UNIVERSITY OF CALIFORNIA

Los Angeles

Negotiating Use, Persistence, and Archiving: A Study of Academic Library and
Publisher Perspectives on Licensing Digital Resources

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor
of Philosophy in Information Studies

by

Sharon E. Farb

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DEDICATION

In memory of Bevorlee Sonya Olinsky for her spirit and belief that education would set us free.

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(2005). *The Quest for Managing Electronic Resources: Report of the Digital Library Federation Electronic Resources Management Initiative*. Council of Library Information Resources (CLIR).

Farb, S. E., Riggio, A. (2004). "Medium or Message: A New Look at Standards, Structures, and Schema for Managing Electronic Resources. Special Issue: MARC and Metadata: METS, MODS and MARCXML: current and future implications part 2," *Library Hi Tech*. London, U.K: Emerald Publications. Volume 22 Number 2

Farb, S. E. (reprint forthcoming). "Universal Design and the Americans with Disabilities Act: Not all Systems are Created Equal--How Systems Design Can Expand Information Access." *ACLTS Occasional Papers Series*. Chicago: American Library Association Publications.

Lievrouw, L.A. , **Farb, S. E.** (2002). "Information and Equity". *Annual Review of Information Science and Technology (ARIST)*. Edited by Blaise Cronin. Medford, New Jersey, 27, 499-541.

Farb, S. E. (2001). "Policy Implications of InterPARES Research Finding: Toward Development of a Theoretical Framework to Guarantee the Long-Term Preservation of Authentic Electronic Records". In *Proceedings of the InterPARES Symposium Authentic Records in the Electronic Age. November 14-15, 2001*. Media Center, Beijing, China, 82-94.

Farb, S. E. (2001). "Developing an Intellectual Framework to Guide the Development of Policies, Strategies and Standards for Long Term Preservation of Electronic Records--Interim Report". *Preserving Authentic Electronic Records International Symposium*, Istituto Italiano di Cultura and InterPARES Project. Vancouver, February 17, 2001.

ABSTRACT OF THE DISSERTATION

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Licensing of digital information products, governed by state contract law and enforced through a combination of legal and technological controls, emerged in the late 1990s and has resulted in licensees such as libraries being required to negotiate with content owners, on a case-by-case basis, not only over the price of information products, but also for rights that had been previously guaranteed by federal copyright law. While there has been much discussion about the growing volume of proprietary information

due to the impact of copyright law and patent law, the effect of licensing on long-term access and use of digital library content such as electronic journals and databases has been understudied. This dissertation explores the phenomenon of licensing digital content by publishers and its implications for libraries, based on the results of a three-part research study that documents and analyzes the current licensing landscape and identifies key issues, trends, and challenges from the stakeholders' point of view. The study includes a survey of 196 major U.S. academic libraries, in-depth interviews with major commercial, scholarly society and university press publishers, and an analysis of standard publishers' license agreements. Findings of the study indicate that libraries are acquiring increasing percentages of licensed digital resources with little guarantee that the material will be available to or affordable by them and their users over time; that both libraries and publishers identify their top challenges as cost concerns related to licensed content; that licensing, as currently practiced, prohibits libraries from preserving and archiving licensed material; and that current technology is widely perceived as not being able to provide adequate functionality for long-term preservation of digital content. The study's findings also indicate that licensing not only restricts users access to and use of library materials over and above that which is allowed under federal copyright law, but that it also explicitly disclaims warranties of the accuracy, reliability, integrity, usability, or affordability of licensed content over time, which consequently calls into serious question whether or not the knowledge we create and rely upon today will be available for future generations.

CHAPTER 1: INTRODUCTION

The primary objective of copyright is not to reward the labor of authors, but [t]o promote the Progress of Science and Useful Arts. To this end, copyright assures authors the right to their original expression, but encourages others to build freely upon the ideas and information conveyed by a work. This result is neither unfair nor unfortunate. It is the means by which copyright advances the progress of sciences and art.

Justice Sandra Day O'Connor, *FEIST PUBLICATIONS, INC. v. RURAL TEL. SERVICE CO.*, 499 U.S. 340 (1991) p. 372

Justice Sandra Day O'Connor defends copyright in an era of continual challenges on the part of the media and other content providers and erosion of the rights traditionally guaranteed to libraries and users in prior copyright legislation. But what if we were to live in a world where preservation and use of library resources were subject to conditions specified in licensing agreements as well as copyright provisions? What would be the effect on long-term access and use of library materials? Would the rights guaranteed to libraries, archives and the public by federal copyright law be superseded altogether?

Imagine a world where increasing quantities of the world's greatest academic library collections are only available electronically, subject to the terms and conditions agreed upon by publishers and vendors? What would happen to the time-honored copyright guarantees of first sale¹, fair use², preservation³ and archiving⁴, much less all

¹ *The Intellectual Property Law Dictionary* defines the "first sale doctrine (generally): an exception to the exclusive right of a copyright owner to distribute copies or phonorecords of a copyrighted work. Under this principle, the copyright owner has the right to sell a copy of a book but not the right to control

other forms of access and use taken for granted as mainstays of our information environment and scholarly traditions, such as accessing, printing, downloading, and sharing? These are just some of the questions that arise with the dramatic shift that has been occurring in the past decade from owning to licensing content for libraries, in addition to the technological challenges related to the long-term availability posed by digital media through which such content is being made available.

The hypothesis guiding this study is that the more digital content and digital collections that libraries acquire using license agreements, the greater the likelihood that there will be few guarantees regarding the long-term access and use of library digital resources.

Before proceeding further brief definitions of a few of the key terms and concepts are required. The National Science Board's 2005 report *Long-Lived Digital Data Collections: Enabling Research and Education in the 21st Century* defines "a 'collection' to refer not only to stored data but also to the infrastructure, organizations,

subsequent sales of that copy" (Gader-Schafran, 2004, part 1-18). This principle and exception is codified in Section 109 of the Copyright Act (17 U.S.C. Section 109).

² The glossary in Jessica Litman's *Digital Copyright* describes fair use as "a long standing legal privilege to make unauthorized use of a copyrighted work for a good reason. Claims of fair use are evaluated by courts on a case by case basis. There is no hard and fast rule setting forth how much of a work may be used—despite popular perceptions, there has never been any magic number of words one may quote or notes one may copy" (Litman, 2001, p. 199). The fair use doctrine was codified in Section 107 of the copyright law (17 U.S.C. Section 107).

³ The Digital Millennium Copyright Act (DMCA) amended Title 17 Section 108 to permit libraries and archives to make up to three digital copies for purposes of preservation provided the copies stay on the premises. ("DMCA Summary, 1999, p. 15) (17 U.S.C. Section 108) Prior to the passage of the DMCA libraries and archives could make one (physical) copy for preservation or security purposes.

and individuals necessary to preserve access to the data” and “digital collections” as “limited to those that can be accessed electronically, via the Internet for example” (National Science Board, 2005, p. 9). ‘Digital content’ is comprised of ‘digital objects’ made up of ‘digital components’ that are defined by the International Project on Authentic Electronic Records (InterPARES) as “a digital object that contains all or part of the content of an electronic record, and/or metadata necessary to order, structure, or manifest the content, and that requires specific methods for preservation of one or more electronic records, and that has specific methods of preservation and reproduction.” (“InterPARES2 Terminology”, 2005).

Interestingly, while the terms ‘digital resources’ or ‘electronic resources’ are used in a variety of settings and circumstances, these terms are rarely defined. *The Online Dictionary of Computer Science* includes references to electronic resources within the context of several other definitions, yet there is no specific definition for what constitutes an electronic or digital resource. At a minimum, any definition should include electronic journals, databases and websites that offer digital information content that can be licensed to libraries. Robert J. Weiner’s definition of electronic resources also includes stand-alone CD-ROMS but for purposes of this study electronic resources includes digital content consisting of electronic journals, databases and websites that are available via digital technology and licensed to libraries (Weiner, 2002, p. 1207).

While the results of this study indicate that all types of electronic resources are both

⁴ Section 108 provides a number of limited exceptions specifically for libraries and archives. Included, as noted in footnote 3 above, is the provision for digital preservation and the provision allowing an archive or library to copy a work into a new format if the old format becomes obsolete. (17. U.S.C. 108)

covered under copyright and require license agreements for their use, it should be noted that at the time of this writing, the focus, quantity, importance, and costs related to the majority of electronic resources concern digital journals.

Therefore, this study is based on the following premises:

1. Libraries are increasingly acquiring greater quantities of digital resources and digital collections at an increasingly greater cost and proportion of their annual budgets. The few studies conducted to date show a dramatic increase in the quantity and cost of digital resources for libraries.
2. Library acquisition and use of digital resources almost always require license agreements that govern the terms of access and use for the duration of the agreement. Licensing terms limit access and use of content for library collections (for example no walk-ins, no archival copies, no perpetual access) more than would be the case under analogous materials governed by federal copyright law, licensing terms also specifically and typically place limits upon archival copying and perpetual or persistent access.

Publishers and libraries today negotiate license agreements for increasing proportions of their collections. According to the Association of Research Libraries (ARL), “libraries have shifted the focus of their collection development policies to the acquisition of more electronic content, much of it via consortia” (ARL, 2002, p. 6). Recent ARL reports indicate that “[b]etween 1994/95 and 2001/02, expenditures on electronic resources for the typical university research library have grown almost 400% to almost \$1.4 million while the overall library materials expenditures have grown only 61%.” A decade ago, ARL libraries reported only 4% of their members’ collection expenditures were spent on electronic resources (Case, 2004, p. 1). In contrast, a recent

paper by Rick Lugg and Ruth Fischer sponsored by the bookseller and subscription agent Harrassowitz⁵ on the role of subscription agents estimates that “75% of all currently published scholarly journals are now available online” with the remainder soon to follow (Lugg & Fischer, 2003, p. 1). While the estimated percentage of licensed electronic content in libraries varies according to how the numbers are counted, and is included in the information collected for this study, it is apparently only a matter of time, given both changing economic structures and new production and dissemination technologies, before all digital content and potentially also a considerable slice of traditionally published materials are made available to libraries under license agreements.

To underscore and highlight how this once-futuristic notion of making all print information available online is now becoming a reality, one need look no further than the latest announcement from the Internet search engine of choice, Google⁶. In December 2004, Google announced the Google Print Library Project and as such it would be “working with the libraries of Harvard, Stanford, the University of Michigan, and the Oxford University and the New York Public Library to digitally scan books from their collections so that users worldwide can search them in Google” (“Google Press Center,” 2004, p. 1). According to the website of the University of Michigan,

⁵“HARRASSOWITZ has been an established bookseller & subscription agent to the institutional library market since 1872”. see their website at: http://www.harrassowitz.de/publ_services.html

⁶, Neilson Net Ratings for 2005 reflect Google to be the number one search engine of choice with 46.2% of all searches followed by Yahoo with 22.5%. Neilson Net ratings “measures search behavior of over one million people worldwide. These web surfers have real-time meters on their computers which

one of the participating libraries, “Google will digitally scan and make searchable virtually the entire collection of the U-M library” (“University of Michigan,” 2005, p. 1)

Libraries have historically provided an important, but under-acknowledged, societal, cultural, and political role as collectors, keepers and preservers of knowledge and information over time. In *The Public Library in the United States*, Robert D. Leigh notes that:

Libraries of all kinds during the centuries of their existence have had a common objective—one so generally accepted it is seldom made explicit. It is the conservation and organization of the world’s resources of recorded thought and fact so as to make them available for present and future users. This is an obvious utility for any civilization as soon as it feels the need for something more than oral tradition. And the library, including the public library, has become in most cases a kind of symbol as well as a servant of culture. (Leigh, 1950, p. 12)

Fifty years later, in *The Future of the Past: Preservation in American Research Libraries*, Abby Smith echoes Leigh on the nature and critical role of the library:

Recorded knowledge is as fragile as the medium on which it is recorded and as enduring as the human resolve to transmit it. In the United States, where full access to the human record is important for citizenship and for scholarship, libraries play a critical role in the acquisition, preservation, and dissemination of that record (Smith, 1999, p. 3).

By contrast, publishers and vendors have never considered it their role to maintain, preserve, or archive any content beyond that necessary to maintain their business model or models. Roger C. Schoenfeld, in his history of JSTOR,⁷ notes one of

monitor the sites they visit. This metered information is compiled to produce NetRatings results” (Sullivan, 2005)

⁷ According to their website, JSTOR “is a not-for-profit organization with a dual mission to create and maintain a trusted archive of important scholarly journals, and to provide access to these journals as widely as possible” (“JSTOR”, 2005)

the early and ongoing challenges for JSTOR was that “publishers often lacked the complete backrun, and sometimes did not even have a record of the journal’s publishing history” (Schoenfeld, 2003. p. 90).

What will happen as the shift continues from libraries owning, maintaining and preserving scholarly publications to publishers and vendors licensing content to libraries under license agreements that typically contain restrictions on perpetual access or archiving by those libraries? What would happen if the existing digital content were to disappear without a trace and there was no means to recreate or identify and replicate prior knowledge, research, creativity, societal memory, and culture? What is the impact on other aspects of library collections and services with the shift to and emphasis on licensed digital resources? Such scenarios represent a dramatic departure from and challenge to the ability of college and university libraries to implement their fundamental and vital mission, values, and role. Moreover, the licensing environment has developed rapidly and without the opportunity for systematic and thorough study, evaluation, and analysis. This study will, therefore, explore these emerging issues and attempt to identify their implications for the use, persistence, and archiving of licensed digital content.

1.2 Statement of the Problem

In the late 1990s, digital information technologies gave rise to the development of exponential growth of new information products, services and business models. By early 2000, the Association of Learned and Professional Society Publishers reported

that “75% of journals published are now available online (72% of Humanities and Social Sciences and 83% of STM titles)” (Cox & Cox, 2003, p. 1). During this period of growth, licensing emerged as a key form of control over the access, use, and distribution of digital content and collections. Licensing, governed primarily by state contract law and enforced by a combination of legal and technological controls, offered content owners, such as publishers, a multitude of new business models and a new level of control over information products. At the same time, licensees, such as libraries, were required to negotiate on a case-by case basis not only for price, but also for rights that have long been guaranteed by federal copyright law, including fair use, first sale, and archiving. In fact, Steven M. Weinberg, in his introduction to *Advanced Licensing Agreements in the New Economy* 2001, argues that “[d]evelopments in the digital world, including the Internet, and specifically e-commerce, has [sic] led to the recognition of new property rights, and has [sic] propelled licensing to unprecedented heights and revenue generation” (Horwitz & Weinberg 2000, p. 15). Weinberg notes that licensing revenues in 1986 exceeded \$59 billion and in 1994 exceeded \$70 billion dollars (Horwitz & Weinberg, 2000 p. 15). Morgan Stanley’s *2002 Industry Overview Report on Scientific Publishing: Knowledge is Power* states that “the global scientific, technical and medical publishing business is a US seven (\$7) billion dollar industry” and that the scientific publishing industry primarily consists of academic libraries as customers (Morgan Stanley, 2002, p. 2). The report predicts that it is unlikely that the nature of the industry will change “any time soon” because of how content owners are aggregating content: “libraries and academics have been trying for over a decade to

develop new ways of disseminating academic knowledge and research but the barriers to entry enjoyed by incumbent journals are just too high...” (Morgan Stanley, 2002, p. 2).

College, university and research libraries have long held that among their fundamental values are long-term access, use and preservation of library materials and collections. In 2004, the American Library Association (ALA) adopted a “Core Values Statement” that included among its core values “access, preservation, intellectual freedom, service, social responsibility, the public good, confidentiality/privacy, diversity and democracy” (“ALA Core Values,” 2004). The present study thus examines the phenomenon of licensing electronic resources in U.S. college and university libraries and the implications of licensing on long-term access and use of licensed information.

1.3 Research Questions and Objectives

While there are many emergent questions in the area of academic that relate to concerns such as shifting economic models for the publishing industry and their customers, evolving technologies and metadata structures to support delivery and to authenticate digital content to users, and dealing with a wealth of social and cultural issues, this study examines the implications of licensing electronic resources (electronic journals, databases and websites) in U.S. academic library collections for long-term access and use. The two primary research questions of the study are:

1. How, and in what ways, do license agreements for digital resources (electronic journals, databases and websites) in general have an effect upon libraries and users' rights guaranteed under federal copyright law?
2. How, and to what extent, do license agreements used in major U.S. academic libraries have an effect upon long-term public access and use of information?

These two primary questions suggest several more secondary or derivative research questions:

1. How does the licensing of digital resources influence library values that have important social consequences, such as fair use, interlibrary loan, long-term access and use, authenticity, and archiving?
2. How does licensing affect libraries' traditional preservation and stewardship role?
3. What strategies, recommendations, or future research can be suggested from the findings that might help inform or implement a policy agenda that ensures long-term access and use of licensed digital content over time?

The above questions are directed at achieving several research objectives. The first objective is to obtain research data that will provide an overview of a new and rapidly evolving phenomenon—the licensing of digital information--and to explore how this phenomenon might have an impact on long-term access and availability to library content. Second, in order to better understand the licensing landscape, key issues, and emerging trends, this research obtains needed empirical data related to the licensing of digital information in the leading academic U.S. college and university libraries. Third, this research compares aspects of federal copyright to licensing. The fourth and final research objective is to use the results of this research to inform future research toward

developing a policy agenda to support long-term access and use of licensed digital resources in libraries.

1.4 Research Significance

In the last few years, the growth of digital information and digital information technologies has been unprecedented, rivaled only by the increasing effort in the U.S. and abroad to both privatize and control digital information sources, content, and flows. *Information Technology Outlook 2004*, produced by the Organisation of Economic Co-operation and Development (OECD), states that the

The [Information Communication Technology] ICT sector is highly and increasingly globalised. Trade in ICT goods has grown at almost double the rate of trade in total goods, with exports of ICT equipment equivalent to well over 5% of GDP in a few OECD countries and trade in IT services growing faster than trade in equipment. Both are growing at much higher rates than GDP (OECD, 2004, p. 5).

The *Digital Economy 2004* (The Digital Economy, 2004) report, produced by the United States Department of Commerce, drew similar conclusions, noting that, “[d]uring 1996-2000, when the economy grew by an average 4 percent annually, the [Information technology] IT producing sector, which accounted for 7 percent of GDP (on average), grew by 21 percent a year (on average, in real terms), and was responsible for 28 percent of overall real economic growth” (The Digital Economy, 2004, p. 25).

Paralleling this growth, recent examples of policies limiting the public domain include the Sonny Bono Term Copyright Extension Act, which extends copyright protection from 50 to 75 years, and the Digital Millennium Copyright Act (DMCA), which creates new rights to prevent any type of circumvention of technological controls

over digital products.⁸ In addition, over the last five years, the commercial publishing industry has instituted a wholesale shift from a purchasing and owning model to a licensing model where college and university libraries rent or lease licensed digital content and collections. Anna May Wyatt, in her article “License, the Law and Libraries,” states “[a]s libraries move further and further into the digital age, an increasing number of library services are controlled by licenses. Every service the library provides which depends on software, database or electronic access is governed by a library license” (Wyatt, 2005, p. 164) Indeed, Niva Elkin-Koren, author of *The Privatization of Information Policy*, notes that “[t]he pervasiveness of license agreements reflects one form of privatization of information policy” (Elkin-Koren, 2000, p. 203). While there has been ongoing interest and debate regarding the recent changes in digital copyright, few studies of licensing as the means for college and university libraries to acquire digital content and collections have yet been undertaken, relative to its clear importance for institutions today.

This research study is significant in three respects. First, it documents and describes a little understood phenomenon—the licensing of library collections. Currently, there are no available benchmarks related to the size, scope, and significance of the shift from purchasing to licensing digital collections. Second, the data collected may be used to inform and guide future research by identifying key themes and emerging issues, trends, and impacts that can be factored into a framework or research

⁸ ‘Digital products’ refers to commercially available content that is typically licensed and marketed to libraries. In some cases, digital information products have a print counterpart, but in some cases the product is born digital and the content only exists in digital form.

agenda within which policy can be suggested. Third, based on study findings, a future research agenda aimed at developing policy recommendations to address long-term access and use of digital collections in college and university libraries is suggested.

1.5 Framing the Licensing Landscape

This section delineates a conceptual framework of the current landscape and larger context within which this study is placed. The depiction of the current landscape is based on a review of the literature as well the hypothesis that guides this study, and set of initial premises and relevant elements. This framework is used to identify the key issues, stakeholders, relationships, context, and implications that underlie the data reported in Chapters 4 and 5.

Figure 1.
Framing the Licensing Landscape

The licensing landscape is depicted in Figure 1. It consists of four overlapping and related dimensions: actors and interests (including U.S. college and research libraries, publishers, vendors, and aggregators); the legal and policy context (including federal and state law, standards, and technological controls); contested or fundamental issues related to licensing electronic resources (including accessibility, affordability, availability, archiving and usability over time); and the implications of licensing electronic resources in larger context (including implications for the public domain present and future, creation and preservation of knowledge, culture, social memory, and creativity). The figure includes two directional arrows with potentially conflicting and competing directions and interests: control over time and access over time.

In the actors and interests dimension U.S. college and university libraries and digital content providers exist as distinct entities in a context of two competing or conflicting continua—one of controls and restrictions over long-term access and use of digital resources, and the other of access and use of licensed digital resources. Figure 1 shows several longstanding values held by U.S. college and university, including stewardship, open access, and equity of access, intellectual freedom, commitment to heritage, and contributions to culture, knowledge, creativity, societal memory, and fostering the public domain.

The licensing landscape model depicts libraries as playing a central role in, and as vital contributors to, the creation, preservation, and use of the world's knowledge, culture, creativity and societal memory, and as key proponents of the public domain.

Modern libraries in the United States have always had one common objective—to collect and to make available the world’s information resources for present and future generations (Leigh, 1950; Smith, 1999; Gorman, 2000).

However, it must be noted that libraries have also been used to control knowledge and access to it (Basbanes, 1993). One of the key values and characteristics of libraries is their commitment to stewardship. Michael Gorman points out the daunting and vital role of libraries and archives as stewards of knowledge and information: “this inheritance of which we are stewards is no less than complete cultural and historical legacy of the records of humankind” (Gorman, 2000, p. 59). Gorman argues that libraries and archives play a unique role as stewards because only “librarians and archivists are engaged in the wholesale preservation of those records (Gorman, 2000, p. 59)”.

Figure 1 also includes the critical role of publishers, vendors, and aggregators of digital resources. As already mentioned, in the print environment, libraries purchase books, journals, and other library materials, and as such are entitled under federal copyright law to lend, use, and make preservation and archival copies of those materials. In the digital environment, however, college and university libraries acquire content from a variety of content providers, including commercial vendors, scientific and scholarly societies, and university press publishers, under conditions governed by state contract law and licensing. A plethora of business models reflect a change in the nature of the relationship between the parties and the materials, where everything--

including the federal copyright guarantees of fair use, perpetual access and archiving -- is negotiable.

As depicted in Figure 1, the licensing landscape exists within a complicated legal, social, and technological environment. A number of critical and contested issues have arisen as a consequences of licensing, particularly two provisions of licenses governed by state contract law that effectively increase the control of content owners: the omission of any type of warranty for quality, reliability, accuracy, completeness of content, and non-disclosure clauses that prevent libraries from disclosing the price and terms agreed to in the license without a court order.

The center dimension of the licensing landscape highlights five such contested issues which may have consequences for the ability of libraries to provide long-term access and use of licensed digital resources. Adapted from the two-factor model developed by R. Anthony Reese in *The First Sale Rule Doctrine in the Era of Digital Networks* (Reese, 2003), these four issues are affordability over time, availability over time, accessibility over time, and usability over time. *Affordability over time* includes costs, costs over time, and economic sustainability. *Availability over time*, includes multiple dimensions including legal, physical, technical, and intellectual contexts. *Accessibility over time* reflects the extent to which opportunities to view or use the resource exist over time. For example, are fair use activities included? *Usability over time* refers to the extent to which the functionality of the resource remains usable over time—this factor raises issues of who is responsible for preserving and archiving content.

The licensing landscape can also be used to identify types of *controls*, such as copyright, technological controls, licensing, the lack of warranties, and non-disclosure clauses, and *values*, such as stewardship, open access, intellectual freedom, commitment to heritage, and archiving, and the role of libraries as contributors to culture, learning, knowledge, creativity, societal memory, and the public domain. Table 1 is adapted from Hal Varian's economic model of product value and Lawrence Lessig's code as control thesis, in which computer code becomes the "perfect tool of control" unless "values that we believe are fundamental" are identified and protected "that a space should guarantee" (Lessig, 1999, p. 6). Similarly, Varian points out that "the first thing to recognize is the fundamental trade-off between control and customer value" (Varian, 1999, p. 98). The values shown in Table 1 are derived from Michael Gorman's "central core values" of librarianship (Gorman, 2000, p. 26).

Table 1. Framing the Licensing Landscape II—Controls Versus Values

Core Library Values	Continuum of Control	Controls
Stewardship—preservation-archiving		Copyright
Perpetual Access		Technological Controls
Intellectual Freedom—includes fair use	+	Licensing
Equity of Access	V.	Non-Disclosure Clauses
Commitment to Heritage	-	No Warranties
Libraries as contributors to culture, knowledge, creativity societal memory and the public domain		Non-Disclosure Clauses
All library values presumed to continue over space and time	+ and – represents degrees or continuum of control	Publishers focus on short-term rather than long-term value

As shown in Figure 1 and Table 1, then, the licensing environment is complex. It exists in a larger legal, technological, policy and societal context; together, licensing and its larger context have important long-term implications for access to and use of digital resources. The following chapters explore and examine the dimensions, relationships, and implications of the licensing landscape in light of the research questions and data collected for this study.

CHAPTER 2: REVIEW OF THE LITERATURE

Copyright today is less about incentives or compensation than it is about control
Litman, *Digital Copyright*, 2001, p. 80

This literature review is divided into five sections. Each addresses literature relevant to a specific aspect of the present study's research questions and develops the basis for definitions of key terms. The first section outlines theories of control including the concept and history of licensing as a means to control access and use of content, code as control and law and integration of technology as control. The second section examines how licensing differs from copyright, specifically with respect to the rights of libraries and library users to access and use information. The third section explores the concept of perpetual access in relation to college and university library collections of licensed digital content. The fourth section examines the mission of academic libraries. The final section reviews studies of licensing for and by libraries.

2.1. Theories of Control

As mentioned above, control over content and uses of information are not new. This section reviews three theories of control over access and uses of information: *code as control*, the *integration of law and technology*, and *licensing as control*.

2.1.1. Code as Control

In *Code and Other Laws of Cyberspace* (Lessig, 1999), Lawrence Lessig argues that the “the invisible hand [of cyberspace] through commerce, is constructing an architecture that perfects control---an architecture that makes possible highly efficient regulation” (Lessig, 1999, p. 6). Lessig defines “code” as “the software and hardware that make

cyberspace what it is and *regulate* cyberspace as it is” (Lessig, 1999, p. 6). It is imperative, he says, to “identify the values that a space should guarantee” or lose “[v]alues that we now consider fundamental” (Lessig, 1999, p. 6).

Lessig examines two types of “values,” “substantive and structural” (Lessig, 1999, p. 7). The relationship between the two values is analogous to the relationship and interplay between the U.S. Constitution (structure) and the Bill of Rights (substance). The inherent relationship between structure and substance reinforces values, provides a built-in method for distinguishing among types of protections, and creates a check on either one subsuming the other. Regarding the Constitution and the Bill of Rights, he notes:

[o]ne would have been meaningless without the other. An unchecked structure could easily have overturned the substantive protections of the Bill of Rights, and without substantive protections, even a balanced and reflective government could have violated what the framers thought fundamental” (Lessig, 1999, p. 7).

In *Code*, Lessig worries that since the creation of cyberspace, the focus has been primarily on substance—whether cyberspace encourages privacy or access -- rather than on structure. For example, what structure is required to support substantive values? By emphasizing substance, will structure go unchecked and result in the loss of fundamental values and freedoms? His conclusion is similar to the early vision of the creation of the United States constitution, that “structure builds substance.” Therefore, in cyberspace, as in real space, if the structure is open or “open code” then the “substance will (mostly) take care of itself” (Lessig, 1999, p. 8).

In *The Future of Ideas: the Fate of the Commons in a Connected World*, Lessig continues to explore the issues and implications surrounding control, but this time in the context of how resources are ordered, with a focus on the implications of new forms of control on creativity and innovation. He asks, “who decides who gets access to what?” and argues that “...in the digital age, the central question becomes not whether government or the market should control a resource, but whether a resource should be controlled at all” (Lessig, 2001, p. 14). This argument is based on the premise that “free resources have been crucial to innovation and creativity; that without them, creativity is crippled” (Lessig, 2001, p. 12). He proposes a three-layer theoretical model of the functions of systems of control. The “content” layer is made up of “the actual stuff that gets said or transmitted across these [sic] wires” (including digital images and text). The “code” layer includes the “code that makes the hardware run,” and the “physical” layer “across which communication travels” (Lessig, 2001, p. 23).

2.1.2. Law and Technology Integration as Control

Increasingly, law and technology are combining to enhance and reinforce control in ways that neither can accomplish separately. Licensing, in combination with the use of technological controls built into digitally disseminated content, can effectively control the long-term access and use of digital collections. In *Online Standardization and the Integration of Text and Machine*, Margaret Jane Radin predicts that the consequences of the “coalescence” between text and machine will be “far-reaching” (Radin, 2001, p. 101), and discusses the pros and cons of standardization from a policy point of view. Digital rights management systems (DRMS), programs which “[limit the] distribution and use of

some piece of digitized content," constitute "next generation copy protection" (Radin, 1999, p. 116). DRMs, she says, produce "many policy problems...in particular the problem of overreaching by content owners who can use technological protection to prevent activities that are otherwise the right of the user (for example, copying of material that is not protected by copyright)" (Radin, 1999, p. 116).

Several other prominent legal scholars have raised similar questions. Jessica Litman, author of *Digital Copyright* makes a similar point, arguing that the dominant metaphor for copyright changed recently from a system that provides "economic incentives for the creation and distribution of original works of authorship" to "copyright as property that the owner is entitled to control—to sell to the public (or refuse to sell) on whatever terms the owner chooses" (Litman, 2001, p. 80). She warns that "if copyright owners can impose conditions on the act of gaining access, and back those conditions up with either technological devices, or legal prohibitions, or both, then copyright owners can license access to and use their works on a continuing basis" (Litman, 2001, p. 82).

Julie Cohen, has written extensively about the dangers posed by the relationship of copyright and technological controls for free speech and privacy rights (Cohen, 1996, 1998, 2001, 2003). Cohen argues that copyright management systems that restrict time-honored first amendment and privacy rights, such as the "freedom to read anonymously" and to access and use copyrighted work for educational and research purposes through a combination of legal and technological controls, should be unconstitutional (Cohen, 1996).

Niva Elkin-Koren (2002) was among the first legal scholars to argue that the increasing commodification of information coupled with the increase of the duration and scope of copyright law and widespread use of contracts has serious implications for users of information and for society overall. For example, Elkin-Koren points out that while “information became more central to the human experience” the “decentralized nature of online information markets increases pressure on the legal system to produce means of market control.” This in turn affects “our freedom and autonomy,” “ability to participate in democratic life,” and “civic virtue” (Elkin-Koren, 2002, p. 80). “[C]opyright law in recent years became the vehicle of control and copyrights are being claimed for accomplishing strategic ends” (Elkin-Koren, 2002, p. 81).

Lawrence Lessig, whose work was discussed previously, has long predicted a digital future “of control in large part exercised by technologies of commerce, backed by the rule of law” (Lessig, 1999, p. 5). Pamela Samuelson has also written extensively on copyright and intellectual property, particularly the challenges that new information technologies and integration pose for traditional legal regimes, especially for intellectual property law. In an article entitled, “Digital Rights Management {and, or, vs.} the Law,” she writes that:

Given that DRM (digital rights management) permits content owners to exercise far more control over uses of copyrighted works than copyright law provides, the moniker “DRM” is actually a misnomer. These technologies are really not about the management of “digital rights” but rather about management of certain “permissions” to do X, Y, or Z with digital information. If DRM systems were about digital management of rights, they would need to be designed so users could express their rights under copyright, too. Thus far, digital rights expression languages (RELs) lack semantics to allow the expression of concepts like fair use. (Samuelson, 2003, p. 42)

2.1.3. Licensing as Control

Licensing is now, and has always been, about controlling the use of certain goods or resources. From the earliest Licensing Acts used to control the printing press and printed works, licensing has been used not only to control the access and use of existing information products and content, but also to control and to exploit the current and future market for such products.

Steven M. Weinberg defines licensing as “a grant of a limited right in the use of an intellectual property...” (Weinberg, 2000, p. 15). The Association of American Publishers (AAP), taking the publishers’ point of view, defines licensing as “contractual authorizations and/or restrictions regarding the provision of access to, or use, distribution, performance, modification, or reproduction of information related rights, including those associated with copyrighted works” (“AAP Glossary,” 2004). The AAP definition is broad in scope and includes “access, use, distribution, performance, modification, reproduction of “information related rights...” (“AAP Glossary,” 2004). Weinberg’s reference to “limited right in the use” reflects two key components of licensing. First, by its very nature, licensing provides only a “limited right” because, by definition, the balance and majority of control are always retained by the owners of the intellectual property. Second, licensing is about controlling the licensee’s “use” of intellectual property (Weinberg, 2000, p. 15).

Intellectual property is often defined as a bundle of rights, including copyright, trademark, patent, trade secrets, and right to publicity (World Intellectual Property Copyright Treaty, 1996). Licensing touches on several important areas of the law,

including treaty, first amendment and privacy laws, as well as intellectual property. Licensing is governed by state contract law, and unlike Federal copyright law, which provides for specific exemptions for libraries, archives and certain other users, in state-governed license agreements everything is negotiable, including the rights and exemptions ordinarily provided by Federal law. If the parties involved agree to these provisions, they are enforceable under state contract law.

There are three primary types of license agreements for digital information products: negotiated, shrinkwrap, and click-through. Negotiated license agreements are the *sine qua non* of contracts. Theoretically, negotiated license agreements provide the opportunity for the parties to discuss, debate, and decide the important terms. When consensus has been reached, the parties assent to and duly execute the agreement. The components of contract law (offer, acceptance, and consideration), coupled with two necessary conditions (meeting of the minds, and freedom to contract) create a legal framework where everything is negotiable, unless the activity is illegal or violates public policy.

The licensing of content and information are not new. Beginning in the 1500s and continuing until the passage of the first copyright act in England in 1710, licensing statutes controlled what was published, by whom, and how publications were accessed and used. Total control over content (otherwise known as censorship) was the primary goal of the Licensing Act of 1662.

Today, licensing has become in many cases the copyright owner's preferred form of control over the creation, access, and use of digital content. L. Ray Patterson,

Professor of Law at the University of Georgia and author of *The DMCA: A Modern Version of the Licensing Act of 1662* argues that “the Digital Millennium Copyright Act of 1998 (DMCA) in the United States is a modern version of the Licensing Act of 1662 in England” (Patterson, 2002, p. 33). He highlights important similarities and differences between the statutes. Both statutes have similar goals: “the control of access to ideas” (Patterson, 2002, p. 34). However, they also differ: under the Licensing Act, “public officials acting for the government” determined what materials could be accessible to the public, while under the DMCA “private copyright holders acting for themselves” determine what materials will be made accessible. This shift from public to private control is a central focus of this study.

2.2. How Licensing Differs from Copyright

Copyright is a form of control over the creation, access, and use of copyrighted work. Depending on who you ask, the purpose of copyright is “to promote the progress of science and the useful arts, or for “securing for limited times to authors and inventors the exclusive rights to protect their writings and discoveries”, or, as the United States Constitution reflects, to balance both those interests (U.S. Constitution, Article 1, Section 8, Clause 8, 1789). Copyright has been around since the demise of licensing in England in 1662. In 1710, the Copyright Statute of Anne was created, which acknowledged the importance of learning and public access to prior work in order to create new work. The statute extended copyright only to new work and limited copyright protection for a specific duration. Prior to 1662, the stationers’ copyright was held in perpetuity and enforceable for any book, regardless of age. For a detailed history on the development of

U.S. copyright law see L. R. Patterson's *Copyright in Historical Perspective* (Patterson, 1968) and Mark Rose's *Authors and Owners; The Invention of Copyright* (Rose, 1993).

U.S. federal copyright law differs from licensing in several significant ways. Unlike licenses, copyright law was designed from the outset to balance the competing interests of property rights and the promotion of creativity, innovation, and public access to copyrighted information. The first copyright statutes in the United States and United Kingdom also required a mandatory deposit of all published copyrighted works in certain specified libraries (17 U.S.C. Section 407, Statue of Anne, 1710). In addition to the creation of depositories of copyrighted works, U.S. copyright law has also included specific exemptions for library and archival copying, as well as provisions for fair use, interlibrary loan, perpetual access, archiving and first sale.

'Fair use' (or "fair dealing," as it is called in Canada and the European Union) covers certain uses of copyrighted work that do not require permission of the copyright owner. Whether a use qualifies for this exemption depends on the purpose and character of the use, the nature of the copyrighted work, the amount and substantiality of the work used, and the effect of the use on the market for the work (17 U.S.C. 107). It is hotly debated in the United States whether or not fair use is an affirmative right or a defense against infringement. In either case, in the U.S. juridical system, determining whether something is fair use requires a case-by-case analysis of the four fair use factors, and ultimately, a determination by a judge.

The first sale rule provides that the first sale of a copy of a work to a member of the public "exhausts" the copyright holder's exclusive right to control further distribution

of the copy. Codified in Section 109 of the Copyright Act, the first sale rule allows libraries, museums, and bookstores to lend, rent, or sell books and other material that they have legitimately purchased. The rule promotes public access and use by allowing *bona fide* purchasers of copyrighted material to redistribute the work in any manner including, giving, sharing, lending, or selling the physical copy without penalty or threat of copyright infringement. While the first sale rule is not restricted to analog work *per se*, redistribution in the digital environment arguably involves copying, which is generally prohibited under first sale.

“Archiving” is a legal term of art that has different meanings and interpretations depending on the context. Most definitions contain some notion of both “saving” and “preserving” of data or records. From a computer science perspective, archiving is defined as the effort “to save data, information, documents, records, onto disk or tape for storage and backup purposes” (Freedman, 2002, p.35). Bellardo and Bellardo (1992) define archiving from an archivist’s perspective, as the practice of “[transferring] records from the place of creation to a repository authorized to appraise, preserve, and provide access to them for accountability and long-term use purposes” (Bellardo & Bellardo 1992, p. 3). The notions of saving, preservation and persistence over time are critical components underlying common definitions of the practice of archiving.

In contrast to the set of rights, privileges, and values included in federal copyright law, licensing of digital information products is strictly market-driven, and affords no such guarantees. Additionally, Fisher (1998) cites Mark Lemley’s 1995 list of restrictions commonly used in software producers’ shrinkwrap license agreements, pointing out that

they reflect the “range of conditions that producers would be likely to demand from consumers”:

- a) Restraints on resale or rental by the consumer of his copy of the product;
- b) Limits on the manufacturer’s warranties;
- c) Prohibitions on modifying or tampering with the product (including disassembling it or reverse engineering);
- d) Prohibitions on uses of the product that would have been permitted by the application of the fair use doctrine in copyright law;
- e) Requirements that the consumer not contest the validity of the producer’s copyright or patent;
- f) Requirements that the user pay royalties for a period longer than would be permitted by copyright or patent law.”

(Lemley, 1995, p. 1248, cited in Fisher, 1998, p. 1241)

Another important distinction between copyright law and license agreements or contracts is that contracts apply only to the parties to the agreement, which effectively reduce the nature, scope, and terms of access to and use of a work from a set of overarching federal guidelines to a state-enforced set of agreements between private parties.

Authors from various disciplines and points of view have observed that “*contract* law is supplanting *copyright* law as a source for protecting works, particularly in the digital environment” (Cate, 2002, p. 3) Cate outlines differences between state-sanctioned licensing and federal copyright law:

These licenses are used to protect rights that go far beyond those provided by copyright law. They can restrict the use of facts or ideas. They can last indefinitely. They can be used to limit critics, or the development of new and competing materials. They seldom provide for any of the defenses included in copyright law, and they often include penalties and conditions far more severe

that those provided by copyright law. Contracts are proving to be an important means for controlling access to information. (Cate, 2002, p. 3).

Leslie Chan (2004) describes the impact of institutional repositories and open access on scholarly communication. Electronic journals have produced ‘affordability’ and ‘accessibility’ problems, as well as “increasingly restrictive licensing terms on who can access the databases and when they can do so and how users share the material” (Chan, 2004, p.277). With regard to affordability, “libraries are spending more, but they are in fact getting less, in terms of journal titles and new monograph acquisition, as more of the budget is consumed by serial subscriptions. So, even the richest university libraries cannot afford to subscribe to most of the journals that their faculty need for their research and teaching” (Chan, 2004, p. 279). Licensing contributes to the accessibility problem because “no longer do libraries subscribe to tangible publications of which they hold a physical copy,” but instead, “libraries and their users now only have access to databases for as long as the libraries maintain their subscription,” which results in “serious gaps in serial holdings” and issues related to the “short and long-term” accessibility to the “scholarly record” (Chan, 2004, p. 299). In addition, licensing “raises questions as to who should be responsible for the preservation and stewardship of the scholarly record in the electronic environment” which was not an issue in the analog environment (Chan, 2004, p. 299)

Margaret-Mary O’Mahony and Adrienne Muir, of Loughborough University, conducted a research project funded by the UK Arts and Humanities Research Board, which focused on copyright and licensing for digital preservation. They found that in the UK, “copyright legislation will not allow libraries to carry out preservation copying and

[...] libraries cannot preserve information that they do not physically own” (O’Mahony & Muir, 2002, p. 60).

Laurie Kaye, partner at Paisner & Co. in the UK, has reported that “providers of electronic information use licenses as a legal means of controlling use of their intellectual property and defining the relation with their customers” (Kaye, 1999, p. 11). Key sections and clauses in license agreements that govern access rights and restrictions include the definition of authorized users and uses. Furthermore, Kaye says:

There is also a further issue to be considered—the existence of controls on the amount of material downloaded by customers. Some information providers use technical measures (and language in their agreements) to prevent end-users from systematic, large-scale downloading. Others employ monitoring devices. While it may be possible to articulate highly restrictive language in license agreements, it may be overly complex, expensive and time-consuming for information providers and their customers to monitor and police such restrictions. (Kaye, 1999, p. 12)

In a history of the evolving role of the fair use doctrine in the licensing and digital environment, Olson (2000, p. 12) characterizes fair use as an important “safety valve for free speech.” Jean Camp and Y.T. Chien agree that the “issue of ownership of information is not one that has been discussed with the public interest in mind” (Camp & Chien, 2000, p. 16). In a doctoral dissertation in American Studies at the University of Texas at Austin, Siva Vaidhyanathan relies on historical examples and analysis to examine the “alarming and steady erosion of a very valuable—yet theoretically suspect—

legal construction: the idea/expression dichotomy” (Vaidhyanathan, 1999, p. 11). He quotes Justice Brennan in *Lee v. Runge* to illustrate the importance of his point and study:

The arena of a public debate would be quiet, indeed, if a politician could copyright his speeches or a philosopher his treatises and thus obtain a monopoly on the ideas they contained. (Brennan, dissenting *Lee v. Runge*, 1971).

Justice Brennan concluded that “we should not construe the copyright laws to conflict so patently with the values that the First Amendment was designed to protect” (*Lee v. Runge*, 1971). Table 2 illustrates some of the key differences between copyright and licensing as they relate to libraries' and users' rights to access and use copyrighted information.

Table 2. Copyright and Licensing. Rights and Controls Affecting Long-Term Access and Uses of Information

RIGHTS OR CONTROLS	U.S. COPYRIGHT LAW (Federal)	LICENSING (State contract law)	TECHNOLOGY
Scope/coverage	Defines scope and limits coverage (e.g., Federal Government information, facts, and processes are not included) †	No limits (unless illegal or against public policy)	To be determined. No limits (unless illegal or against public policy)
Duration	Limited time (as specified) ††	To be negotiated (usually annually or for a period of less than five years)	To be determined. Controls include digital rights management (DRM), media dynamics, diversity and obsolescence, software copyrights and patents, proprietary metadata
Fair Use	Inter-library loan Scholarly sharing Electronic reserves Electronic linking Printing Downloading Parody News reporting Criticism ††† 17 U.S.C. § 1201	To be negotiated To be negotiated To be negotiated To be negotiated To be negotiated To be negotiated To be negotiated To be negotiated	To be determined. Can Fair Use be modeled without compromising the case-by-case approach to balancing the four Fair Use factors?
Exemptions for Libraries and Archives	Inter-library loan Preservation copies Security copies Archiving rights Perpetual access ‡	No such thing. U.S. contract law only applies to the parties to the agreement so unless all libraries or archives were party to an agreement this type of exemption would not be possible Any customization to be negotiated, including preservation and security copies, archiving rights, and perpetual access and the terms can only apply to specific parties of the agreement.	To be determined. Technology currently exists to monitor, track and enforce terms of agreements at various levels e.g. individual internet protocol (IP) address (user) domain (site) or licensee regardless of what is in the terms of the agreement. .
First Sale	Remote access Walk-in users ††	No such thing. Remote access and walk-in users to be negotiated	Controls include technological controls and DRM

† 17 U.S.C. 102 [PCI]. †† Chapter 3, Section 301. ††† 17 U.S.C. 107. ‡ 17 U.S.C. 108. ‡‡ 17 U.S.C. 109.

2.3. The Concept of Perpetual Access

Sonny wanted the term of copyright protection to last forever. I am informed by staff that such a change would violate the Constitution. I invite all of you to work with me to strengthen our copyright laws in all the ways available to us. As you know, there is also Jack Valenti's proposal for term to last forever less one day. Perhaps the Committee may look at that next Congress.

Rep. Mary Bono (R-Cal) Congressional Record. October 7, 1998.

The idea of persistence, and of continuing access to library collections, has been around for a very long time. Since their inception, libraries have included preservation for future access and use as fundamental aspects of their missions. In the traditional library environment, libraries owned multiple copies of physical items, such as books or journals, and often stored them in multiple libraries. This redundancy insured that the loss or destruction of any one copy did not eliminate the availability of another copy. Printed works themselves could last for hundreds of years.

Persistence in the age of print has been relatively long-term; persistence in the digital environment is another story altogether. New challenges to digital preservation in the digital environment include rapid and ongoing improvements in hardware and software, which can make earlier versions obsolete and incompatible; preservation strategies, such as migration, that require the ongoing change of formats and the possible loss of data or functionality; restrictive license agreements that prevent libraries and library users from archiving and providing persistent or perpetual access and use; and limitations of copyright law.

The Oxford English Dictionary Online defines perpetual as “lasting or destined to last for ever; eternal, unceasing; permanent (during life)” (OED Online, 2005); this definition suggests that permanence is an essential aspect of perpetual or continuing

access. According to consultant John Cox, scholarly communication requires the permanent availability of published papers (Cox, 1997).

Access is also critical, defined as “[t]he right of entry to a library or its collections” (“Online Dictionary of Library Science”, 2003). In a more general sense, access is “the right or opportunity to use a resource which may not be openly and freely available to everyone” (“Online Dictionary of Library Science”, 2003). All public libraries and most academic libraries in the United States are open to the general public, but access to certain areas, such as closed stacks, rare books, and special collections may be restricted.

Persistent access is increasingly being used as an alternative concept to perpetual access. Ken Thibodeau, head of the U.S. National Archives and Records Administration Electronic Records Project, says the “cornerstone of the persistent archives approach is the articulation of the essential characteristics of the objects to be preserved—collections as well as individual objects—in a manner that is independent of any specific hardware or software” (Thibodeau, 2002, p. 27).

The Oxford English Dictionary Online defines persistence as “the action or fact of persisting; firm or obstinate continuance in a particular course in spite of opposition. Also, the quality of being persistent; = PERSISTENCY” (OED Online, 2005). *The Online Computing Dictionary* defines persistence as “a property of a programming language where created objects and variables continue to exist and retain their values between runs of the program” (“Online Computing Dictionary”, 2005). While each of these definitions includes the notion of long-term access and use of information, the

length of time involved is unclear and remains undefined. Indeed, much of the literature related to long-term access or persistent digital access stops short of stating exactly how long a period it is. “[A]rchivists and others use the word [persistence] frequently, but have difficulty explaining what it is.” (Soy, 2000, p. 1).

One of the few exceptions can be found in the work of Regan Moore and his colleagues at the San Diego Supercomputer Center, whose aim is to design and build technical infrastructure that will “preserve digital information for at least 400 years” (Moore et al., 2000, 2). One aspect of this study involves the exploration of the concepts of perpetual and persistent access and control in relation to implications for long-term access and use of licensed digital resources. Moore emphasizes the point made by Ken Thibodeau, “that a persistent collection requires the ability to dynamically recreate the collection on new technology” (Moore, 2000, p. 3).

The digital environment has generated challenges to persistence that do not occur with print and other, more stable "analog" materials. For example, when software and hardware formats and media become obsolete, the information stored on them is at risk. The interactivity of many digital formats poses additional challenges to preservation. The preservation of context becomes crucial for digital materials: “preservation of the context to associate with digital objects is the dominant issue for collection-based persistent archives” (Moore, 2000, p. 2).

In 2002, the Council on Library and Information Resources (CLIR) published a report, *Building a National Strategy for Digital Preservation: Issues in Digital Media Archiving*. The report reflects the results of a series of discussions with representatives

from the technology, business, entertainment, academic, legal, archival, and library communities, sponsored by the Library of Congress. Participants discussed the problems of digital preservation and strategies for the future. They identified several critical questions related to digital preservation and archiving: 1) what will be preserved? 2) for what purpose? 3) for whom? 4) for how long? and 5) who will decide (and take responsibility)? (Friedlander, 2002).

Ellen Finnie Duranceau, the Digital Resources Librarian of the MIT Libraries, has written extensively on issues related to licensing management and digital acquisitions. She interviewed five publishers and related their policies, practices, and plans to archiving and perpetual access. Duranceau examined JSTOR, OCLC's Electronic Collections Online (ECO), Blackwell's Electronic Journals Navigator (EJN), Johns Hopkins University Press (JHUP) Project Muse, and Stanford University's HighWire Press. She concluded that "information providers agree that there is no working complete, sufficiently redundant archiving model for electronic journals currently in place" (Duranceau, 1998, p. 111).

Most model license agreements developed by and for the use of libraries or library consortia include the notion of perpetual or permanent use of content that has been paid for. Recent model license agreements, such as the CLIR/DLF Model License ("CLIR/DLF License," 2001) and the California Digital Library Model License (2005) have all been adapted and built on collaborative work by libraries and publishers that was begun in 1999 in the UK with the Publisher's Association and Joint Information Systems Committee (JISC). The standard agreement between UK universities and publishers was

further developed by John Cox and Associates (Cox Model License, 2005). The NorthEast Research Libraries (NERL) Consortium Licensing Guidelines provides that “[a] license agreement should state clearly what access rights are being acquired by NERL or NERL member institution’s permanent use of the content or access rights,” that “specific detail should be provided regarding extent of backfile, method of access,” and that “assurance that access to backfiles will continue even if the institution or the consortium cancels its agreement for ongoing access” (NERL, 2005). In contrast, the California Digital Library includes the following perpetual access license clause:

Notwithstanding anything else in this Agreement, Licensor hereby grants to Licensee a nonexclusive, royalty-free, perpetual license to use any Licensed Materials that were accessible during the term of this Agreement. Such use shall be in accordance with the provisions of this Agreement, which provisions shall survive any termination of this Agreement. The means by which Licensee shall have access to such Licensed Materials shall be in a manner and form substantially equivalent to the means by which access is provided under this Agreement. (CDL Model License, 2005)

While the CDL model license does not require the specificity sought under the NERL guidelines regarding the method of future delivery, it does require that the method be "substantially equivalent" to those available under the terms of the original license agreement.

Resolution 34, adopted by the Executive Board of the United Nations, draws “attention to the ever-growing digital heritage and the need for an international campaign to safeguard endangered digital memory” (United Nations, 2002). It states that the purpose of digital heritage is “to ensure that it remains permanently accessible.” Article 5 of the Resolution, under the heading “continuity of digital information,” states:

[t]he digital heritage is part of a wider continuum of digital information. To preserve digital heritage, measures will need to be taken throughout the information's life cycle. Preservation of digital heritage begins with the design of reliable systems which will produce authentic and stable digital objects" (United Nations, 2002).

2.4. The Mission of Academic Libraries

As the scholarly record moves from a print-based one to an electronic one, challenges and opportunities that directly affect the academic enterprise are emerging, and the entire academic community must grapple with them.

Lynch, 1995, p. 1

In *The University Library: the Organization, Administration, and Functions of Academic Libraries*, Louis Round Wilson and Maurice A. Tauber argue that the mission of university libraries can only be understood within the context of the institution of higher education of which it is a part (Wilson & Tauber, 1956). Specifically, Wilson and Tauber note that "any discussion of the organization, administration, and functions of the university library should be related to the institutions whose objectives it is intended to advance" (Wilson & Tauber, 1956, p. 19).

This section briefly examines the literature related to the mission of academic libraries in the United States. The first part highlights the historical role and relationship between institutions of higher education and academic libraries. The second part explores the fundamental mission of higher education and highlights what Jaroslav Pelikan describes as the fundamental four components of a 'university' (Pelikan, 1992). The third part considers the mission of academic libraries in relation and to the preservation of knowledge or heritage role of a university. The fourth part explores the literature related to the mission of academic libraries and higher education institutions in

light of the phenomena and implications of licensing of electronic resources on long-term access and use of licensed digital resources.

2.4.1. Academic Libraries and Higher Education

Academic libraries have existed on university and college campuses since the parent institutions' inception (Hamlin, 1981, p. 87). Louis Shores provides a detailed historical account of the early period of academic libraries in the United States in *The Origins of the American College Library 1638-1800* (Shores, 1934). Shores identifies the fundamental and integral relationship between the library and the university or college, noting that “American higher education began with a library” (Shores, 1934, p. 11).

Arthur Hamlin, in *The University Library in the United States: its Origins and Development* (1981), continues where Shores leaves off, and provides a detailed historical account of university libraries in the United States. Hamlin also notes the close and symbiotic relationship between the university and the university library, citing studies conducted between 1925 and 1965 that demonstrated the strong correlation between “quality [and] size of library collection[s]” (Hamlin, 1981, p. 96). Hamlin quotes Henrik Edelman and Marvin Tatum, who sum up the centrality of libraries to the academic mission:

Good scholars need good libraries, and good libraries attract good scholars. This interaction is the dominant theme in the story of American university libraries (Edelman & Tatum, 1976, p. 237) .

Sharon Gary Weiner (2005) echoes the strong connection and interrelationship between U.S. colleges and universities and their libraries: “academic libraries have a close relationship with learning and research and have influenced these things as well. Their

history is one of evolution and change that parallels the history of their parent institutions” (Weiner, 2005, p. 1). Clark Kerr describes the historical development of the modern university and the integral relationship of the library to the larger institution as a series of concentric circles with the library in the middle from the beginning.

“The university historically has been growing in concentric circles. It started with philosophy in Greece, and a library—the first great one—at Alexandria. It spread to the ancient professions, and then to science. It permeated agriculture and now industry. Originally, it served the elites of society, then the middle class as well, and now it includes the children of all, regardless of social and economic background” (Kerr, 1963, p. 88)

James Thompson provides an international review of the history of the university library (Thompson, 1980). David Kaser observes that “the terms ‘college’ and ‘university’ [were] used synonymously [in the U.S.] until about 1880, when present distinctions between the two began to come into use” (Kaser, 1980, p. 33). He further describes the development of the modern distinction between U.S. colleges and universities, noting that:

The question of whether to emphasize instruction or research was faced by virtually all institutions in the nation. Many—primarily the younger, private institutions west of the Alleghenies clearly opted for the former and became colleges in the twentieth-century sense, while emphasis on the baccalaureate degree. Others,—especially the colonial period institutions and those enjoying state support—chose the latter alternative and became universities in the present sense, offering not only the basic arts and science programs, but also a broadening range of graduate and professional degrees (Kaser, 1980, p. 43).

2.4.2. The Mission of Higher Education

As noted above, an understanding of the mission of academic libraries in the United States requires an understanding of the missions of the institutions in which they reside. It is important to remember that the missions of academic libraries (and of their parent institutions) have never been static, nor have they been uncontested. Nonetheless, a review of the literature reveals several recurring themes or elements related to university (and thus library) missions. For example, while there are many types and sizes of universities, Jaroslav Pelikan identifies four principles or fundamental components of any university: 1) the advancement of knowledge through research; 2) the extension of knowledge through teaching; 3) the preservation of knowledge in libraries, galleries and museums; and 4) the diffusion of knowledge through scholarly publication (Pelikan, 1992, p. 76). Clark Kerr employs a similar definition, comprising three elements: 1) the preservation of knowledge, 2) the creation of knowledge and 3) the dissemination of knowledge. He states,

The ends are already given—the preservation of the eternal truth, the creation of new knowledge, the improvement of service wherever truth and knowledge of high order may serve the needs of man. The ends are there; the means must be ever improved in a competitive dynamic environment. There is no single “end” to be discovered; there are several ends and many groups to be served” (Kerr, 1963, p. 38).

Ralph A. Wolff argues that the library must be seen in relationship to the larger organization of which it is a part: “the real value of the library is determined by its relationship to other parts of the whole” (Wolff, 1995, p. 85). He uses the metaphor of quantum physics to propose a new approach “built around relations and multiple roles and [which] gives form to the fundamentally changing character of knowledge and the

learning process,” rather than relying on a Newtonian model “separating the world into independent parts” (Wolff, 1995, p. 90). Wolff concludes that “the mission of the library of the future will be principally a teaching one that is directly linked to the educational mission of the institution” (Wolff, 1995, p. 90)

Wilson and Tauber outline six functions of the university that, “despite changes which may occur periodically, appear to follow a consistent pattern” (Wilson & Tauber, 1956, p. 15). The six functions are: “1) conservation of knowledge and ideas, 2) teaching, 3) research, 4) publication, 5) extension and service, and 6) interpretation” (Wilson & Tauber, 1956, p. 15). Wilson and Tauber highlight the imperative to conserve and the university’s important role in the conservation of knowledge and ideas for present as well as future generations, noting:

During the past five hundred years the university has been the chief conservator of knowledge and ideas accumulated by man in his struggle to conquer the physical world, to relate himself effectively to the society of his fellow men, and to develop his intellectual and spiritual capacities. Through laboratories, libraries, and museums, the university, in conjunction with other social institutions, has conserved the heritage of the past essential to the education of the individual and the interchange of ideas. (Wilson & Tauber, 1956, p. 16)

They also point out that teaching is a fundamental function of any university: “through its instructional staff the knowledge and ideas conserved by it are revitalized and put to use in the education of youth who are to be leaders in society and workers in the field of research” (Wilson & Tauber, 1956, p. 16). There is a strong relationship between teaching and preservation of knowledge and ideas:

The preservation of the physical object called the “book,” for example, may not be important in itself. What is important is for the university to transmit to the oncoming generations the ideas which the book contains. (Wilson & Tauber, 1956, p. 16)

Clearly, academic libraries' missions are intimately related to those of universities.

However, the process by which the parent institution advises or consults with the library, or the library with the institution, as a means of coordination, is not well articulated in the literature. Clifford Lynch points out the additional complication and dilemma that exists when there are multiple stakeholders with competing or conflicting interests: “university research libraries serve two masters: the scholarly disciplines of the university faculty and the programmatic objectives of the university administrations” (Lynch, 1995, p. 100).

2.4.3. Academic Libraries and their Heritage Role

Regarding the preservation role of university and research libraries, Jaroslav Pelikan writes that “the university, as perhaps no other institution except the church, memory and expectations are inseparable” and that the “vocation of preserving the common memory represents a moral obligation for the ethos and curriculum of every school and department of the university determined though some of them have been from time to time to forget this obligation” (Pelikan, 1992, p. 112). The university library has a primary moral obligation in this regard and therefore, “it is simply sober fact to say that no single institution in the contemporary world of scholarship has a greater bearing on the future of the university than the library, just as nothing in the history of the university has had greater bearing on its scholarship” (Pelikan, 1992, p. 113).

Patricia Battin has written extensively about the imperative to preserve intellectual heritage, and the challenges in both the print and an increasingly digital environment (Battin, 1982, 1998). She documents the gap between the “intensive

discussion, conference presentations, journal articles, and local initiatives among librarians and specialists” regarding the importance of preservation with the lack of concrete programs or initiatives for carrying it out: “a major program for concerted productive action still eludes us” (Battin, 1982, p. 61). Brian Hawkins asserts the heritage and preservation role of research libraries, stating “research libraries in this country have assumed a major societal role in creating, preserving and organizing the world’s knowledge and have been funded through student tuition, through formula-funding at public institutions, and through endowed book funds” (Hawkins, 1998, p. 129). Likewise, Don Waters argues that “what libraries preserve is the integrity of the works they contain so that these works are reliably and economically available to the individuals and communities whose pursuits of knowledge they support” (Waters, 1998, p. 196). Hawkins also acknowledges the scope of the preservation challenge for research libraries, stating “the problem is universal in scope, but the solution has been related largely to research institutions because historically they have developed the largest, most complex and oldest collections” (Hawkins, 1998, p. 131).

Generally speaking, then, a number of observers seem to agree that there are several key elements or fundamental components of higher education (preservation of knowledge and ideas, creation of knowledge, dissemination of knowledge, teaching, service, and interpretation), and that these may inform and provide a framework for the mission of academic libraries. Academic libraries have traditionally had a role to play to “...preserve the scholarly record in printed form by buying books and journals from publishers for their local researchers, teachers and students” (Waters, 2004, p. 2). This

role now faces crucial challenges and opportunities from the increased reliance on digital technologies (Battin, 1982; Hawkins, 1998; Lynch, 2005; Pelikan, 1992).

2.4.4. Academic Libraries' Heritage Role and the Implications of Licensing

In the face of this shift, what makes preservation action so urgent for electronic scholarly journals—and the risk of failure so high for the academy—is the nature of the licensing regime under which these journals are now distributed (Waters et al., 2005, p.1)

In their report, *The Digital Dilemma*, the Committee on Intellectual Property Rights and the Emerging Information Infrastructure highlights “libraries’ role as a permanent repository of material that constitutes a cultural heritage [which] is threatened by a change in the model of distribution from sale to licensing.” According to the report, licensing has extremely important implications: “libraries could instead become transient, temporary points of access to collections of information that may be available today but gone tomorrow, when licenses expire” (*Digital Dilemma*, 2002, p. 203). In the UK context, Adrienne Muir observes that “libraries cannot preserve digital material they do not own” (Muir, 2003, p.1, 2004). Similarly, Laurie Kaye notes that “license agreements have become a fact of life in conducting business in the electronic environment” (Kaye, 1999, p. 11). Kaye offers practical advice to libraries “in the electronic environment, where traditional print practice of ownership through purchase is being replaced by access through licences, libraries need to be aware that licensing arrangements will set out their specific rights and restrictions and those of their users” (Kaye, 1999, p. 11). Another report by the Task Force on Archiving Digital Information puts it more bluntly: The pursuit of knowledge is a process in which the emergence of new knowledge builds on and reconstructs the old. Knowledge cannot advance without consistent and reliable

access to information sources, past and present. It is the archival function in the system of knowledge creation and use that serves to identify and retain important sources of information and to ensure continuing access to them. (*Preserving Digital Information*, 1996, p. 11).

Regarding the scope of the challenge of digital preservation, Lynch notes that “more broadly speaking, digital preservation is going to be an enormous issue – a very fundamental societal problem at all levels from the nation-state to the individual” (Lynch, 2005, p. 4). He further explores the implications of the preservation challenge for stewardship:

Note that there's a set of research questions about stewardship more broadly in the digital age; these are related to preservation but go far beyond preservation, and move into cultural, public policy, and ethical questions about how and what we remember and forget, about when and how it is appropriate to invest in ensuring the survival of memory. These questions are, in my view, of central importance, but they are not purely (or even, perhaps, predominantly) scientific and engineering questions, and are at best adjacent to the concerns that have characterized digital libraries, even in the context of preservation. Yet we must not lose sight of them, even though it's unclear where the responsibility for engaging them lies other than in academia broadly, largely outside of existing funding frameworks. (Lynch, 2005, p. 5)

According to Ann Okerson, electronic information license agreements “constrict rights in various ways” that the purchase of book materials does not:

- Potential loss of knowledge
- License restrictions on use and users
- Limitations on users' rights
- Loss of browsing
- Cost
- The stability factor
- Other stumbling blocks (Okerson, 1996, p. 57)

She says that in the case of digital materials, “libraries generally do not own the material that they are paying for—they lease it for a limited time. If at the end of that time they cease paying the lease price, prior investment may become worthless if the information is taken away” (Okerson, 1996, p. 57). Clifford Lynch reflects on aspects of control afforded publishers through combinations of licensing and technology:

In the digital world, technology combined with new legal frameworks for doing business - contracts and license agreements, rather than the doctrine of first sale - allow publishers much more flexibility. They create new revenue opportunities, new capabilities for tracking and controlling the use of content, the potential to create new business models such as pay-per-view or limited-time subscription-based access, which generate ongoing revenue streams. In effect, by combining technology with the new business and legal framework, publishers can for practical purposes opt out of many of the requirements of copyright such as fair use. They can bypass first sale, subject only to being able to gain consumer acceptance and acquiescence in the marketplace. This is a promising prospect since each work is a monopoly in some sense, and since there is no meaningful balance of power between individual consumers and publishers in negotiating terms (Lynch, 2001, p.18)

In October, 2005, the Association of Research Libraries endorsed a statement, edited by Don Waters, entitled “Urgent Action Needed to Preserve Scholarly Electronic Journals”. According to the ARL press release, “the endorsement reflects ARL's recognition that now is a crucial time for the library community to act in support of initiatives that will ensure enduring access to scholarly e-journals” (“ARL Endorses,” 2005, p. 1). The statement argues that

When research and academic libraries license electronic journals, they do not to take local possession of a copy as they did with print. Rather, they use content stored on remote systems controlled by publishers, and economies of scale in electronic publishing are driving control of more and more journals into fewer and fewer hands. Although some—but certainly not all—licenses now recognize that libraries have permanent rights to use electronic journal content, these rights remain largely theoretical. If a publisher fails to maintain its archive, goes out of business or, for other reasons, stops making available the journal on which

scholarship in a particular field depends, there are no practical means in place for libraries to exercise their permanent usage rights and the scholarly record represented by that journal would likely be lost. (“Urgent Action Needed to Preserve Scholarly Electronic Journals”, 2005)

2.5. Studies of Licensing and Libraries

Libraries in the United States and elsewhere are new to licensing as a means to acquire access to, and use of, collections and electronic resources. Prior to the 1990s, libraries in the United States purchased and owned collections of materials. Licensing was rarely required and therefore was not an issue. Since the 1990s, however, licensing of digital resources for library collections has grown dramatically and is fast becoming the exclusive method for libraries to access and use commercial digital content and collections. Because licensing library access and use of content and collections is a new practice, the literature on this point is relatively limited.

In 1998, the Association of Research Libraries (ARL) conducted the first survey that specifically addressed licensing and libraries. The survey collected information on six areas, including personnel, educating users and staff, recordkeeping, terms of agreement, collection development impact, and satisfaction levels. Overall, the results indicated that “although some standardization of practice appears to be developing, licensing of electronic products remains a challenge for many libraries and is handled in a variety of ways.” (ARL SPEC, 1999, p. 7).

The ARL Licensing survey focuses primarily on library management of the licensing process. The ARL survey also addresses four issues that are frequently contested in license negotiations: walk-in users at a public terminal; fair use rights as defined by copyright law; perpetual access to purchased materials; and archival rights

(ARL SPEC, 1999). Of the 36 institutions that responded, 26 (72%) reported that they had a policy requiring licensing agreements to include use by a walk-in user at public terminals; 25 (69%) had policies requiring license agreements to include fair use rights. Only 7 (19%) respondents had policies regarding archival rights, and 8 (22%) had policy requirements for perpetual access to purchased license content (ARL SPEC, 1999, p. 9).

The ARL Licensing survey also asked respondents for their views regarding the principal challenges of managing/coordinating licensing for electronic products. Respondents could choose from a list of issues, including license management; negotiation; educating users; staff and vendors; time required; turn-around time; and number of licenses. None of the choices, however, addressed the question of access and use of licensed digital content and collections over time.

The Academic Library Survey (ALS) has been conducted biennially since 1998 by the National Center for Education Statistics (NCES). In 1990, ALS became part of the NCES Integrated Postsecondary Education Data System (IPEDS), which is the U.S. Department of Education's vehicle for collecting data from all postsecondary institutions in the United States. The NCES collects data from 3,700 postsecondary institutions. A number of demographic and routine quantitative data elements are collected, including total library operating expenditures, total volumes, circulation counts and so on. Until 1996, the ALS survey included no questions regarding electronic content, collections, expenditures, or services. Beginning in 1996, a few questions began to be included that related to certain aspects of these library activities and issues. Currently, the ALS survey gathers data regarding expenditures for preservation; however, it does

not require respondents to distinguish between digital and analog preservation. Overall, the ALS provides an overview of broad-based demographic information that can be useful for broad-based comparisons and trends, and as long as it continues on a biennial basis it will also provide useful longitudinal data. However, the ALS surveys do not gather detailed information about the proportion of commercially-licensed digital content in libraries or about the long-term access and use of licensed digital content in library collections.

In their study of electronic journals in 299 ARL and non-ARL libraries, Shemberg and Grossman (1999) found that “both ARL and non-ARL libraries offer extensive electronic services to their constituents.” They also found that “libraries are beginning to cancel paper journals in favor of electronic versions” and that “there is little consensus about who will archive electronic journals” (Shemberg & Grossman, 1999, p. 26). They found little statistical difference between ARL and Non-ARL libraries with regard to canceling print in favor of electronic-only access. 57.2 % of ARL libraries, and 60.4% of non-ARL libraries, reported that they would cancel print in favor of electronic journals within the year (Shemberg& Grossman, 1999, p.35).

Shemberg and Grossman draw two major conclusions related to library archiving of electronic journals that are relevant to the present study. First, they note that “archiving is an unsettled issue” and that “libraries have not increased their commitment to archive electronic journals, rather the reverse” (Shemberg& Grossman, 1999, p. 35). They argue that “[t]his is a major departure from the traditional library role of preserving knowledge, especially for research libraries” (Shemberg & Grossman, 1999, p. 35).

Second, they conclude that “most libraries expect someone other than the library -- the vendor, publisher, or consortia -- to archive (Shemberg & Grossman, 1999, p. 35).

A survey conducted by the Digital Library Federation (DLF) asked respondents about their libraries' expenditures for “commercially supplied content and licensing” in 2000-01, and where they sought advice on copyright and intellectual property issues (DLF Survey, 2001). The aim of another study, by the Institute for Museum and Library Services, was to “develop a realistic picture of preservation activity among non-ARL academic libraries.” Respondent institutions included members of the Council on Library and Information Resources (CLIR), the Association of Research Libraries (ARL), the University Libraries Group (ULG), and the Regional Alliance for Preservation (RAP). However, the definitions of preservation and content used in this survey did not distinguish either the scope or types of preservation included (Kenney, 2002; IMLS Questionnaire, 2001, p. 1). Although the survey did gather data on preservation expenditures by respondent groups (CLIR, ARL, ULG, RAP), it did not differentiate between preservation of materials that were owned versus preservation of digital content and collections licensed by participating institutions.

As part of a systemwide collection management study in 2001-02, the University of California conducted a Journal Use Study, which was designed to provide a “title by title comparison of print and digital journal use under experimental and controlled conditions at campuses” (CMI, 2003, p. 1). The results concluded that “[o]n average, electronic use is more than sixteen times the rate of print use for the same journal titles and issues at control campuses that had both print and digital access” (CMI, 2004, p. 25.

A companion study, the User Preference Survey, included six questions regarding the advantages of electronic journals. Over 90 percent of respondents cited the convenience of electronic journals (CMI, 2003, p. 3). The study also found that the “lack of backfiles was perceived as the major impediment to effective use of digital journal collections” (CMI, 2003, p. 21). The results of both CMI studies indicate strong user preference for electronic content.

The Outsell Survey of Students and Faculty, conducted jointly by the DLF and CLIR, focused on the use and users of scholarly electronic information resources is the Outsell Survey of Students and Faculty. Outsell Inc. surveyed over 3,000 undergraduates, graduates and faculty from a variety of academic institutions. Amy Friedlander’s preliminary analysis of the data indicates that most faculty and students prefer a hybrid environment where electronic resources add to the range of services rather than supplant print information resources (Friedlander, 2002).

In 2002, ARL conducted two more surveys related to licensing and libraries. The *ARL Survey on E-journal Subscription Trends*, “attempt[ed] to develop a portrait of the current landscape for electronic journals” (ARL E-Journal, 2002). This survey was the first attempt to collect detailed information on “price, pricing structures of electronic journals, the degree of penetration of electronic journals in ARL collections, funding and pricing models and license terms to be used by ARL” (ARL E-Journal, 2002), in order to “refine our understanding of the electronic environment and begin to assess how mergers may affect journal prices and license terms in this context” (ARL E-Journal, 2002). The design of the survey, however, was criticized as being difficult and time consuming to

complete. ARL received a lower than expected response rate and have not publicly reported the survey's results.

In 2003, ARL conducted a further survey designed to collect information from its members about "significant negotiations for bundled packages" that had been negotiated in 2003 or were in process for 2004. Fifty-seven ARL libraries responded to the survey (ARL Licensing, 2003). "Bundled packages" were defined as "generally, a multi-year agreement that discourages cancellations through cancellation caps, capped price increases, etc." (ARL Licensing, 2003). A section entitled "key issues" asked about the respondents' experience with specific publishers (Kluwer, MIT Press Journals, and so on) and about specific clauses such as interlibrary loan, non-disclosure clauses, and "bottom-line positions that will make-or-break-a deal.". Forty-eight ARL members reported that they did in fact take such positions; 19 of those reported their libraries required that their own state/nation be the "governing law and venue" for such agreements or that the "license is silent on the matter." "Remote access required" was mentioned 11 times, and "access by walk-in user required" was mentioned 10 times (ARL Licensing, 2003). Fair use and archival access were mentioned 8 and 7 times, respectively, reflecting somewhat less interest in these issues. Twenty-five (44%) reported that where print and electronic versions were available they ordered electronic version only (ARL Licensing, 2003). Forty-three of 57 respondents (76%) reported that they cancelled print versions when they also subscribed to the electronic editions of (ARL Licensng, 2003). This point may suggest that a shift is underway with respect to academic libraries' approach to the

collection, organization, and management of collections for present and future generations.

The ARL Licensing 2003 survey did inquire specifically into libraries acceptance of non-disclosure clauses in license agreements. According to the ARL report “A Snapshot in Time: ARL Libraries and Electronic Journal Resources”, twenty public ARL institutions reported they did accept non-disclosure clauses and eleven private institutions, nine indicated they accepted non-disclosure clauses in their license agreements (Case, 2004 p. 7). In addition to the results one of the 2003 respondents commented on the issue and implications of non-disclosure clauses:

Non-disclosure is a problem. It is certainly a method publishers use to defeat consortia, and to encourage libraries to compete with each other. It would be excellent if the ARL community could agree not to accept non-disclosure statements and yet, if the publisher offers to charge less in return for non-disclosure, it is difficult for libraries to resist; each of us is responsible for getting the very best deal we can for our own institutions. (Case, 2004, p. 7)

In 2003, Lynn Wiley, Head of the Information Resource Retrieval Center at the University of Illinois, surveyed 13 “large research libraries” regarding the impact of licenses on interlibrary loan, for example, how libraries fulfilled ILL⁹ requests from online journals (Wiley, 2004, p. 94). The libraries were all members of the Committee on Institution Cooperation (CIC) consortium. The study found that “not only are the license details not easily available or searchable, but also the conditions vary widely from publisher to publisher, adding another level of exception checking to the ILL workflow.” (Wiley, 2004, p. 95). Wiley also studied examples of ILL clauses in license agreements

⁹ ‘ILL’ is the acronym for interlibrary loan. The American Library Association defines interlibrary loan as “the process by which a library requests material from, or supplies material to, another library” (ALA

and found there to be “many variations” including “ILL is authorized broadly,” “ILL is authorized conditionally...maybe, maybe not,” and “ILL is denied.” (Wiley, 2004, p. 98). Wiley noted that “it is difficult to determine what an authorized user is if it is not spelled out” and that “in some cases the language is just plain contradictory where ILL may be prohibited in one clause but then in a later one, the licensee is allowed to send a hardcopy to a library” (Wiley, 2004, p. 98). The study recommended widespread use of standardized model licenses that guarantee ILL and “maintaining access for users,” and that consortia should negotiate collectively to “increase success in removing prohibitions” (Wiley, 2004, p. 100).

Research related to digital preservation, and more recently, to aspects of licensing and copyright, has also been undertaken in the European Union. Web-based surveys of authors, publishers and libraries conducted in the UK by Margaret-Mary O’Mahony and Adrienne Muir, cited previously, sought to “investigate whether copyright legislation and licensed access to digital content threaten the ability of libraries to provide long-term access to that content and to suggest ways in which the problems can be overcome” (Copyright and Licensing for Digital Preservation, 2003, p. 2). The results of this study make an interesting comparison with the U.S. situation. The CLIP project posed two research questions: 1) How can libraries preserve digital content that is available remotely? 2) If libraries hold a physical copy of digital material, is digital preservation possible under UK copyright law? The survey questions focused primarily on digital preservation strategies and practices and did not ask about specific licensing clauses,

ILL,” 2001) The purpose of interlibrary loan is “to obtain, upon request of a library user, material not

although a number of questions did relate to copyright and licensing for digital preservation. The main findings of the CLIP study indicate that there is “little standardisation in license agreements”, “some publishers consider they have a duty to keep material available long-term, others are motivated by commercial concerns and are therefore not able to give long-term guarantees to libraries”, and “there was no clear consensus from either publishers or libraries on who should be responsible for digital preservation, although the majority of librarians and publishers selected legal deposit libraries as an option”, and that there is a “lack of awareness of digital preservation and related copyright and licensing issues” (Copyright and Licensing for Digital Preservation, 2003, p. 223-225).

In 2001, the International Federation of Library Associations and Institutions (IFLA) Committee on Copyright and other Legal Matters (CLM) prepared a set of licensing principles designed to “prevail in the contractual relationship and written contracts between libraries and information providers” (IFLA Licensing Principles, 2001, p. 1). The Introduction noted that “just as libraries advance the archiving and preservation of traditional media so they are seeking ways to identify ways to ensure that electronic resources will be archived and preserved to be accessible over a long period of time,” and that the methods and costs of ensuring “long-term archiving and preservation of electronic resources are disturbingly unclear” (IFLA Licensing Principles, 2001, p. 1). The IFLA Licensing Principle 3 stipulates that “licenses (contracts) for information should not exclude or negatively impact for users of the information any statutory rights

available in the user's local library” (“ALA ILL.” 2001).

that may be granted by applicable copyright law” (p. 1). Principle 22 states, “a license should include provision for affordable, perpetual access to the licensed information by some appropriate and workable means,” and Principle 23 directs that “a license should address provisions for long-term access and archiving of the electronic information resource(s) under consideration and should identify responsibilities for these.”

In a 2002 report for Morgan Stanley on the \$7 billion global scientific, technical, and medical publishing business, in which Reed/Elsevier is the market leader, analyst Paul Gooden noted that “scientific publishing is the fastest growing media sub-sector in the past 15 years”(Morgan Stanley, 2002, p. 1), for which U.S. academic libraries “account for around 60% of the global market” (Morgan Stanley, 2003, p. 3) Gooden’s research found that “since 1986 the average price of a journal has risen by 215% while the number of journals purchased has fallen by only 5.1%” (Morgan Stanley, 2002, p. 2). The report predicted that three key drivers would affect the industry in the following years: slower growth of library expenditures due to budget cuts; the economies of scale that publishers can realize by bundling their portfolios of journals into single online "products," and the likelihood that margins would increase for publishers with successful online product lines (Morgan Stanley, 2002, pp. 2-3)¹⁰ Gooden predicted a “growing trend of moving from paper and on-line to just on-line” (Morgan Stanley, 2002, p. 3). Of note, from an economic and policy perspective, is that the report estimates that U.S. academic libraries “account for around 60% of the global market” (Morgan Stanley, 2002, p. 3).

¹⁰ In fact, Gooden cites an Institute for Scientific Information Inc. report indicating that the top six STM publishers, including Elsevier Science, Wolters Kluwer, Blackwell Publishers, Bertelsmann, Wiley and Taylor & Francis, account for 44% of articles published.

Another relevant literature for this study is research related to recent legal cases. Research for recent Supreme Court cases related to the extension of copyright duration also involved the important societal and heritage role of libraries for access to and use of information over time. In an *amicus curiae* brief filed on behalf of the Internet Archive in the case of *Supreme Court of the United States Eric Elred et al. v. John D. Ashcroft*, Mark Lemley, Jason Schultz, and Deirdre K. Milligan argued that Libraries exist to preserve and provide access to society's cultural artifacts. To continue to foster education and scholarship in this era of digital technology, libraries must extend into the digital world. Libraries depend heavily on public domain materials to serve their mission of preservation and access. (Lemley, Schultz, Mulligan, 2002, p. 1).

The authors proposed that the Copyright Term Extension Act of 1998 deprives the public of a universally-accessible digital library because extending the exclusive rights of copyright holders discourages posting materials on the Internet by inviting accusations of copyright infringement (17 U.S.C. section 501, *et. seq.*). In 2000, the American Library Association, the American Association of Law Libraries, the Association of Research Libraries, the Medical Library Association, and the Special Libraries Association filed comments to the Copyright Office's Inquiry Regarding Sections 109 (first sale) and 117 - - hearings required as part of the passage of the Digital Millennium Copyright Act. Echoing the findings of the Morgan Stanley report cited above, the library associations observed that "American libraries have long been among the largest volume-purchasers of copyrighted works" (ALA Comments, 2000, p 3). They argued that "licensing rather than selling digital works has allowed content owners to implement a price and market

discrimination business model which forces libraries to choose between second-class but affordable products and more expensive digital versions” (ALA Comments, 2003, p. 5).

Along the lines of the present study, the library associations contended that “[a]s libraries obtain more electronic products under license rather than purchase, they are losing control over archiving and preservation, because many licenses prohibit copying digital works for archival or any other purpose, and because prohibitions on copying are enforced by technological measures” (ALA, 2003, p. 4). The associations concluded that “library services have been diminished by the loss of control over collections that results from restrictions on the application of the first sale doctrine to licensed digital works, so some rethinking of federal policy is urgently needed” (ALA, 2003, p. 12).

Since the beginning of ‘libraries’ in the United States, libraries have always existed to provide access to collections over time. The Oxford English Dictionary defines a ‘library’ as “[a] place set apart to contain books for reading, study, or reference. (Not applied, *e.g.*, to the shop or warehouse of a bookseller.” (OED 2nd ed., 1989, p.888-889). As noted by Robert D. Leigh, in *The Public Library in the United States*:

Libraries of all kinds during the centuries of their existence have had a common objective—one so generally accepted that it is seldom made explicit. It is the conservation and organization of the world’s resources of recorded thought and fact so as to make them available for present and future users. This is an obvious utility for any civilization as soon as it feels the need for something more than oral tradition, and the library, including the public library, has become in most places a kind of symbol as well as a servant of culture. (Leigh, 1950, p. 12).

U.S. college and university libraries have long acquired, owned, made accessible, and preserved resources and collections over time. (Gorman, 2000). As the owners of physical material, as a matter of law, U.S. libraries are entitled to share, loan, archive, and

preserve a copy of the work in perpetuity (17 USC Section 109). Licensing digital content, rather than purchasing content and resources in college and university libraries is, however, a new phenomenon that as of this writing exists in a dynamic environment of fluidity and continuous change. In a licensing environment, governed by state law, license agreements govern the terms and there are no federal copyright guarantees such as fair use, preservation, archiving, and exemptions for libraries and archives. This chapter outlines literature relating to five key aspects of this study including the concept and history of licensing as a means to control access and use of content, how licensing differs from copyright, theories of control, heritage mission of academic libraries and studies of licensing and libraries. The next chapter presents a discussion of the data collected.

CHAPTER 3: METHODS AND PROCEDURES

This chapter, divided in three parts, outlines the study's research design and procedures, including the choice of research methods, research design, and study limitations. Part one details the data collection methods, processes and procedures. Part two provides an overview the analytical methods used in this study. Part three discusses the limitations of the study.

3.1. Research Design

This section provides a detailed overview of the data collection methods, processes and procedures used in this study. A multiple-method design was employed, to gather as much relevant data as possible, to enable comparisons across data types, and to help insure validity and reliability.

Data Collection

As noted earlier, little empirical work has been conducted concerning the implications of licensing digital content for libraries and their users. There are, therefore, few research designs or existing data sets on which this study could build. As a result, I elected to gather four relevant types of data: 1) primary legal texts, such as U.S. Federal Copyright Law, state law relating to contracts, the Licensing Act of 1661, and other relevant existing or proposed legislation; 2) data collected from a survey of 198 college and research libraries in the United States, 3) standard license agreements disseminated online through publishers' websites for products offered for sale to libraries, and 4) interviews

with top publishers, including respondents from commercial, scholarly society, and university presses.

To obtain information on licensing digital content directly from major United States college and university libraries, I designed a survey questionnaire that adhered to Robert A. Peterson's three general guidelines for structuring a good questionnaire. First, Peterson states that a questionnaire should be easy to fill out and be "structured to facilitate its completion." Second, a questionnaire should be structured to "facilitate the efficient transfer of question answers to a form that is amenable to analysis." And, third, surveys should be structured to "avoid biasing question answers" or "context effects" (Peterson, 2000, p. 102).

Every question included in the survey instrument was evaluated for relevance, i.e., how the question and its potential answers address the research purpose. Irrelevant were eliminated. The survey instrument developed for this study is shown in Appendix 1.

A strength of survey research is that it provides the researcher with information obtained directly from representatives of institutions who are directly involved in the licensing of digital content in college and research libraries. A weakness of this form of data collection, however, is that it is self-reported: the responses can be subjective, idiosyncratic, and the context of the answers may be difficult to assess.

The first phase of data collection involved the questionnaire development and the completion and approval of a human subjects protocol by the UCLA Office of Protection of Research Subjects prior to the survey's administration. In addition to the survey

instrument, invitations to participate in the study and follow up correspondence were developed, a secure website was established, a security protocol was designed to strip any personally identifiable information from the survey responses, and the survey instrument was coded for use as an online survey.

There are two main options for developing and implementing an online survey. The first option, which many refer to as the “home grown” option, requires the development of custom software which allows extensive tailoring of the online survey to fit the specific needs of the particular research project. The second option, “off-the-shelf,” commercially available software, is designed to meet common client demands for an online survey tool. The survey for the present study required only one special function: logical skipping or branching. Depending on the respondent’s answer, he or she can be directed to the next appropriate question rather than to the next question in the sequence, which might be relevant for some, but not all respondents. Several commercially available products with this capability were identified, reviewed, and tested. The *Keysurvey* product was selected.

The draft survey was pre-tested with the assistance of several librarians who have licensing experience, but who were not later included in the survey pool. They were encouraged to make comments, and several of their questions and suggestions were incorporated into the final version.

A preliminary legal analysis of the key issues, characteristics of rights and controls of federal copyright law and state law related to licensing was also conducted. Data analysis revealed key issues and contexts (see Table 2). Table 3 reflects the rights

and controls affecting long-term access and uses of information in the legal (copyright and licensing) and technological context, as well as key areas where copyright law diverges from licensing e.g., where rights and uses provided under copyright are not routinely included in license agreements for digital resources acquired by libraries.

In addition to the library survey, I conducted interviews with representatives of top commercial, scholarly society and university press publishers, to elicit publishers' perspectives on the licensing of digital resources. The interview questions are shown in Appendix 3.

Together, the survey responses, interviews, and content analysis of standard publisher agreements yielded both quantitative and qualitative information that provide a rich and complex picture of the key issues, trends and concerns regarding libraries' licensing activities with respect to digital resources. The data also suggest a number of variables that might be used and further refined in future studies.

Selection of Leading Academic U.S. College, University, and Research Libraries

The selection criteria for the academic libraries in this study were designed to include institutions that were most likely to have experience with licensing digital resources. In addition, academic libraries that had participated in similar surveys previously were a particularly important target group, both to facilitate over-time comparisons and to triangulate among variables in the present survey and previous studies. Therefore the list of approximately 100 members of the Association of Research Libraries were invited to participate, since they are the only group to have been previously surveyed on the matter of digital licensing. In addition to the ARL members,

the 74-member Oberlin Library Group (hereafter referred to as "Oberlin" libraries) and 22- member University Library Group (ULG) were included, which increased the total survey population to the 196 largest and most prestigious academic libraries in the U.S.

The libraries that participated in the survey can be compared against the larger population of U.S. institutions of higher education and the libraries that serve them. For example, the National Center for Educational Statistics (NCES) reported that in 1998 there were a total of 3,658 degree-granting post-secondary institutions in the U.S., including 2,220 four-year institutions and 570 doctorate-granting institutions. NECS defined "academic library" as:

An entity in a postsecondary institution that provides all of the following: organized collection of printed or other materials, or combinations thereof; a staff trained to provide and interpret such materials as required to meet the informational, cultural, recreational, or educational needs of clientele; an established schedule in which services of the staff are available to clientele; and the physical facilities necessary to support such a collection, staff and schedule (NECS Data File, 2002, p. 3).

Similarly, in the Carnegie Classification, Research I and II institutions are defined as those that give a high priority to research and graduate at least 50 doctoral students a year ("Carnegie Category Definitions," 2005). As of 2002, there were approximately 225 Carnegie Research I and II institutions in the U.S.; these institutions essentially constitute the elite tier of American colleges and universities, and house the top research libraries. Since these libraries are likely to have the most experience in licensing digital resources, the majority of libraries from these institutions have been included in this research study.

The Association of Research Libraries (ARL) is a not-for-profit membership organization comprised of leading research libraries in North America. ARL consists of

120 member libraries, approximately 100 of which are located in the United States.¹¹

According to its website, ARL's primary mission

is to shape and influence forces affecting the future of research libraries in the process of scholarly communication. ARL programs and services promote equitable access to and effective use of recorded knowledge in support of teaching, research, scholarship, and community service ("ARL", 2005).

ARL has taken an active role in studying the implications of licensing for their member libraries. Since 1993-94, the organization has collected information on its members' expenditures for electronic resources; electronic resources in these studies are defined broadly, and include any type of electronic/digital resource, such as CD-ROMs and networked resources, whether locally mounted or accessed remotely. In 1999, the organization published the first survey on managing licensing in academic libraries (ARL Spec, 1999). The list of U.S. ARL members participating in these studies is included in Appendix 2.

The Oberlin Group is an unincorporated organization with a cap of 75 liberal arts college libraries that share mutual concerns and interests. The Oberlin Group was created in the mid-1980s by presidents of 50 liberal arts colleges, who met in conferences held at Oberlin College to "discuss the role of private colleges in educating the nation's scientists" (English, 2003, p. 1). The main purpose of the group from the outset has been to "share information among the directors in a collegial way to establish an atmosphere of mutual encouragement and support" (English, 2003, p. 1). The group maintains a dedicated discussion listserv, conducts an annual statistical survey whose results are

¹¹ For purposes of this study, since it involves legal analysis and comparison between U.S. federal

shared only with members, and engages in cooperative projects and activities, including reciprocal interlibrary loan agreements. Recently, the group has negotiated consortia license agreements for subscriptions to electronic journals and other digital resources on behalf of its members. In 2003, the Oberlin Group endorsed the Northeast Regional Libraries Licensing Guidelines and Principles (NERL) based on the ARL and CLIR/DLF model license and licensing principles ("Oberlin Libraries," 2003). The current list of Oberlin Group member institutions appears in Appendix 3.

The University Libraries Group (ULG) was founded at Villanova University in Pennsylvania, in 2001 ("ULG Website", 2005). According to the ULG mission statement, adopted in July 2000, the organization's mission is:

To bring together directors of comparable, mid-sized university libraries to share best practices, promote the libraries interests, develop benchmarks for assessing quality of service, and discuss current trends in the delivery of information to undergraduate and graduate programs in a range of disciplines ("ULG Website", 2005).

ULG libraries are primarily privately funded. The current ULG membership consists of 22 privately-funded, mid-sized libraries. Membership is determined by the size and quality of the library, the amount of institutional resources it receives, the number and caliber of students and level of graduate programs supported by the parent institution. The group convenes annually. A complete list of members is shown in Appendix 2.

copyright law and U.S. state law governing contracts, the 20 Canadian ARL libraries were not included in this study

Major Commercial, Scholarly Society, and University Press Publishers—In-depth Interviews

Publishers and other providers are also important actors in the digital licensing landscape. In-depth interviews were conducted with representatives of the top commercial, scholarly society, and university press publishers of academic journals, databases, and monographs, to obtain their perspectives on key issues, trends, and policy issues related to licensing digital resources. According to Michael Quinn Patton, “key informants are people who are particularly knowledgeable about the inquiry setting and articulate about their knowledge—people whose insights can prove particularly useful in helping an observer understand what is happening and why.” (Patton, 2002, p. 321). There are several advantages to using key informants as a means of data collection. A single key informant interview, for example, can be used to provide several types of information: 1) key informants as exemplars or representatives of a particular community or group; 2) key informants as “insiders” to provide the “insider view” of a community or user group being studied; and 3) key informants as an entrée to the community or user group being studied. In this research study, any of the three roles may be appropriate under the circumstances. The key informants and interviewees not only provide exemplars of their community and perspectives but also provide both a view on their unique perspective and insider view of it along with providing an entrée perhaps for follow-up studies in this area or with this group. The strength of using a structured follow-up interview, using the same instrument as the online self-administered survey, is that through dialogue one may be able to collect richer information. A disadvantage of utilizing key informants and follow-up interviews however, is selection bias. Has the

appropriate key informant been selected for the appropriate purpose? Has the interviewer biased the responses by leading the interview in any particular direction?

In the present study, publishers' representatives were a particularly valuable source of information and viewpoints about intellectual property issues. As Lynette Owen observes in *Selling Rights: A Publisher's Guide to Success*, "[t]he publishing business—and by association the trade in publishing rights—is inextricably linked to the existence and recognition of copyright" (Owen, 1991, p. 1). The interview instrument is reproduced in Appendix 3.

Selection of Publishers for In-Depth Interviews

Publishers were selected for the study based on a review of industry literature that related categories and market ranking of leading publishers with digital resources (Morgan Stanley, 2002; Office of Fair Trading, 2002; Publishing for Professional Markets, 2004). Industry and market reports generally categorize publishers into three main types: 1) commercial, 2) scholarly society, and 3) university presses. Traditionally, commercial publishers are distinguished from society and university presses by their for-profit status. The Library of Congress Cooperative Online Serials (CONSER) Cataloging Manual Online, for example, defines a commercial publisher as "a corporate body whose function is that of publishing a work for profit" ("Library of Congress CCM", 2004).

Scientific and scholarly societies are a second category of publishers included in the present study. The American Physiological Society, which is widely regarded as "the oldest American basic biomedical society," defines "scientific societies" as existing "to meet the needs of their members." Typically, they "convene meetings, publish research,

and provide other benefits and resources to their members” (American Physiological Society, 2005).

University presses are the third category. According to the Association of American University Presses (AAUP), “a university press is defined as the publishing arm of a university or college, or a group of such institutions;” furthermore, “university presses encourage and refine the work of younger scholars through publications of the first books that establish credentials and develop authorial experience” (AAUP, 2005).

Similar to the selection criteria for libraries, publishers were selected on the basis of their size, market share, and digital publishing product inventory, with the expectation that the larger publishers would likely have more licensing experience and thus be able to provide broader and deeper experience and perspective about the issues and study research questions. The interview participants included representatives of some of the largest commercial publishers of science, technology, and medicine journals, as well as other academic information products. All were ranked highly in industry and market reports, such as the 2002 report of the Office of Fair Trading in the United Kingdom (Office of Fair Trading, 2002, p. 7). The two scholarly societies selected for this study were also ranked highly according to quantity and prominence of their research publications, the size of their membership, and independence of their existing publishing operations. The two university press publishers were selected on the basis of size and prominence of their print portfolio, and by their growing digital resources of both journals and monographs.

Respondents from all three groups were recruited for the present study because, although all three license content to libraries, each type of publisher has its own distinctive characteristics, including diverse (and sometimes divergent) missions and business models. For example, by definition, commercial publishers are for-profit organizations that only exist if their business models are successful and the bottom line or margin targets are met. In contrast, the primary mission of scholarly society publishers, is to further the research goals of their members and society at large; they publish and disseminate scholarship as a larger part of their educational and research mission and goals rather than to meet a for-profit objective. Meanwhile university press publishers aim to further the education and research mission of their parent institutions of higher learning: they are often a part of or at least affiliated with, the same educational institutions for which they are licensing back the content.

Content Analysis

Data Collection Process

Publishers' standard license agreements were also analyzed for this study, to identify their key provisions and to compare their specific language and other attributes.

Selection of Leading Publishers for Content Analysis

Standard license agreements from fifteen of the publishing industry's leading publishers were obtained for content analysis. Publishers were chosen according to their size and ranking (either by market share, or the size of the firm's portfolio of digital products that

required license agreements), and whether their standard agreements were available online.

Again, data for this part of the study was obtained from commercial, scholarly society, and university press publishers. Standard agreements were obtained for six commercial publishers (Elsevier, Wiley, Blackwell, Kluwer, Taylor & Francis, and Thomson). These publishers' 2,300 ISI-ranked journals account for over 30% of total journal impact factor¹² worldwide, according to the UK Office of Fair Trading (2002, p. 7).

Agreements were also obtained from scholarly society publishers; again, criteria for selection of society publishers included size, market share and rankings, and the publisher's experience in the publishing and licensing of digital content to libraries. Given the high cost of entry and inelastic market in academic publishing, and the large number of highly specialized scholarly societies ("Scholarly Societies Project," 2005), it is not surprising that over the past three decades many societies that previously published their publications themselves have transferred their publications to commercial publishers. However, because the distinctions between commercial and scholarly publishers was an important issue in this study, agreements were obtained from only those societies which continue to publish and host their own publications. Based on these criteria, agreements were obtained from six scholarly society publishers: American Chemical Society (ACS), American Geophysical Union (AGU), American Institute of Physics (AIP), American Psychological Association (APA), Association of Computing

Machinery (ACM), and American Physical Society (APS). Each of these six societies is described below.

American Chemical Society (ACS)

The American Chemical Society (ACS) was founded in 1876. The ACS website describes ACS as a “self-governed individual membership organization that consists of more than 158,000 members at all degree levels and in all fields of chemistry” (“ACS Publications”, 2005). Regarding their publishing program, ACS Publications 2004 highlights include: “revenues from web publications exceeded 40% of total revenue,” “web downloads of ACS articles topped 44 million,” “ACS journals were number one in impact and/or citations in about half the categories of the ISI Journal Citations Reports” (“ACS Publications Highlights,” 2004). In addition, ACS is included among the top ranked scholarly society publishers in the 2002 Office of Fair Trading Report (Office of Fair Trading, 2002, p. 7).

American Geophysical Union (AGU)

The American Geophysical Union (AGU) was founded in 1919. According to AGU’s website, AGU is a non-profit scientific organization with over 41,000 members whose mission is “to promote the scientific study of Earth and its environment in space and to disseminate the results to the public” and “to advance various geophysical disciplines through scientific discussion, publication and dissemination of information” (“Inside AGU,” 2005). AGU currently publishes a weekly newspaper, eighteen scientific journals, and nine book series (“AGU Publications,” 2005).

¹² ISI Thomson Scientific defines impact factor as a measure of the frequency of with which the “average

American Institute of Physics (AIP)

The American Institute of Physics (AIP) was founded in 1931 and is comprised of “a federation of ten member Societies representing a spectrum of the physical sciences” (“AIP About,” 2005). The AIP publication program is very important and the AIP website states that “AIP supports their efforts with print and e-publishing services...” AIP publishes eleven highly cited and rated journals, hosts a database *Scitation* of over 100 journals, and publishes conference proceedings, books, and statistical reports.

American Psychological Association (APA)

The American Psychological Association (APA) was founded in 1892. The APA website describes APA as both a scientific and professional organization that represents over 150,000 members worldwide (“APA About,” 2005). The APA Bylaws 1.1 includes the following mission: “the increase and diffusion of psychological knowledge through meetings, professional conference papers, discussions and publications” (APA Bylaws, 2005). APA does extensive publishing, including over 50 journals, databases, software, videos and books.

Association of Computing Machinery (ACM)

The Association of Computing Machinery (ACM) was founded in 1947. The ACM currently has over 80,000 members and describes itself as the “industry’s leading portal to computing literature, authoritative publications and pioneering conferences.” The ACM publishes extensively online, including online books, journals, and proceedings.

article” in a journal has been cited in a particular year or period. For more information see The Impact

American Physical Society (APS)

The American Physical Society (APS) was founded in 1899. The mission of APS “to advance and diffuse the knowledge of physics” (“APS A Brief History,” 2005). APS currently has over 40,000 members. APS currently publishes “the world's most prestigious and widely-read physics research journals” (“APS Publications” 2005).

University Press Publishers

The selection criteria for university press publishers were basically the same as for the other publisher types, including the size of the press and the size of its portfolio of digital products, its likely experience with digital licensing, and the availability of its standard license agreement on its website. *Publishing for Professional Markets: Forecasts and Projections 2004-2005* lists the University of Chicago Press and MIT Press among the top seven U.S. “leading university presses” (*Publishing for Professional Markets*, 2004, p. iii) In addition, two of the three university press publishers included in the Office of Fair Trading report of top publishers of ISI rated STM journals, Cambridge University Press and the University of Chicago Press, were selected.

Cambridge University Press

Cambridge University Press “is an integral part of the University and is devoted constitutionally to printing and publishing for the acquisition, advancement, conservation, and dissemination of knowledge in all subjects” (“Cambridge University Press”, 2005). Today, the press publishes over 150 journals and 2,500 books a year. In its earliest days, circa 1850s the press was primarily a printer of bibles and prayer books. According to its

Factor: ISI at <http://www.thomsonscientific.com/knowtrend/essays/journalcitationreports/impactfactor/>

website, today, the press not only publishes the from the press's publishing business but also "for many other academic publishers and organizations around the world" ("Cambridge University Press", 2005).

MIT Press

MIT Press was established in 1926 when MIT published a set of lectures on the problems of atomic dynamics given by physicist Max Born. John Wiley & Sons, a commercial publisher, took over the editorial and marketing function for the next 25 years until 1962, when MIT severed the Wiley arrangement and resumed independent publishing as MIT press. The MIT Press describes itself on its website as "the only university press in the United States whose list is based in science and technology" ("About MIT Press", 2005). As such, MIT Press has and continues to be an innovator in electronic publishing having begun their first experiments with electronic publishing tools as early the late 1960s.

University of Chicago Press

The University of Chicago Press was founded in 1891 as an "organic part" of the university. By 1901 the press was publishing fourteen scholarly journals. Today, the journals division publishes 50 journals all of which are currently available in digital or print format. The mission of the University of Chicago Press is to "disseminate scholarship of the highest standard and to publish serious works that promote education, foster public understanding, and enrich cultural life" ("University of Chicago Press", 2005)

In total, standard license agreements were obtained from six commercial publishers, six scholarly society publishers and three university press publishers, for a total of 15 agreements. Cumulatively, these 15 publishers provide over 40% of science, technology, and scholarly content available worldwide (Morgan Stanley, 2002; Kassab, 2003).

Based upon a preliminary review of the text of the licenses, seven main categories or focus areas were identified for content analysis: 1) the identification of included rights to use the licensed digital content; 2) the identification of any restrictions or prohibitions on rights to use the digital content; 3) the scope or omission of any publisher's warranties; 4) the occurrence or omission of the publisher's guarantee of completeness of content or accuracy of licensed content; 5) the occurrence or omission of the publisher's guarantee of a right to perpetual or continuing access to the licensed digital content; 6) the right to archive; and 7) the occurrence or omission of a non-disclosure clause.

Each category also included a number of subcategories or elements. For example, elements in the first category included specific use rights, such as the right to copy, scholarly sharing, interlibrary loan, e-reserves, right to print articles, and inclusion of a fair use clause.

3.2. Choice of Research Methods

This section describes choice of methods and analytical tools used in this study. One of the challenges of any study is the careful design and implementation of a detailed research plan that is aimed at obtaining rich and reliable results that can contribute to generalizable research and society. Research on new and emerging phenomenon is by its

nature aimed at obtaining new information in new and emerging areas to inform future research and is therefore additionally challenged by lack of prior comparable research. Research on emerging and new phenomenon are not likely to have the advantage of relying on previous relevant work and are therefore used more to obtain an overview, refinement, or baseline and context, dependent findings rather than to make large-scale generalizable claims. In this study, the multiple method research design appears were utilized in an effort to utilize a variety of strategies and approaches and in an effort to increase understanding of the problem and guide future research in this area.

The challenge of contributing generalizable findings from research into new and emerging areas was compounded in this case because there has been little or no previous empirical research done on this topic. In addition, the subjects and contexts exist in a highly dynamic and complex environment, where the scope is broad and contains few established definitions. For example, it is not clear whether there is an established definition of what constitutes and is counted by various libraries as “licensed digital resources.” Or, what is meant by “persistent or perpetual access?” This new and understudied phenomenon is also, however, what makes this research valuable and unique. My hope is that I can contribute in some way toward informing further research in this area. The topic of long term access and use of licensed digital collections in college and university libraries in the U.S. is a phenomenon that is both new and has been understudied.

Studies into new and emerging areas such as this one are particularly appropriate for three reasons. First, the problem or phenomenon under study is new. Second, the

phenomenon occurs during a period of a rapid technological and legal change. Third, little empirical work has been done so there are no existing baselines. In this study, all three of these aspects apply. Licensing digital content and collections by college and university libraries is a new phenomenon. Prior to the early 1990s, libraries purchased and owned collections. In 1990, the Association of Research Libraries member libraries reported spending approximately 4 percent of their annual collection budget on licensed electronic resources (ARL, 2000). Since the early 1990's, there has been exponential growth in the nature, quantity, and complexity of acquiring, maintaining access, and preserving licensed digital resources over time. The quantity and sheer explosion of new information and new digital information is noteworthy. Hal Varian's *How Much Information Project* analyzes the annual size of new information recorded in storage media. He estimates that "new stored information has about doubled in the last three years. The United States produces about 40% of the world's new stored information..." ("Varian, 2003, p. 1) This study seeks to explore this new phenomenon and identify trends that can be used to guide future research and policy development in this area.

U.S. academic libraries have long acquired, owned, made accessible, and preserved resources and collections over time. As a matter of law, as the owners of the physical material, U.S. libraries are entitled to share, loan, archive, and preserve a copy of the work in perpetuity (17 USC Section 109). Licensing digital content rather than purchasing content and resources in college and university libraries, however, is a new phenomenon that as of this writing exists in a dynamic environment of fluidity and continuous change. In a licensing environment, governed by state law, license

agreements govern the terms and there are no federal copyright guarantees, such as limited scope, duration, fair use, exemption for libraries and archives, and first sale guarantees. Instead, everything is negotiable, including any provisions or restrictions related to maintaining access, completeness or accuracy of content, persistent or perpetual access, and digital preservation.

Peter K. Knight, author of *Small Scale Research* states that “[g]ood research involves creatively designing ways of using inquiry methods to face research questions” (Knight, 2002, p. 16). Fred N. Kerlinger, known for his books on the Foundations of Behavioral Research, agrees and defines research design as “research design is the plan and structure of investigation so conceived as to obtain answers to research questions” (Kerlinger, 1986, p. 286). Following the wisdom of Kerlinger and Knight, this study seeks to creatively employ several methods to obtain relevant information that informs the research questions.

In an effort to provide as rich and robust an examination as possible, multiple methods are utilized, including narrative policy analysis, legal analysis, and empirical data collection and analysis. Below is an overview of each method.

Selection of research methods are dependent on several factors, including the type of research and research questions to be examined. Good research design requires researchers to examine two critical questions prior to the selection and evaluation of selected research methods. First, what kind of data will provide a detailed understanding and answer the research questions? Second, having determined what we need to find out about, what research techniques are most appropriate for capturing the relevant data?

Thematic Analysis

Thematic analysis involves the identification of patterns or themes as a means to “identify core consistencies and meanings” (Patton, 2002, p. 453). Thematic analysis begins with inductive analysis “discovering patterns, themes, and categories in one’s data” that are then used to inform deductive analysis “where data are organized according to an existing framework” (Patton, 2002, p 454). Similar to grounded theory, where inductive processes inform deductive processes, thematic analysis can be used in this study to identify the core themes for libraries and publishers related to the challenges involved with licensing digital resources. Thematic analysis seeks to “unearth themes salient in a text at different levels” (Attride-Stirling, 2001, p. 386) and thereby provides a useful tool to analyze the responses from publishers and libraries. In addition, thematic analysis provides for a multi-disciplinary approach that seems well suited to the cross domain environments of law, technology, and policy related to the study of long-term access and use of licensed digital content in college and university libraries. The strengths of thematic analysis are the identification and description of key or core patterns and themes. The weakness of thematic analysis is related to misreading or possible multiple readings of the same data.

Legal and Policy Analysis

Legal analysis involves the identification, analysis, and discussion of primary and secondary legal sources. In this research study, primary legal sources include the Licensing Act of 1662, the U.S. Copyright Act, the Digital Millennium Copyright Act (DMCA), and the Sonny Bono Term Extension Act are examined and discussed. In

addition, and in comparison, state contract law and the law of licensing are examined, analyzed, and key provisions of federal copyright law and state contract law are compared.

Critical legal analysis, along with thematic analysis, can be used to identify themes and issues related to long term access and use of licensed digital content in college and university library collections. While there have been several examinations of the impact of the global expansion of copyright and other forms of intellectual property, there have been too few studies on the role and impact of ensuring sustainable, persistent access, and use of licensed digital content in college and university library collections. The focus of this study is on exploring in what ways, if any, do license agreements for digital information resources have an impact on library users rights guaranteed under federal copyright law.

Policy analysis can be defined and practiced utilizing a variety of methodology, methods and tools. According to Mairead Browne, “in the information studies literature, the term ‘policy’ is used most often to describe government policy, but the term is also used to refer to strategies in private and public sector organizations to align informational support and corporate goals such as increased competitiveness and improved efficiency” (Browne, 1997, p. 263). Browne points out that in public policy circles, traditional policy analysis is restricted to governmental and public policy rather than organizational or individual policy. Browne notes, however, that “the distinction between the role of the public and private sectors has been getting blurred and the scope of public policy less clear-cut as a consequence” (Browne, 1997, p. 264). In this study, issues related to the

law and governmental policy, and the role of libraries and publishers as institutional stakeholders are identified, addressed and analyzed.

Content Analysis

Content analysis is a research method that can be used in both quantitative and qualitative research. According to Bruce L. Berg in *Qualitative Research Methods for the Social Sciences*, content analysis provides a method for identifying and understanding words or text or transcribed accounts from the perspective of the producers (Berg, 1998). In this study, content analysis can help with both quantitative questions and data collection. For example, how many license agreements collected/examined contain an occurrence or an omission of key clauses or key words? Content analysis is also used as a qualitative method to flag occurrences and omissions of key clauses or key words where an interpretation or qualitative assessment or analysis is appropriate. Content analysis provides a technique to analyze both manifest content (those elements physically present and countable) and latent content (the underlying structural meaning conveyed by the message) (Berg, 1989). For example, the question of how many U.S. academic library license agreements contain a provision or clause related to archiving can be obtained by a quantitative approach yet understanding what is included in the archive may only be obtained through a qualitative or interpretative analysis. Both types of approaches are utilized. Among the terms or phrases that are included are the following: fair use, interlibrary loan, scholarly sharing, perpetual access, and archives or archiving.

3.3. Limitations of the Study

The same factors that make this topic a good candidate for a research study have also created certain limitations. First, because relatively little prior research has been done on digital licensing in academic libraries, the study has been designed to gather basic descriptive data about digital licensing, and its implications, instead of more in-depth information about specific institutions, or more specific issues or problems. This decision has restricted the degree to which detailed comparisons might be made among subgroups of respondent libraries or publishers. For example, because publishers customarily prohibit libraries from disclosing the terms of particular license agreements, library respondents were not required to identify their institutions in survey responses, so that they could comment more freely about the details of their contracts with publishers. As a result, fewer than half of the survey respondents identified their institutions, which limited the comparisons that could be made among the ARL, Oberlin, or ULG groups.

Second, because the licensing of digital content exists in a rapidly changing technical, legal, and business climate, it may be difficult to make predictions based on the results reported here. As noted in the results of the publisher interviews and survey, licensing of digital resources to U.S. academic libraries only began in 1995; in less than a decade the volume of licensing activity has increased over 600%. The technological, institutional, and legal contexts of licensing are likely to shift just as dramatically in coming years. Therefore, the research findings, significance, or analysis reported here may need to be reevaluated or reconceptualized in future studies.

Finally, a note on what is not included in the scope of this study. This study has been designed to provide a detailed and rigorous first look at the nature, scope, issues, and implications of the licensing of digital collections in college and research libraries. The underlying economic, social, or cultural contexts of licensing are largely outside the scope of the present work, except as part of the discussion of implications for further research.

CHAPTER 4: DATA DESCRIPTION AND DISCUSSION OF FINDINGS

This chapter describes and discusses the results of all data collection conducted for this study.¹³ As noted in Chapter 3 on research design, multiple methods were used to collect pertinent data from diverse sources and perspectives in order to identify key factors, issues, and context. This chapter is divided into three sections that reflect the three methods used in this study: Section 4.1, an online survey of 196 leading academic college and research libraries in the United States; Section 4.2, eighteen in-depth interviews conducted with top publishers of digital resources; and Section 4.3, a content analysis of publishers' standard license agreements used in libraries.

4.1 Licensing and Libraries—The Survey

This survey was designed to answer the primary research question driving this study and to collect information that can help to identify the key issues, trends, and perspectives relating to the licensing and collection of digital library content by major U.S. academic libraries. According to the protocol outlined in Chapter 3 the survey was conducted online over a 12 week period between April and July, 2004. The survey target group consisted of the leading academic libraries in the United States, including 100 libraries (excluding UCLA) that are members of the Association of Research Libraries (ARL), 74 Oberlin Group Libraries (Oberlin), and 22 University Research Group Libraries (ULG).

¹³ The online survey instrument is shown in Appendix 1; the publisher's interview instrument is shown in Appendix 3; and sample standard license agreements from a scholarly society (Appendix 9), university press publisher (Appendix 10) and commercial publisher are shown in Appendix 8.

The following section, describes the target groups data and significant results from the survey.

Survey Response

Of the 196 survey invitations sent out to the directors of the selected libraries, 114 institutions responded for an overall survey response rate of 57%. Not all respondents however, completed every question of the 23 question online survey. Matthias Schonlau in *Conducting Research Surveys via Email and the Web* reports that “response rates range from 7 to 44 percent for Web surveys and from 6 to 68 percent for e-mail surveys” (Schonlau, 2001, p. 91). The 1999 ARL survey *Managing the Licensing of Electronic Products*, conducted by regular postal mail, reported 44 of the 122 ARL member libraries (36%) responded to the survey. (ARL Spec, 1999, p. 6). The 2004 U.K. study on digital preservation, copyright, and licensing conducted by Adrienne Muir at Loughborough University also included a survey questionnaire. In that study, 1000 libraries in the U.K, were surveyed with a response rate of 16.8% (Muir, 2004, p.26).

4.1.2 Licensing Activity in U.S. College and Research Libraries

The first seven survey questions address demographic and quantitative information related to the libraries’ level of licensing.

Table 3. Survey Response—Section 1, Question 1

1. How does your library ordinarily manage/coordinate the licensing of digital resources (e.g., databases, electronic journals, websites, etc.)? Check the answer that most closely reflects your situation:	
<u># of Respondents</u>	
8 (7%)	We do the licensing of all digital resources that the library acquires.
102 (89.5%)	We do the licensing of all digital resources that the library acquires with the exception of those done on our behalf by consortial partners.
0	We only acquire digital resources through consortial arrangements.
0	We do not manage/coordinate the licensing of if any digital resources.
<u>4 (3.5%)</u>	Other ¹⁴ (please specify).
<u>114 (100%)</u>	

¹⁴ These responses are shown in Appendix 4.

As shown in Table 3, 114 libraries responded to Question 1, which pertains to management and coordination of licensing library digital resources. A majority (almost 97%) of the responding libraries do nearly all of their own licensing on behalf of their libraries, while 4 (3.5%) libraries responded “other” (see Appendix 4 for these responses). One library respondent pointed out the difficulty he or she experienced while completing the survey.

No place in survey for a note -- you ask for many percentages. I would have to spend many hours to answer these questions. the % answers I give are entirely guestimates and probably a long way from reality. We are now working on ERSM plan that will give us better analysis tools of these resources. Ask again in a couple of years. Good Luck. ps - when I fill out a survey, I like to save a copy of my responses - would be nice if you had a final page where I could see my completed survey and save or print it.

Responses to the Survey’s Question 2-7 are shown in Table 4.

Table 4. Survey Response—Section 1, Questions 2-7

Survey Question	# of Respondents	Mean Number	Range of High/Low	Standard Deviation	Median Number	Average Absolute Dev. from Median
2. In 1995, about how many signed license agreements for digital resources did your library have? Please fill in a number (for example, 60): _____.	34	13.9	110 / 1	20.4	9.50	9.62
3. Today (2004), about how many signed license agreements for digital resources does your library have? Please fill in a number (for example, 75): _____.	36	179	600 / 20	138	155	101
4. What is your library's total collection budget as a dollar amount ? \$ _____.	36	\$4.7 mil. (2004)	450,000 / 27,000,000,	5.1 mil.	3.4 mil.	1.3 mil.
5. What percentage of your library's collection budget do you expect to spend this year on licensed digital resources? Please do not include items like your library's OPAC or other digital project development: _____%.	36	28.3%	60% / 8%	13.2	29	10.7
6. Of the digital resources for which you currently have signed license agreements, what percentage does your library also acquire in print, microfilm, CD or other physical forms? _____%.	33	29.9%	75% / 5%	22	20	17.4
7. What percentage of your library's licensed digital resources are acquired in digital form only? (Online access only): _____%.	33	69.4%	98% / 25%	23.4	80%	19.6

The purpose of questions 2 and 3 is to obtain historical and contemporary benchmark data for the libraries' comparative levels of licensing activity in 1995 and 2004. Of the 40 institutions that responded to these two questions, 34 reported that their libraries had signed license agreements for digital resources in 1995. A high of 110 agreements was reported by one ARL library with a low reported by three libraries (2 Oberlin and 1 unidentified) of 1 license agreement. The second highest number of agreements in 1995, 50, was reported by a member of the University Library Group (ULG). The median number of license agreements was 9.50 and the absolute deviation from the median is 9.62. All but five respondents reported that they signed 15 or fewer agreements in 1995. However, in 2004, 36 institutions reported a mean of 179 signed license agreements with a standard deviation of 138 and a range of a high of 600, reported by one unidentified library, and a low of 20 reported by 2 libraries (1 Oberlin and 1 unidentified) also signed license agreements. Therefore, an overall increase of 600% occurred from 1995 to 2004. The majority of respondents above the median are ARL library members and the majority of responding Oberlin and ULG libraries either at or below the median.

Fig. 2: Major Increase in Number of License Agreements

Over 600% increase in Agreements from 1995 to 2004

Source: Questions 2 and 3, Survey Instrument (Farb 2005)

Table 5. Survey Response—Section 2, Questions 8-12

Survey Question	# of Respondents	Mean Number	Range of High/Low	Standard Deviation	Median Number	Absolute Dev. from Median
8. Does your library have guidelines, principles, checklists, or other policy documents that outline or recommend practices for licensing digital resources? ___ No ___ Yes If yes, please describe below (or provide document link/ URL or email to _____).	36/36	24 Yes 12 No	Not applicable	Not applicable	Not applicable	Not applicable
9. Does your library modify or amend standard license agreements offered by vendors, publishers, or providers before they are signed? ___ No ___ Yes	30/35	30 Yes 5 No	Not applicable	Not applicable	Not applicable	Not applicable
10. What percentage of such standard license agreements does your library typically modify or amend? ___ %	30/35	62.2%	4 / 1	39	82.5	32.2
11. What types of modifications or amendments do you typically propose (for example, <i>governing law, usage statistics, etc.</i>), and about how frequently are they accepted by the licensor? Please list.	Governing law and indemnification were the most commonly cited modifications. Provisions or restrictions related to interlibrary loan were also cited several times.					
12. Please rank-order the following factors in terms of their value to your library in finalizing digital resource license negotiations. (Highest to lowest, 1-6)	1. Copyright guarantees 4. Authenticity/completeness of content 2. Long-term access and use 5. User satisfaction 3. Price 6. Usability					

As shown in Table 4, questions 4 and 5 focus on demographic information related to the financial and economic resources spent by respondent libraries on their collections overall, as well as the proportion money spent on digital resources. Information related to library collection budgets overall are reported by participating ARL institutions annually and are reported in ARL Statistics. ARL reports that “definitions of statistical categories used are based on ANSI/NISO Z39.7 1995” standards and “gradually modified the definitions to accommodate electronic resources” (“ARL Statistics,” 2002). Beginning in 1992, ARL introduced a supplemental survey that focused on “increased expenditures of electronic materials” (“ARL Statistics,” 2002).

Thirty-six libraries responded to Question 4 with a meaningful estimate of their collection budgets. The mean collection budget reported for 2004 was \$5.6 million, with a sum of over \$179 million spent annually among those responding academic libraries. In regard to question 5, 36 libraries responded that on average they spend 28.3% of their current collection budget on licensed digital resources. The standard deviation for this percentage is 13.2, with a range high of 60% reported by 2 libraries (1 unknown and the other an ARL library) and a low of 8% reported by an Oberlin library. The median is 29 and the absolute deviation from median is 10.7. Of the 24 respondents that can be identified by member organization, 12 are above the median (8 ARL, 3 Oberlin and 1 ULG) and 12 are below the median (8 ARL, 3 Oberlin and 1 ULG). As shown by the data in Table 4, since libraries are using nearly one-third of their collection budgets on licensed digital resources, this is a significant amount of their overall budgets.

Of the 33 libraries that responded to Question 6 (regarding the percentage of material acquired under license that the library also acquires in print or other formats), all but two respondents filled in a numeric percentage that ranged from 5 to 75%. Thirty-three libraries also provided meaningful responses to Question 7 (regarding the percentage of digital materials that are acquired in digital form only and therefore are available for access and use based solely on the terms and conditions of a license agreement). The mean was 69.4% with a standard deviation of 23.4 and a range of a high with one Oberlin library reporting 98% to a low of 3 libraries (1 ULG and 2 ARL) reporting 25%. The median was 80% and the average absolute deviation from median is 19.6. In Question 7, (see Table 4), ten libraries reported between 90-98% of their library's licensed digital resources are acquired only in digital form and another 7 reported 80-89%. Thus, over half of the respondents reported that 80% or more of their libraries' licensed digital resources are acquired in digital form and therefore are usable only under the terms and conditions provided by the license. 20 respondents can be identified by member organization of those 12 libraries responded at or above the median (6 Oberlin, 5 ARL ,2 ULG) and 8 below (6 ARL, 1 Oberlin and 1 ULG).

Licensing Provisions and Negotiation in College and Research Libraries in the U.S.

Section 2 of the survey (Questions 8-12) addresses license provisions and negotiation, focusing on the individual library's institutional response to the development of policies and practices related to negotiating and licensing library resources and content.

As shown in Table 5, while 24 libraries reported that did they have guidelines, checklists, or other policy documents that outline or recommend practices for digital

resources, 12 reported that they had no such documents. Some respondents also referenced existing model license or consortial guidelines such as North East Research Libraries (NERL) Principles for Electronic Journal Licensing or University of California (CDL Model License) Model License, or respondents indicated that they would make their own institutional guidelines and such documents available (NERL Licensing Guidelines, 2005, CDL Model License, 2005).

In response to Question 9, 30 out of 35 responding libraries (85%) indicated that they routinely modify standard license agreements offered by vendors, publishers, or providers before they are signed. For Question 10, regarding the percentage of standard agreements modified, the mean for the 30 respondents was 62.21% with 8 libraries reporting that they modify fewer than 10% of standard agreements, while 13 libraries reported that they routinely modify 90-100% of standard agreements. The standard deviation is 39 and the range is a high of 4 libraries reporting they modify 100% (1 Oberlin, 2 ARL and 1 unknown) of the standard agreements to a low of 1 (Oberlin) library reporting they modify zero standard agreements. The median is 82.5 and the average absolute deviation from the median is 32.2. Of the 15 respondents that can be identified by group affiliation 7 ARL, 1 Oberlin, and 1 ULG libraries reported percentages above the median where 4 ARL, 1 Oberlin, and 1 ULG reported percentages below the median. Governing law and indemnification were the most commonly cited modifications in the responses to Question 11. Provisions or restrictions related to interlibrary loan were also cited several times. Comments related to archiving and

perpetual access varied from “attempted to gain perpetual access to content” to “publisher archiving? User archiving?”

In the responses to Question 12, on a scale of 1 to 6, *usability* received the lowest overall ranking, with a score of 3, followed by *authenticity/completeness of content and user satisfaction*. *Copyright guarantees* rated the highest with an overall score of 4.4, followed by *long-term access and use* with an overall ranking of 4. *Price* had an overall ranking of 3.1.

Licensing: Access and Preservation Issues

Section 3 of the library licensing survey (Questions 13-19) highlights licensing in relation to access and preservation issues and focuses on library policies, priorities, and key clauses that encourage or restrict access and preservation.

Participant responses to Question 13 are shown in Figure 3 (next page) which graphically reflects the high institutional interest in a variety of use-related issues including fair use, walk-in users and interlibrary loan. It is noteworthy that only three libraries reported that their license agreements permit creation of preservation copies and only seven of 41 reported that securing archiving rights was a matter of library policy.

Fig. 3. Licensing Clauses Required by Library Policy

Source: Question 13, Survey Instrument (Farb 2005)

The largest overall response was the library policy for provision in license agreements for walk-in users. Walk-in users are often defined in license agreements as users who are not students, faculty, or staff of the licensing institution but are authorized to use resources within and on library and institutional premises. Provision for walk-in users has always been important to public institutions who routinely, and in some cases by charter, provide access to library materials to members of the public and the community. In addition, increasingly walk-ins users are also alumni of the institution that are otherwise excluded from access to electronic resources licensed by their alma mater. The data related to walk-ins reflects that libraries that are members of all three member organizations find provision for walk-in users a priority in license agreements. Of the 14 responses, where library member organizations are identifiable, 3 Oberlin, 2 ULG, and 9 ARL libraries responded that their libraries require license agreements to be used by walk-in users at public terminals as a matter of library policy.

Thirteen libraries provided comments in the “other” category. The transcript of these responses can be found in Appendix 5. In section 3 of the survey instrument, questions 13 through 18 focus on specific areas of license agreements that include archiving rights, perpetual access, and fair use. Data collected through these questions indicate that on average 39% of the current license agreements in individual responding libraries provide for the library’s right to archive the content of licensed digital resources; 45% include the right of perpetual access to licensed digital resources; and 75% include fair use. It should be noted that there was a wide range of responses related to the percentage of license agreements that included the right for libraries to archive licensed

content. Five libraries reported that less than 10% of their agreements provided for the library's right to archive and five libraries reported 75% or more of their agreements included the right to archive licensed content. While the latter number is particularly high, especially in light of the 39% right to archive figure, it is noteworthy that, on average, 25% of agreements do not include fair use and over 60% do not include archiving rights.

Responses to Question 14 (regarding the percentage of license agreements libraries currently have that provide for the right to archive) indicate that overall 36.2% of license agreements negotiated by responding libraries include the right for libraries to archive licensed content. The mean is 45.3 and the standard deviation is 27.8 with a range of a high of 90% reported by one Oberlin library and a low of zero reported by four libraries (2 Oberlin and 2 unknown). The median is 30 with the average absolute deviation from the median is 23.9. Of the 35 libraries that responded to that question, 21 (60%) can be identified by their library member organization. Of the libraries that can be identified from the three groups, the mean for each is fairly close to the overall mean of 36.2%. The five Oberlin Group libraries that can be identified responded that, on average, 40% of their license agreements include the right to archive licensed resources. The 3 ULG libraries reported that on average 31% of their license agreements provide for the right to archive and 32% of 13 ARL licenses provide for the right to archive.

The responses to Question 15 (regarding the percentage of license agreements that include perpetual access) also break down similarly for each library member organization. The five Oberlin Group members that can be identified report that 45% of

their license agreements include perpetual access. The ULG members that can be identified report that 38% of their agreements include perpetual access and ARL members report that 43% of their agreements include perpetual access.

Question 16 on fair use also maps closely by member organization to the overall average and to each other. The Oberlin Group members that can be identified report that 73% of their license agreements include fair use, while ARL members report a mean of 68% and ULG members report that 60% of their agreements include the provision of fair use in the license agreement. The results discussed above are shown in Figure 4.

Fig. 4. Lack of Archiving Rights, Perpetual Access, Fair Use & Long-Term Planning for Licensed Digital Resources (LDR)

Source: Questions 14-17, Survey Instrument (Farb 2005)

In response to Question 17 (Does your library currently have a plan for the long-term preservation, access, and use of licensed digital resources?), 26 (75%) out of 35 libraries reported that they did not have any long-term plan for licensed digital resources. Only 9 (25%) libraries reported that they did have a plan. Of the responses that can be identified by library member organization again all three are represented. Of the five Oberlin Group members that can be identified, all five indicate that they do not currently have a plan for long-term preservation, access and use of licensed digital resources. The three ULG libraries that can be identified also report not having a plan. Of the 13 ARL libraries that can be identified eight (60%) report not having a plan while five (40%) report that they do have a plan.

As shown in Figure 5 (next page), over 40% of respondents reported that their library currently has no strategy for addressing perpetual or archival access to licensed digital resources, but has begun planning. Another 11% of respondents report that perpetual and archival access has not been considered. In other words, over 50% of all responding libraries have no current strategy. Also noteworthy in this data is the reported reliance of 30% of respondents on a third party for long-term preservation and access, a finding that has implications for the library's traditional stewardship role and for the traditional non-archival role of the publisher. This topic is discussed in more detail in Chapter 6 (see Figure 5).

Fig. 5. Academic Libraries' Methods of Addressing Perpetual Access

Source: Questions 18, Survey Instrument (Farb 2005)

The survey instrument's next three questions (Questions 19-21) are open ended and ask libraries to describe what they are doing to ensure licensed digital resources will be affordable over time, to identify the most difficult issues facing their library regarding licensing, and to identify the most difficult challenges facing their library regarding long-term access and use of licensed digital resources. The complete responses for these three questions can be found in Appendix 5, 6, and 7. What follows below are brief excerpts that highlight the results. Highlights of the responses to this question are included below. For the complete transcript see Appendix 5, 6, and 7.

“Praying. Negotiating every single vendor price increase—getting better results as we work on this.”

“We are not working with publishers/providers yet. Currently we are trying to avoid duplication, canceling print that is duplicated in electronic form [that does not require paper subscription for electronic access]. Substituting ILL for expensive, lightly used print journals.”

“Collaborative efforts with other libraries. Long-term (3-5 years) contracts with fixed price increases. Buying in bulk (e.g., several resources at once from the same vendor and negotiating collective cost that is less than cumulative individual prices).”

“There is no way to ensure this! Just like there was no way to ensure print serial prices. If we cannot afford and usage is low, we cancel. The best way to attempt to do this is to negotiate price caps into licenses especially for 3-year deals.”

General Issues

The survey instrument's final section includes two open-ended questions about challenges related to licensing and long-term access and use of licensed digital resources. Regarding what are the most difficult issues related to licensing digital

resources, there was a range of comments and topics. Excerpts from the responses to these two questions are included below with the full transcript of the responses in Appendix 6 and 7. The narrative responses from 34 libraries are thematically analyzed in Chapter 5. The remaining survey questions 21 and 22 focus on obtaining relevant documents or contact information for further information and follow-up. Listed below are a few responses to Question 20; a complete listing is available in Appendix 6.

“Just the sheer volume of agreements makes the job difficult, but long term preservation is one of the most important issues.”

“Increasing prices Lack of archiving.”

“Escalating costs + inflation and shrinking budgets. No policies regarding licensing in place. Not enough staff to fully review and negotiate licenses.”

“In order to keep inflation rates down, we are committing to longer-term licenses that prohibit us from canceling print; as we move towards e-only, we may not be considering as thoroughly as we should our access rights in the future.”

“Local commitment to systemwide principles that should be pursued vigorously and uniformly, but a lack of bargaining power when dealing as a single institution which makes achieving perpetual access and other usage rights difficult. Local action can impact other campuses and prevent progress toward model terms. Many titles have to be approached individually and their publishers are reluctant or completely unwilling to entertain changes.”

Selected responses from Question 21 are included below. The complete transcript of the responses can be found in Appendix 7.

“Our library needs to come up with a formal plan.”

“COST. I am concerned that producers of digital resources will model the STM journal publishers in pricing. I recently spoke with a database sales rep after a demo. The price tag for the database is in the 6 figures. The database is excellent for all libraries not just academic libraries. I asked him to return to his company and suggest that they chop three digits off of the price and market it to every school, public, and academic library in the country. As it stands now, there are only about 3 libraries in the US that will pay the 6 figure price. Unfortunately, I don't think his company will listen.”

“Our dependence on publishers to provide such access; the library no longer having control of the information medium.”

“cannot afford to purchase also print so depend on vendor to provide permanent access.”

In response to Question 22, the majority of respondents, 21 (58%) reported that they were not willing to provide examples of redacted license agreements, which is potentially an interesting result in that this unwillingness might indicate an obstacle to libraries working together to address some of the issues raised by this research. In addition, in-depth interviews with publishers and a content analysis of publishers' standard license agreements point to non-disclosure clauses in license agreements as another potential reason why the majority of libraries responded that they were not willing to share information related to license agreements negotiated and signed by their institutions. Unfortunately, the survey did not ask for reasons why libraries might not choose to share their licenses, but it is possible that this may be influenced by the non-disclosure requirements that are frequently included in standard commercial publishers' licenses. In the following question, however, 26 libraries did indicate that they would be willing to be contacted for further clarification or additional information.

4.2 Licensing and Publishers – The Interviews

This section describes the process and results of nine in-depth interviews conducted with representatives of top publishers of digital resources at commercial, scholarly society, and university presses. Publisher interviews were conducted in an effort to collect the publisher's perspective on key issues, trends, and challenges as a result of licensing digital resources similar to how college and research libraries were surveyed for their opinion about key issues, trends, and challenges regarding licensing of digital resources. Chapter 5 on Data Analysis includes a discussion and comparison of the results from the publisher interviews with the results from the college and research library surveys.

This section is divided into two parts. Section 4.2.1 delineates the process of conducting the interviews with publishers. It includes a discussion of the interview instrument, subjects, and scope. Section 4.2.2 reviews the data collected, including the overall number of respondents, respondents by type of publisher, and the key issues, trends, and challenges identified by respondents. Section 4.2.2 also summarizes respondents' primary concerns about the future of digital licensing.

4.2.1 Data Collection Process

The publisher interviews were conducted according to the protocol outlined in Chapter 3, Research Design. Top publishers in commercial, scholarly society, and university presses were identified from market and financial data, industry reports, publishers'

websites and a review of the literature (Morgan Stanley, 2002; Kassab, 2003). All publishers were interviewed using the interview instrument that can be found in Appendix 5. All interviewees were provided with instructions that included the following brief overview of the focus of the study and emphasized the importance to the study of the publisher perspective “this interview explores how, to what extent, from the publisher’s perspective, the change from purchasing to licensing affects publishers and libraries and implications for long-term access and use of licensed digital content” (Publishers’ Interview Instrument, Appendix 3). Interview subjects were contacted by email and invited to participate. Subjects were asked to respond to the email to set up the interviews if they were willing to participate in the study. In order to obtain a robust set of examples from each of the three categories of publishers of digital resources, a list of leading publishers from each category was developed based on a review of the literature, including market and financial reports.

4.2.2 Response

Eighteen publishers, drawn from all three publisher categories, were contacted and invited to participate in the study. Nine interviews were conducted, for an overall response rate of 50%. Telephone interviews were conducted in June and July 2004, with the interviewer taking notes. No tape recordings were made of any of the interviews and interviewees were advised of their right to decline to answer any question. Eleven of the top commercial publishers in the world were contacted and six interviews were conducted. Four of the largest scholarly society publishers were invited to participate and two interviews were conducted. Two of the three university

presses contacted also agreed to an interview. All interviews were scheduled to take 20-30 minutes. In most cases, however, the interviewees gave very generously of their time and the interviews, on average, lasted an hour.

The interview instrument see Appendix 3 consisted of 16 questions was designed to focus on and highlight the publisher's perspectives on a set of topics parallel to the scope of the survey of academic libraries already described. Among the categories included were questions designed to solicit quantitative and demographic information such as how much of a publisher's content is currently available in digital form? How much is also in print? Questions were also designed to solicit qualitative information. For example, where both print and digital versions of the same products are available, in what ways is the digital version different? Do publishers routinely agree to modify their standard license agreement? What is the publisher's policy regarding archiving and perpetual access for digital resources? What do publishers see are the biggest challenges regarding licensing digital resources? Similarly to what was asked in the libraries' survey, publisher respondents were asked how much published content is published in digital format only, the scope and types of license agreements, the policies and practices related to long-standing library practices and values, including archiving and fair use, and their perspective on current and future challenges related to licensing and use of digital resources.

According to statistics published by Gooden, the market share in 2002 of global scientific publishing controlled by the commercial publishers who were interviewed was approximately 30% (Morgan Stanley, 2002, p. 2), and according to Van Orsdel, the

same publishers published over 2000 scholarly journal titles in 2003 (Van Orsdel, 2004, p. 2). Van Orsdel ranks the “most formidable commercial publishers” as follows: 1) Elsevier (1800 scholarly titles and 20-25% of market sales), 2) Springer/Kluwer (1350 scholarly journals), 3) Taylor & Francis (800 journals), 4) Blackwell (600), 5) Wiley (400) (Van Orsdel, p. 2).

4.2.3. Review of the Data Collected

The first four interview questions were demographic in both nature and scope and aimed at defining the scope and landscape of licensing of digital resources. None of the questions were readily answerable using information available from the publishers’ websites or other publications. Publishers were advised at the outset that interviews would be reported by quotes attributed to publisher category rather than to any individual or specific company. The responses to all questions are presented in the table, with as much verbatim conversation and quotation as possible, given my limits as a researcher, interviewer, and notetaker.

Digital versus Print

In response to Table 6 and 7 (How much of your company’s content is available in digital form? And, how much is available also in print?), the publishers are identified by type: commercial, scholarly society, and university press along with a number. In addition to a column for each answer, the table also includes a notes column that contains additional interviewee explanations, comments, and quotes.

Table 6. Publishers' Report on Content Available in Digital and Print Formats

Publishers	Content in Digital Form	Content in Print	Notes
Commercial #1	100% "Basically 100% (couple Societies not wanting to go digital)" "95-98% journals, e-reference works, encyclopedias, not much anything monographs"	100% "Basically 100%" "Still virtually good chunk of the world people want print and archiving"	"Digitized all journals back to issue #1. Over 6 million articles. In e-environment speed is the issue. In effect, e-version is becoming copy of record."
Commercial #2	95% journals 80% books frontlist, "everything else STM databases, protocols, reference works"	100% print	"2 reasons continue print. 1. market demands—countries outside North America, Europe, Asia. Developing Countries and 2. archival use"
Commercial #3	100% "not necessarily all backfiles – everything has e-counterpart"	100% there is a print version	Does "not stipulate version of "record"
Commercial #4	100% journals 100% reference 10% books	100% Journals--online and print Reference--online and print	1 e-only journal and 1 p-only journal
Commercial # 5	100% "Almost 100%" "All current output—not all backfiles"		Re version of "record" "we're ambiguous—no claim one way or another"
Society #1	100% "everything we publish."	100% "Most publishers doing both."	
Society #2	All e-journals	Not dropped any print	e-journal considered "journal of record"
University #1	All journals. Annual monographs not available.	"Everything in d-form available in print."	"no e-only at this time"
University #2	All journals. Over 2000 monographs.	All "but out of print." Copy somewhere. Paper archive. "Fair amount of stuff is out of print."	

The commercial publisher responses to the first question (How much of your company's content is available in digital form?) indicate that in the future such a question will not be necessary since the default will be that all or almost all publishers' content will be available in digital form. In this case, regarding the availability and scope of digital publishing, responses from all three types of publishers indicate a clear trend toward the availability of nearly 100% of their company's content digitally. With one exception, the responses to the second question unanimously indicated that "everything in digital form is available in print." The one exception, a response from a university press, had a caveat that all "but out of print" is available in print. The same university press respondent further stated that a "fair amount of stuff is out of print."

It is worth noting that, while not specifically asked, several publishers mentioned at the outset, and at different points in the interviews, of which version, digital or print, was the version of record. Commercial publisher #1 commented that their company "digitized all journals back to issue #1...over 6 million articles. In an e-environment, speed is the issue. In effect, e-version is becoming [the] copy of record." In addition, commercial publisher #3 noted that they did "not stipulate version of record." Commercial publisher #3 noted that *at this time* (emphasis mine) they do "not stipulate version of record." Society publisher #2 stated that in their company, the e-journal was considered the "journal of record."

In response to Question 3 (Where you provide digital and print, in what ways is digital different?(or, are digital resources equivalent to print?) most publishers replied to this question that the content was equivalent between digital and print, but that digital

content provides additional functionality. Table 7 (next page) provides additional detail on the responses.

Table 7. Publishers' Comments on How Digital Resources are Different than Print

Publishers	Where you provide digital and print, in what ways is digital different? (Or, are digital resources equivalent to print?)	Notes
Commercial #1	"Everything. Editorial and table of contents, articles, editorials, obits, letters to editor, book reviews. In effect, supposed to be identical. Big. Big. Ads. 90% journals don't take ads."	"Clinical journals, AJG, AJC, JACC, take ads. Large circulation (e.g., Lancet). Going back no rights to ads would have to get permission. Ads not editorial content too expensive."
Commercial #2	"98-100% overlap. Advertising one place where print and digital are different." "Everything cover to cover."	"Both digital and print are copies of record" "1/3 society partners may not reprint journals."
Commercial #3	"1 or 2 products with multimedia functionality. Also, papers published online appear earlier than in print, "Online quicker."	Does not stipulate version of "record."
Commercial #4	"Identical. No ancillary information."	"Internally, refer to digital as copy of record."
Commercial #5	"Sometimes digital version is enhanced. For example, with links."	"No claim either way as to version of "record."
Society #1	"Content equivalent. All content in print is online except online does not contain advertising. Online version contains additional functionality re links, searching, supplemental data."	
Society #2	"Several e-only journals new. Specific domains technology highly integrated. For example, weather and space"	"E-journals [sic] is journal of record."
University #1	"Supplemental material is online is not available to print. Online is print plus"	"E-version, for the most part is version of record"
University #2	"linking and searching"	

Publishers from all three groups again mentioned the “record” version in their response to Question 3. One of the two scholarly society publishers, society publisher #2, stated that the “e-journal is the journal of record.” University publisher #1 commented similarly that the “e-version, for the most part is the version of record.” Commercial publisher #4 noted that in their company “internally, refers to digital as copy of record.” Commercial publisher #5 took a different view by stating that their company made “no claim either way as to the version of record.”

4.2.5 Publishers and Licensing

For the most part, for Question 4 (as shown in Table 8 below) all respondents agreed that license agreements are required for the majority of full text content available via subscription. The exceptions are for small amounts of free content that’s available at most publisher’s sites. Respondents reported the origins of licensing at their company as dating back to 1995 at the earliest, through the late 1990s at the most recent.

Table 8. Publishers Licensing Requirements

Publishers	Do you currently require license agreements for all digital resources?	Yes	No	Notes
Commercial #1		Yes		"Began in 1995."
Commercial #2	"All content abstracts freely available." "All full text requires license. Several types of standard licenses." "2 part obligation: 1. Institutional license 2. Terms of use click-through individual users"	Yes "Full text"	No "Most abstracts freely available"	
Commercial #3	4 License templates	Yes		"Would like not to continue to license—time consuming."
Commercial #4	Several license templates (for example, institutional, multiple site, consortial license)	Yes		"Began 1999 license."
Commercial #5		Yes "Majority of full text"	No "Some content available without access control"	"Began licensing in 1997."
Society #1		Yes "Journals"	No "Some free content-magazines"	"Began requiring license 1998."
Society #2	"2 types: 1. License--institutions 2. Individuals--terms and conditions"	Yes		
University #1		Yes "Varies slightly"	No "Some content freely available. For example, excerpts, interviews, essays."	"Began 1995."
University #2			No "Some content freely available"	

As shown in Table 9 (next page) the five commercial publishers' responded to Question 5 (How, if at all, is licensing different than selling content to libraries?) by focusing on issues related to the complexity associated with licensing digital resources, numerous and changing pricing models, and relationships with libraries. The scholarly society and university press publishers commented about their concern regarding other substantive issues and changing roles and values. For example, society press #1 and university press #2 both mentioned "archiving" and "who owns the content," and university press #1 noted that "licenses attempt control over use" of digital resources.

Table 9. Publishers on How Licensing Differs from Selling Content

Publishers	How, if at all, is licensing different that selling content to libraries?	Notes
Commercial #1	<p>"In print world (e.g. books, encyclopedias, journals) everybody got the same thing."</p> <p>"Price. Delivered the same way."</p> <p>"Licensing, in contrast, everything is customizable, packages, clusters. No two licenses are the same. gets something different."</p>	"Licensed digital content, price increases usually 6 %."
Commercial #2	<p>"Biggest thing is the relationship with publisher and purchaser has changed."</p> <p>"Relationship between publisher and customer is now iterative."</p> <p>"Right to access versus a right to own. Change is good and bad. On the good side, it keeps customers coming back."</p> <p>"Ideally, leads to predictable revenue stream. License agreements usually for between 1-5 years."</p> <p>"On the bad side, right to access versus right to own content."</p>	
Commercial #3	<p>"Depends on discipline. Social sciences and humanities not racing forward all over the world. Varies by subject area. NO all migrated over. North American libraries and institutions want everything online but it doesn't exist that way in all parts of the world."</p> <p>"In EU no sales tax. VAT is online product. Canada GST (print and online). Taxes are another layer. More people engage selling more in print."</p>	<p>"Would like not to continue to license—time consuming."</p> <p>"80% print sales subscription agent"</p>
Commercial #4	<p>"Print environment was easier. Agents distributed journals, direct sales, marketing."</p> <p>"Change in readers, young people read hand-helds"</p> <p>"Will cease to print journals people use database—more functionality."</p> <p>"Shift role of libraries—e-licensing"</p>	
Commercial #5	<p>"Selling transactional—single price-single product"</p> <p>"Licensing encapsulates service to community of users."</p>	

Table 9 (cont'd): Publishers on How Licensing Differs from Selling Content

Publishers	How, if at all, is licensing different that selling content to libraries?	Notes
Society #1	<p>“Archiving.”</p> <p>“Who owns the content”</p> <p>“Copies—print subscription-libraries own. In digital environment, leasing arrangement—Issue has to be addressed.”</p> <p>“Concern fair use both sides. Publishers believe is too easy to abuse. DRM not available. DRM not solution yet. Put terms and conditions in License agreement.”</p>	<p>“Frankly, licensing no control. Robots download, open proxy, not especially effective, controlled leak.”</p> <p>“DRM is nice idea but it would have to work on both sides.”</p>
Society #2	<p>“On the positive side, publishers now communicate more directly with customers (libraries) that ever before. Process of licensing requires that.”</p> <p>“In traditional print environment, publishers and libraries relied on subscription agent; publishers had no relation to library.”</p> <p>“On the negative side, licensing burden on time, depending on how many lawyers involved.”</p> <p>“More time, slow things down, won’t turn on access until license is signed.”</p>	<p>“Based license on review of model licenses—still requires ongoing review and discussion re proposed changes.”</p>
University #1	<p>“Potential structural changes in the marketplace.”</p> <p>“Licenses attempt control over use.”</p>	<p>“IP address not seat based.”</p>
University #2	<p>“Archiving.”</p>	

In response to Question 6 of the Publishers Interview Instrument (Do you use a standard license agreement?), all commercial publishers reported having between two and four standard templates or types of standard license agreements. For example, several publishers had a standard license for institutional or consortial agreements, while others had a template designed to be used for different types of library customers, such as corporate, government, academic and public libraries. One publisher uses several types of license agreements, depending on the level of service and access one is able to afford to be interested in. One license is for basic access while another is for enhanced access that is generally used for larger institutions that are acquiring more content or acquiring the ability for more users to access the content at one time (see Table 10 next page)

Table 10. Publishers' Comments on Standard License Agreements

Publishers	Do you use a standard license agreement?	Yes	No	Notes
Commercial #1	3 Standard Templates 1. Individual 2. Institutional 3. Consortial	Yes		Not static Subject to ongoing review. "Continue to tweak and revise every year to 18 months."
Commercial #2	2 Types 1. Basic access 2. Enhanced-generally larger institutions-not restricted by site.	Yes		
Commercial #3	4 Standard Templates 1. Corporate 2. Government 3. Academic 4. Public Libraries	Yes		
Commercial #4	3 Types 1. Institutional 2. Multi-site 3. Consortial	Yes		
Commercial #5		Yes		
Society #1	2 Types 1. Single site license 2. Consortial license	Yes		
Society #2		Yes		"Based on model license."
University #1		Yes		
University #2	All others standard license and terms of use required.	Yes		Constituent users no license required. Of use required.

Although many respondents clarified their response to Question 6 (Do you routinely modify your standard agreement?) with comments regarding “minor variations,” all agreed that they routinely modify their standard license agreements. What they did not agree on however, was the degree of their routine modifications (see Table 11 next page)

Table 11. Publishers' Comments on Modification of Standard Agreements

Publishers	Do you routinely modify your standard license agreement?	Yes	Notes
Commercial #1		Yes	"Send license and edits back and forth several times. Pricing negotiable."
Commercial #2	"Modify on case by case basis" "60-80% of what asked for agreed to."	Yes	"Libraries question pricing, business terms and ILL. Lawyers question warranties, damages."
Commercial #3		Yes	"Not aware of any deal breakers."
Commercial #4		Yes	"All the time." "Libraries ask about definition of site, governing law."
Commercial #5	"Do modify in some instances based on some requests. Key issue access in perpetuity."	Yes	"Not changed license [sic] to often."
Society #1	"Will consider requests to make changes. For the most part use license as stated."	Yes	"Minor issues easily resolved. Once legal counsel involved drags on."
Society #2		Yes	"Minor variations"
University #1	"Usually governing law-like to leave blank."	Yes	
University #2		Yes	

Question 8 (Do you use different agreements for different types of libraries) elicited some references back to earlier questions about standard license agreements. For the most part, however, the responses underscored that while different agreements associated with different prices are used for different types of institutions, the terms of the license are mostly the same (see Table 12 next page)

Table 12. Publishers' Use of Different Types of License Agreements

Publishers	Do you use different license agreements for different types of libraries?	Yes	No	Notes
Commercial #1	"We use a different agreement for corporations."	Yes		
Commercial #2	"3 variations: 1. Corporations 2. Academic 3. Consortia"	Yes		"Libraries question pricing, business terms and ILL. Lawyers question warranties, damages."
Commercial #3		Yes		
Commercial #4		Yes		
Commercial #5	"Pricing, not terms--4 categories."	Yes		
Society #1			No	
Society #2		Yes		"Very small variation—non-teaching institutions"
University #1		Yes		"By institution"
University #2	No Response	No Response	No Response	

In response to Question 9 (Do you negotiate library by library over terms ?) (as shown in Table 13 next page) all publishers responded that they do negotiate library by library. One commercial publisher however, commented, that the “biggest advantage of consortia... [is] ...one license” rather than the potentially hundreds of the individually negotiated licenses (see Table 13 next page).

Table 13. Publishers' Comments on Negotiation on Case-by-Case Basis

Publishers	Do you negotiate library by library over terms?	Yes	No	Notes
Commercial #1	"If requested we will review and revise."	Yes		
Commercial #2		Yes		"Biggest advantage consortia—one license."
Commercial #3		Yes		
Commercial #4		Yes		"Case by case."
Commercial #5		Yes		"Built dedicated sales staff. Past agents 95% business. Now, agents 50%. Revenue sign."
Society #1		Yes		"Most changes jurisdiction, governing law, indemnity clauses."
Society #2		Yes		
University #1		Yes		
University #2	No Response	No Response	No Response	

Licensing, Archiving, Fair Use and Perpetual Access

Question 10 (What is your company's policy regarding archiving of digital resources?) of the Publisher's Interview Instrument, focuses on company policy on archiving digital resources. Here though, most publishers cited a range of technological solutions, such as "redundant servers," "dark archive," "digitize everything," one or two reflected on the scope of the problem and lack of a systematic solution or strategy. For example, commercial publisher #1 responded that "we are building redundant dark archives on different continents in case of catastrophe but these efforts require large scale and massive resources that most of our competitors couldn't do—all middle players are gone." In contrast, commercial publisher #3 responded, "Difficult problem. We make pledges material can be delivered in a format in perpetuity, but we don't know 10, 20, 30 years in the future." and society publisher #2 commented on the role of the library: "I don't think libraries will be able to archive as they did in print. Most people are paying attention to [the] archiving issue. We have 2 committees focusing on digital archiving - 1. content and 2. formats." (see Table 14 next page).

Table 14. Publishers' Archiving Policies

Publishers	What is your company's policy regarding archiving of digital resources?
Commercial #1	Publishers referred interviewer to company website for publisher statement on archiving. Publisher reported on their agreement with National Library of Netherlands to provide a dark archive. The National Library of the Netherlands would be the official repository in the event of a catastrophe. In addition, Publisher is working to identify/partner 1 or 2 places on each continent including Japan and Australia, redundancy, back-ups, secure location. License includes promise will work with Board Neutral parties to administer. "We knew we must have archiving plan." "No one really knows what is coming down the pike." "Couldn't do this without large scale, 6 or 7 of our competitors couldn't do this." "All middle players are gone."
Commercial #2	"Redundant servers. Post-termination customers offered one of two choices continue access via publisher (for period of previous paid subscription or some e-medium."
Commercial #3	"Difficult problem. Make pledges material can be delivered in that format in perpetuity. We don't know 10, 20, 30 years in the future."
Commercial #4	"Dark archive. Libraries live archive. Archive everything. Other case, LOCKSS ¹⁵ , Last resort, XML, SGML, PDF, migration, print archive."
Commercial #5	"Depends on what you mean by archive? Digitize? Host on server? How secure? Dark archives. What we haven't done is create any type of digital preservation type archive."
Society #1	"Digitized everything Vol. 1 Issue 1. Not archive what you think. For sale, nor working everyone. Monitoring technological changes. IT back-up plans. Publisher not expected to be archive. 2 copies Library of Congress. Increasingly asked to play role LOCKSS, Dutch National Library, British Library. Hard to do case by case."
Society #2	"Don't think libraries will be able to archive as they did in print. Most people not paying attention to archiving issue. We have 2 committees focusing on digital archiving: Content Formats." When to translate forward. How to keep all safe. Hire maintenance societies—Asia—deep archive.
University #1	"None yet. Good suggestion. Publishers hesitant to do it. Commercial publishers willing to tax subscriber to preserve the record. Decay rate. Most used most recent. 1 st year. Most hits new stuff."
University #2	University Press archive. Some third party. Quark, pdf, University access only. More seriously think archive XML."

¹⁵ Lots of Copies Keeps Stuff Safe (LOCKSS) "is designed to address issues related to persistence of library digital resources and collection. "LOCKSS is an open source, peer-to-peer software that functions as a persistent access preservation system." More information on LOCKSS can be found on their website at <http://lockss.stanford.edu/>.

In response to Question 11 (What is your company's policy regarding perpetual or persistent access?) publishers stated that perpetual or persistent access is a highly complex topic that is dependent on many factors, including some that are outside the publishers' direct control (for example, technological obsolescence, interoperability, and federal and international intellectual property and copyright law). The respondents' views on perpetual access were varied, as is evidenced by the responses shown in Table 15 (next page)

Table 15. Publishers' Policies on Perpetual Access

Publishers	What is your company's policy regarding perpetual or persistent access?
Commercial #1	"Perpetual access = access for those years paid license. If there is no archive you can't have perpetual access."
Commercial #2	"Is there a role for the government or government archives. Publisher thinks going to be determined by libraries. Not sure best equipped to do that. Supportive of libraries role."
Commercial #3	"What are perpetual rights? If the institution ceases would download material to CD for a fee."
Commercial #4	"Perpetual access is access something someone paid for. We do that now."
Commercial #5	"No way do we want to deprive people of content they have already paid for. That's why we don't include it in standard license agreement. We may be able to provide XML. We are open to any solutions."
Society #1	"No position. Please continue to subscribe. Look at alternatives and back-ups down the road. Big issue."
Society #2	"Continuing access. "Could be cost prohibitive." Publisher concerned about promising what it couldn't deliver."
University #1	"We are committed to maintaining the record of scholarship."
University #2	"Initially access to files to use, reuse. Longer term having everything available. Nothing out of print."

From this question's data, it would appear that publishers view perpetual access as a challenge related both to what to deliver, and how, and at what cost to deliver it. All respondents understood that their library customers have some expectation that something once accessed or viewed could be viewed again at some later time.

Scholarship demands the ability to check sources and to be able to do so in weeks, if not months or years later. Even if publishers can agree with their customers (as to what to offer, when, and what to charge for it) it remains to be seen whether years from now an agreed upon policy will work and the digital content will still be readable. Table 16 (see next page) indicates interviewee responses to Questions 12, 13 and 14. Table 17 similarly indicates responses to Question 15.

Table 16. Publishers' Practice on Archiving and Fair Use

Publishers	Do you routinely agree to archiving?	Do you routinely agree to Fair Use?	Notes
Commercial #1	No Response	No	"Do fair use guidelines apply equally in print and electronic? In theory, no fair use = why we license. If license properly more access than with fair use."
Commercial #2	No Response		"Can ILL print copy."
Commercial #3	No Response	No Response	
Commercial #4	No Response	Yes	"Can't deny fair use. Included in license agreements."
Commercial #5	"Yes, if preservation archive."	"Don't object permit ILL—print out only. DRM software."	"If open, threat to existing revenue business model—would be worried about it."
Society #1	No	No Response	
Society #2	No Response	No Response	
University #1	No Response	"Fair Use mixed up with infringement. ILL ok."	
University #2	No Response	No Response	

As shown in Table 17 (next page) non-disclosure agreements seek to bind a party or parties to non-disclosure related to all or some aspects of the agreement (for example, non-disclosure of terms, price or other aspects of the agreement). Non-disclosure allows the party proposing the agreement, typically a seller, to use the same or different terms with different second parties, typically buyers; the non-disclosure agreement prevents the second parties from disclosing the terms upon which they agreed. In basic economic terms, this strategy provides a benefit only to one party (the seller) by allowing it to control and monopolize information regarding the deal. Interestingly, four of the five commercial publishers replied “yes” to this question, scholarly society and university press publisher interviewed responded in the negative.

Table 17. Publishers' Practice on Non-Disclosure

Publishers	Is it your company's practice to routinely require non-disclosure of license terms? (If yes, why?)
Commercial #1	NR
Commercial #2	"Yes." "Will make exception for state sunshine laws. Publisher's position is that different situations require different financial arrangements. Standard terms-negotiate power with non-disclosure." "Nondisclosure applies to anything negotiated."
Commercial #3	"Yes." "Regard as confidential. Applies to what negotiate under heading special terms."
Commercial #4	"Yes." "Standard. Nothing to do with price." "Protection of publisher and buyer." "Tradition"
Commercial #5	"Yes," "Pricing." "Why secret—pricing—can piece together based on what people are saying."
Society #1	"No." "No, no value in it." "Everything is on website. Nothing secret. Nothing proprietary."
Society #2	NR
University #1	"No." "Everything is posted on website."
University #2	NR

Challenges Regarding Licensing Digital Resources

As shown in Table 18 (next page) overall, commercial publishers expressed concern about the business aspects of publishing, including pricing and business models. The scholarly society publishers discussed open access models and the role of government and archiving. The university presses were still obligated to publishing imprint and struggling to “integrate with other formats.”

Table 18. Publishers' Biggest Challenges Related to Licensing Digital Resources

Publishers	As a publisher, what are your biggest challenges regarding licensing digital resources?
Commercial #1	"Libraries and Publishers. Perception among users—everything in the web is free." "Users very unappreciative of the work, time, [and] money involved." "Libraries skill set much higher. The librarian less visible." "Libraries costs have gone up. Whole process costs more."
Commercial #2	NR
Commercial #3	"#1 Worry about the 'big deal.' Works to benefit of very few, very large publishers. Ties libraries under contract." "Publishers very defensive strategy." "Squeezing diversity and range. Librarians don't like. See deals continuing." "#2 Faculty are fundamentally conservative and publishers leading brands. Difficult dynamics industry."
Commercial #4	"Pricing." "Single institution easy. Multi-site, consortia difficult. Hospitals-beds, heads, scholarly publishing-FTE, universities-tiered approach." "Usage. Different disciplines."
Commercial #5	"Biggest challenge 3 parts: 1. Standard approach to FTE. Pricing is fairer. 2. Usage Based Pricing; Pricing reflects value to customers. Long-term business relationship. 3. Publishers and libraries made up of people. New lawyers. New sales. Huge potential variations."
Society #1	"Open access. Sizzle. Mission. Word out. Content. Sustainable. Manageable." "DMCA, UCITA." "SABO Bill." "We believe charge a reasonable amount for subscriptions." "With subscription model best possible sustainable model." "PLOS-9Million grant Mellon." "Question open access model is sustainability."
Society #2	"Time sensitive." "More and more pressure-huge challenge. Open Access. Making regulation. Government. <i>Thou shalt</i> ...huge, huge apparatus." "Director NIH blowing off concerns need to be concerned re dissemination. Resource question. Tax dollars" "Archiving completely naive. Are you including material not on a flat page?" "Questions body of knowledge-record of science." "Can't just look at it today. Must look at over time."
University #1	"Publisher committed level of communication never seen before. Many models out there. Got to be responsive. Levels of attention to customer service-managing e-things." "Will be question re evolution in product offerings. More complex offerings. More choices." "Pricing not simpler. More differentiation usage based." "More complexity offerings." "Publisher requires communication." "Everything is posted on website."
University #2	"Figuring processes to integrate with other formats." "Print publishing still focus." "Trying to work in process." "Trying to figure out what makes sense—to do digital only." "Print on demand." "Digital only."

4.3 Licensing and the “Not-So-Standard” Standard Agreement

As reported by publishers in their interviews, and reported in published studies on licensing of digital content (Davis, T. L., 1998, Duranceau, E, F, 2003, Jewell, 2001), increasingly the acquisition and use of digital content requires a license agreement or legally binding contract between the parties. Also, as noted above, license agreements as contracts can take on as many forms as the parties agree to. This section describes the results of the data collection and subsequent content analysis of actual standard publishers’ license agreements that are available on individual publisher’s websites or elsewhere on the Internet. The section is divided into two parts. Part One includes an overview of the content analysis data collection process and Part Two presents the results of the content analysis.

4.3.1 Content Analysis Data and Results

In general, the data reveals that the contract language used in standard license agreements by publishers of all types always leaves some room open to interpretation. In addition, the data reveals that, overall, even the existence or omission of a specific guarantee or warranty can not always be answered with a binary or simple answer since there were several examples of arguably ambiguous or potentially conflicting language in the Agreements. For example, in the educational context, it is commonplace for academics and scholars to share articles and excerpts of articles that may be of educational, research, or personal use. Typically, applying the four fair use factors allows this type of scholarly sharing in the print environment. In contrast,

however, in a license agreement, as the one below, a fair use clause can exist alongside a clause that appears or arguably restricts fair use. An example of one of the scholarly society's license agreements includes a Fair use clause that read as follows:

Nothing in this License shall in any way exclude, modify, or affect any of the Licensee's statutory rights under the copyright laws of the United States.

Followed by the seemingly contradictory limitation and prohibition at least in an educational context to:

[the licensee may not] Provide by electronic means, to a user at another library or elsewhere, a retained electronic copy of any part of the Licensed Materials.

More detailed results of this content analysis are reported below in the context of the seven categories and focus areas of the analysis. The first category relates to the scope and inclusion of rights to use the digital content included in the license agreement. The results for each content analysis category are reported in Tables 19-37 by the three groups of publishers included in the study. In addition, most categories and focus areas will include a cumulative comparison of all the publishers study responses.

The six scholarly society publishers included in the content analysis are the following: 1) the Association of Computing Machinery (ACM), 2) the American Chemical Society (ACS), 3) the American Geophysical union (AGU), 4) the American Institute of Physics, 5) the American Physical Society (APS), 6) American Psychological Association (APA).

Table 19. Commercial Publishers' Rights Included in Standard License Agreements

Commercial Publishers' Standard License Agreements	Blackwell	Elsevier	Kluwer	Taylor & Francis	Wiley	Commercial Total
What Use Rights Are Included?						
Right to copy	Y	Y	Y	Y	Y	100% 6/6
Scholarly Sharing	N	N	Y	Y	N	33% 2/6
Interlibrary Loan	Y	N	Y	Y	Y	85% 5/6
E-Reserves	N	N	N	N	N	33% 2/6
Print Articles	Y	Y	Y	Y	Y	100% 6/6
Fair Use	N	N	Y	N	N	33% 2/6

Table 20. Scholarly Society Publishers' Rights Included in Standard License Agreements

Scholarly Society Publishers' Standard License Agreements	ACM	ACS	AGU	AIP	APS	APA	Society Total
What Use Rights Are Included?							
Right to copy	Y	Y	Y	Y	Y	Y	100% 6/6
Scholarly Sharing	N	N	Y	Y	N	N	33% 2/6
Interlibrary Loan	Y	N	Y	Y	Y	Y	85% 5/6
E-Reserves	N	N	Y	N	N	Y	33% 2/6
Print Articles	Y	Y	Y	Y	Y	Y	100% 6/6
Fair Use	Y	N	Y	N	N	N	33% 2/6

Table 21. University Press Publishers' Rights Included in Standard License Agreements

University Press Publishers' Standard License Agreements	Cambridge	Chicago	MIT	University Press Total
What Use Rights Are Included?				
Right to copy	Y	Y	Y	3/3
Scholarly Sharing	Y	Y	Y	3/3
Interlibrary Loan	Y	Y	Y	3/3
E-Reserves	Y	N	Y	2/3
Print Articles	Y	Y	Y	3/3
Fair Use	Y	N	N	1/3

4.3.1 What Use Rights are Included?

As shown in Table 19, the first category of this content analysis focuses on what use rights are included in the standard publisher's license agreements and includes the following six subcategories and components: 1) the right to copy, 2) scholarly sharing, 3) interlibrary loan, 4) e-reserves, 5) the right to print articles, and 6) inclusion of reference to the fair use or Section 107 Title 17 USC.

For the commercial publishers' agreements there are two use subcategories where there was 100% consensus: (the right to copy and the right to print). The six standard license agreements from the five commercial publishers (Blackwell, Elsevier, Taylor & Francis, Thomson and Wiley) all include provisions for authorized users to at least a limited right to copy and print digital resources for their personal use. Table 19 below indicates the subcategories of specific use rights where there is limited agreement.

Standard agreements from scholarly society publishers had an identical breakdown with all six scholarly society publishers in agreement regarding the limited right of authorized users to copy and print from the digital resources, but with little agreement on how they addressed other routine academic uses such as scholarly sharing, e-reserves and Fair use (Table 20)

There appears, however, to be more widespread agreement and broader use rights included in standard university press license agreements in all but one category. The category with the least widespread adoption in university press standard agreements sampled was the inclusion of a fair use clause -- only one out of three or

33% of university press licenses included such a clause. It should be noted, however, that only three university press publishers were included in contrast to the 12 commercial and scholarly society publishers sampled. The three university press publishers--Cambridge University Press, University of Chicago Press and MIT Press--agreed in all but one subcategory—e-reserves. In all other use subcategories there was 100% consensus see Table 20.

Licenses from all three types of publishers reflect unanimous agreement in two subcategories: the right to copy and the right to print. This is closely followed by a third category – (interlibrary loan) – which is included in 13 out of 15 standard agreements or 86% of standard agreements. The three subcategories with the least amount of consensus were fair use, e-reserves, and scholarly sharing. A fair use clause was least likely to be included by all three publisher types, occurring in 33% or (5 out of 15) standard agreements. The second lowest subcategory was e-reserves, with an overall inclusion rate of 40% (or 6 out of 15) standard agreements. The third was scholarly sharing, with a 46% inclusion rate overall. As noted below, however, the three university press publishers' agreements reflect a 100% consensus on the inclusion of a provision for scholarly sharing in their licenses (see Table 22).

**Table 22. Commercial, Scholarly Society and University Press Publishers
Comparison of Rights**

All Publishers' Standard License Agreements	Commercial Total	Scholarly Society Totals	University Press Totals	All Publishers Total
What Use Rights Are Included?				
Right to copy	100% (6/6)	100% (6/6)	100% (3/3)	100% (15/15)
Scholarly Sharing	33% (2/6)	33% (2/6)	100% (3/3)	46% (7/15)
Interlibrary Loan	83% (5/6)	83% (5/6)	100% (3/3)	86% (13/15)
E-Reserves	33% (2/6)	33% (2/6)	66% (2/3)	40% (6/15)
Print Articles	100% (6/6)	100% (6/6)	100% (3/3)	100% (15/15)
Fair Use	33% (2/6)	33% (2/6)	33% (1/3)	33% (5/15)

4.3.3. Restrictions and Prohibitions on Use

Tables 23- 26 relate to the identification and description of restrictions and prohibitions on the use of licensed digital content. This content analysis category has five subcategories: 1) Does the license include an “all rights not expressly granted are reserved” clause? 2) Are there any restrictions on copying? 3) Are there any restrictions on downloading? 4) Are there restrictions on scholarly sharing? and 5) What is the duration of the restrictions? In the print environment, for both published and unpublished material, use rights and restrictions are determined primarily by copyright law. Other areas of the law, such as privacy, publicity rights, and donor restrictions, may also come into play with manuscript and unpublished material. In the digital environment, information resources governed by license agreements, additional rights, or restrictions may be proposed. License agreements that contain examples containing additional restrictions such as “all rights not expressly granted are reserved” provide the licensor with the legal ability to limit use to those uses explicitly included in the agreement and no other hence the phrase “all rights not expressly granted are reserved.”

The content analysis reveals that all commercial publishers’ standard agreements include restrictions and prohibitions on use of licensed digital resources. All six commercial publishers’ agreements examined include specific restrictions and prohibitions in three subcategories: restrictions on copying, restrictions on downloading, and restrictions on scholarly sharing. Only one of those six agreements

includes a survivor clause that provides for restrictions in specified clauses, to last for an indeterminate amount of time following the termination of the agreement. Three out of the six include an “all rights not expressly granted are reserved” clause (see Tables 23-26).

Table 23. Commercial Publishers Standard Restrictions

Commercial Publishers' Standard License Agreements	Blackwell	Elsevier	Kluwer	Taylor & Francis	Thomson ISI	Wiley	Commercial Publishers Total
All rights not expressly granted are reserved	N	N	N	Y	Y	Y	3/6
Restrictions on Copying	Y	Y	Y	Y	Y	Y	6/6
Restrictions on Downloading	Y	Y	Y	Y	Y	Y	6/6
Restrictions on Scholarly Sharing	Y	Y	Y	Y	Y	Y	6/6
<i>Duration of Restrictions</i>	Term	Term	Term	Term	Term	Term	5/6

Table 24. Scholarly Society Publisher Standard Restrictions

Scholarly Society Publishers' Standard License Agreements	ACM	ACS	AGU	AIP	APS	APA	Society Publishers Totals
All rights not expressly granted are reserved	Y	N	N	Y	Y	N	3/6
Restrictions on Copying	Y	Y	Y	Y	Y	Y	6/6
Restrictions on Downloading	Y	Y	Y	Y	Y	Y	6/6
Restrictions on Scholarly Sharing	Y	Y	Y	N	Y	N	4/6
<i>Duration of Restrictions</i>	Term	Term	Term	Term	Term	Term	6/6

Table 25. University Press Publishers Standard Restrictions

University Press Publishers' Standard License Agreements	Cambridge	Chicago	MIT	University Press Total
All rights not expressly granted are reserved	N	N	Y	1/3
Restrictions on Copying	Y	Y	Y	3/3
Restrictions on Downloading	Y	Y	Y	3/3
Restrictions on Scholarly Sharing	Y	Y	Y	3/3
<i>Duration of Restrictions</i>	Term	Term	Term	3/3

The standard agreements of scholarly society publishers also include restrictions and prohibition on uses of licensed digital content. There was unanimous agreement in two subcategories: restrictions on copying and restrictions on downloading. In addition, none of the reviewed scholarly society publishers' standard agreements contain any survivor clauses, so in all instances, the duration of the agreement is the term of the agreement. Four out of the six scholarly society publisher agreements include restrictions on scholarly sharing, and similar to the commercial publishers agreements reviewed, 50% or (3 out of 6) included an "all rights not expressly granted are reserved" clause (see Table 24).

The university press publishers' agreements reflect complete consensus within this group in all but one subcategory--the inclusion in the standard agreement of an "all rights not expressly granted are reserved" clause. In this subcategory, only one standard agreement contains such a clause (see Table 25).

The second content analysis category, (restrictions and prohibitions on use of licensed digital content) reflects a similar consensus across all publisher types in two subcategories: inclusion of contract language related to restrictions on copying and inclusion of restrictions on downloading. Table 26 (next page) indicates broad agreement regarding restrictions on scholarly sharing, and 13 out of 15 (or 86%) restrict duration of standard agreement to the term of the contract. Just under 50% of all agreements reviewed contain an "all rights not expressly granted are reserved" clause.

Table 26. Comparison of Restrictions and Prohibitions

All Publishers' Standard License Agreements	Commercial Totals	Society Totals	University Press Totals	All Publishers Total
Are There Any Restrictions or Prohibitions on Uses?				
Restrictions on Copying	100% (6/6)	100% (6/6)	100% (3/3)	100% (15/15)
Restrictions on Downloading	100% (6/6)	100% (6/6)	100% (3/3)	100% (15/15)
Restrictions on Scholarly Sharing	100% (6/6)	66% (4/6)	100% (3/3)	86% (13/15)
<i>Duration of Restrictions</i>	83% (5/6)	100% (6/6)	100% (3/3)	93% (14/15)

4.3.4 Accuracy, Reliability and Completeness of Content Warranties

In *Essentials of Licensing Intellectual Property*, Alexander I. Poltorak defines a warranty as “a promise by one party, that certain statements are true and will remain so. If the promise is broken, the party to which it was made may recover any resultant damages” (Poltorak, 2004, p. 20). In the print environment, the publisher’s imprint or mark represents a guarantee from the printer or publisher that the book or journal is what it says it is and that it is an accurate and complete authorized version of such. Since the earliest days of printing, the process of printing itself, with its inherent fixity and standardization, provided for the first time an information product that could be uniquely identified, verified, distinguished, counted, and authenticated and that was acknowledged as such through the printer’s mark and subsequently the imprint of the publisher and due to its physical form remained as such through the lifecycle of the item. While the publisher’s imprint was not a legal warranty enforceable by contract, it did provide notice to the consumer that the publisher authorized the version. In contrast, in a digital environment, publishers make claims regarding the content, scope, and completeness of their digital products, yet routinely disclaim any warranties for accuracy, reliability and completeness of content which leaves libraries and individual consumers with little recourse other than to take it or leave it “as is.” The accuracy, reliability, and completeness of digital content needs further study, it could be an area that may be better served however, by an industry best practice or technical standard rather than enforcement of strict liability in contract law.

Category three of this content analysis section relates to any occurrences or omissions of warranties related to the accuracy, integrity, or completeness of the content of the licensed digital resource over the long-term (see Tables 27-29). This category has four subcategories: inclusion of a “no warranties” clause, warranty for integrity of content, warranty for accuracy of content, and long-term preservation or persistence of licensed digital content.

Two out of six, (or 33%), of the reviewed commercial publishers’ standard agreements include a blanket “no warranties” clause. There were two subcategories with near unanimous agreement in disclaiming any warranties. None of these six agreements however, contain a guarantee of any type related to the integrity or accuracy of the content being marketed and sold (see Table 27). The only possible exception among the commercial publishers is that a Taylor & Francis document entitled *Terms and Conditions of Access* contains a clause stating the following:

7.5 Except as expressly provided in the License, the Publisher makes no representations or warranties of any kind, express or implied, including, but not limited to, warranties of design, accuracy of the information contained in the Licensed Materials, merchantability or fitness of use for a particular purpose. The Licensed Materials are supplied ‘as is.’ (Taylor & Francis Terms and Conditions, January 2005)

Another Taylor & Francis license, available on their website for the journal, *Studies on Women and Gender Abstracts*, contains the following affirmative statement regarding the Publisher making “reasonable efforts to ensure that the journals are complete and accurate” under the section disclaimer of warranties:

The Publisher will make reasonable efforts to ensure that the Journals are complete and accurate. However the Publisher does not warrant their completeness and accuracy, and does not warrant that the Subscribing Institution's access to the Journals will be uninterrupted or error free, or that the results obtained will be useful or will satisfy the Subscribing Institution's requirements. (Taylor & Francis, SWA License, 2005).

This affirmation of the Publisher's willingness to take "reasonable efforts" may be a model for an industry-wide best practice. Also of note is that only one commercial publisher's standard agreement (albeit the largest and most profitable publisher, Elsevier) includes an explicit promise of long-term preservation or persistence:

Archival Access Policy. 1. A digital archive of the journals that Elsevier owns and that the Licensor makes available electronically on the Science Direct online service (Elsevier Journals) will be maintained. The archival files are intended to be maintained in perpetuity, with their format converted as appropriate if the technology used for storage or access changes.

2. The Licensor understands that the permanent availability of these archival files is of critical concern to its subscribers. Therefore, it makes the commitment that, in the unlikely event that it cannot assume the responsibility for maintaining the archive, it will arrange to transfer the archive to one or more depositories mutually acceptable to Elsevier and an independent board of library directors. (Elsevier, Science Direct License, 2004)

This same agreement, however, stops short of promising the full version for subscribers who terminate their relationship with ScienceDirect. In such a case, those subscribers are afforded the following:

If a Subscriber Agreement with Licensor expires, is not renewed or is terminated by Subscriber or by Licensor (except for violation of Subscriber's obligation under the Agreement), Subscriber may, at its option, acquire electronic copies of the Subscribed Content provided that it defrays the costs of preparing the data sought. In such circumstances, term and conditions of access will be as set forth herein; the electronic archive copy, will provided in the then current format and may not contain all the links and other features associated with the online version. (Elsevier, Science Direct License, 2004)

Table 27. Commercial Publishers' Warranties

Commercial Publishers' Standard License Agreements	Blackwell	Elsevier	Kluwer	Taylor & Francis	Thomson	Wiley	Commercial Total
Warranties							
No Warranties Clause	N	N	N	Y	N	Y	2/6
Integrity of Content	N	N	N	N/Y	N	N	-6/6
Accuracy of Content	N	N	N	N/Y	N	N	-6/6
<i>Long-term Preservation or Persistence</i>	N	Y	N	N/Y	N	N	1/6

Table 28. Scholarly Society Publishers' Warranties

Scholarly Society Publishers' Standard License Agreements	ACM	ACS	AGU	AIP	APS	APA	Society Total
Warranties							
No Warranties Clause	Y	N	N	N	Y	N	2/6
Integrity of Content	Y	N	N	N	Y	N	2/6
Accuracy of Content	Y	N	Y	N	N	N	2/6
<i>Long-term Preservation or Persistence</i>	Y	N	Y	N	N	N	2/6

Table 29. University Press Publishers' Warranties

University Press Publishers' Standard License Agreements	Cambridge	Chicago	MIT	University Press Totals
Warranties				
No Warranties Clause	N	N	N	3/3
Integrity of Content	N	N	N	3/3
Accuracy of Content	N	N	N	3/3
<i>Long-term Preservation or Persistence</i>	N	N	Y	1/3

Scholarly society publishers' standard agreements did include some explicit warranties related to integrity, accuracy and long-term preservation or persistence. Two out of six (33%) of their agreements includes some explicit guarantee related to the integrity of content. For example, Section 7 of the American Physical Society's (APS) standard license agreement includes the following:

7. Official Version of Record. APS will use commercially reasonable efforts to ensure that the online version of the journal corresponds in content with the print version. In the event of any discrepancy between the print and online versions, the online version will be the official version of record. (APS Standard License Agreement, 2004)

In addition, under Section 9a Disclaimer of Warranties, the standard American Physical Society (APS) agreement reads as follows:

9 a. The APS will make reasonable efforts to ensure that APS online journals are complete and accurate. (APS Standard License Agreement, 2004)

However, in spite of the language in Section 7, and the first sentence above in Section 9, Section 9a continues as follows:

...However, the APS does not warrant their completeness or accuracy, and does not warrant that institutional subscriber's access to APS online journals will not be uninterrupted or error-free, or that the results obtained will be useful or will satisfy institutional subscriber's requirements. (APS Standard License Agreement, 2003).

The Association of Computing Machinery's (ACM's) copyright policy Section 2.4

Definitive Versions and Revisions provides as follows:

The ACM will create and maintain a definitive version of ACM-copyrighted works. (Association of Computing Machinery, 2002).

Two scholarly society agreements include some explicit mention of long-term preservation of licensed materials (see Table 28). One of them, the American Geophysical Union's (AGU's) standard academic license agreement, Section 7.4 states as follows:

The Publisher undertakes to use reasonable endeavors to provide or to make arrangements for a third party to provide an archive of the Licensed Materials for the purposes of long-term preservation of the Licensed Materials. (AGU Standard Academic License, 2005)

University press publishers were in agreement in all but one subcategory related to warranties. Only one university press publisher's standard agreement includes any mention of long-term preservation or persistence of the licensed materials (see table 28).

MIT Press Institutional License Agreement Section 3 Archiving states:

...MIT Press promises to do everything possible to ensure continuing access to its electronic publications for a minimum of 10 years. (MIT Press, 2004)

Overall, across publisher types, the warranty category has less than 30% agreement in two subcategories: integrity of content and accuracy of content had less than 15% agreement with only two out of 15 agreements including any guarantee or warranties related to the integrity or accuracy of licensed digital content. Overall, by publisher type, scholarly society publishers are more likely to include any of the warranty subcategories than either commercial or university press publishers (see Table 30).

Table 30. Comparison of Warranties

All Publishers' Standard License Agreements	Commercial Totals	Society Totals	University Press Totals	All Publishers Total
No Warranties Clause	33% (2/6)	33% (2/6)	0% (-3/3)	26% (4/15)
Integrity of Content	0% (-6/6)	33% (2/6)	0% (-3/3)	13% (2/15)
Accuracy of Content	0% (-6/6)	33% (2/6)	0% (-3/3)	13% (2/15)
<i>Long-term Preservation or Persistence</i>	16% (1/6)	33% (2/6)	33% (1/3)	26% (4/15)

4.3.5 Completeness of Content

The completeness of content clause is typically proposed by libraries (on behalf of themselves) and end users to both identify and ensure that online versions of print content represent “complete, faithful and timely replications of the print versions of such Materials...”. The California Digital Library (CDL) model license contains the following completeness of content clause:

Completeness of Content. Where applicable, Licensor shall use reasonable efforts to ensure that the online content is equivalent to print versions of the Licensed Materials, represents complete, faithful and timely replications of the print versions of such Materials, and will cooperate with Licensee to identify and correct errors and omission. (CDLModel License, 2005)

The Council on Library and Information Resources/Digital Library Federation (CLIR/DLF) model license contains the following completeness of content clause that is focused entirely on the Licensor providing notice regarding “instances where online content differs from the print” (CLIR/DLF Model, 2005, p. 5).

Completeness of Content. “Where applicable, Licensor will inform Licensee of instances where online content differs from the print versions of the Licensed Materials.” (CLIR/DLF, 2005, p. 5)

This clause, however, if adopted as is, stops far short of requiring the Licensor to take any steps to check or ensure completeness of content. The completeness of content category (see Tables 31-33) for this content analysis has three subcategories: 1) the occurrence or omission of a completeness of content clause; 2) a publisher’s declaration as to the definitive version of the content; and 3) a publisher’s declaration

as to the version of record. Commercial publishers, with one exception, were in agreement regarding this category and each of its subcategories (see Table 31). Only one commercial agreement includes any mention related to the notions of accuracy and integrity that underlie the completeness of content clause. Taylor & Francis, under the disclaimer of warranties section of their Terms & Conditions of Use –Online Journals 2001, include the following:

6a. the Publisher will make reasonable efforts to ensure that the Journals are complete and accurate... (Taylor & Francis Online Journals License, 2001)

It must be noted, however, that this same agreement goes on in the following sentence to state:

“However, the Publisher does not warrant their completeness and accuracy ...”
Taylor & Francis Online Journals License, 2001)

Table 31. Commercial Publishers' Completeness of Content

Commercial Publishers' Standard License Agreements	Blackwell	Elsevier	Kluwer	Taylor & Francis	Thomson	Wiley	Commercial Total
Completeness of Content	N	N	N	N	N	N	-6/6
Definitive Version	NR	NR	NR	NR	NR	NR	6/6
<i>Version of Record</i>	NR	NR	NR	NR	NR	NR	6/6

Table 32. Scholarly Society Publishers' Completeness of Content

Scholarly Society Publishers' Standard License Agreements	ACM	ACS	AGU	AIP	APS	APA	Society Total
Completeness of Content	N	N	Y	N	Y	N	2/6
Definitive Version	Y	NR	NR	NR	Y	NR	2/6
<i>Version of Record</i>	NR	NR	NR	NR	Y	NR	1/6

Table 33. University Press Publishers' Completeness of Content

University Press Publishers' Standard License Agreements	Cambridge	Chicago	MIT	University Press Totals
Completeness of Content	N	N	N	3/3
Definitive Version	NR	NR	NR	3/3
<i>Version of Record</i>	NR	NR	NR	3/3

Compared to commercial publishers' standard agreements, scholarly society publishers' agreements had an overall 33% adoption rate in this content analysis category. In two out of the three subcategories, (completeness of content and definitive version), there was a 33% adoption rate. It is noteworthy, that three out of the six scholarly society publishers' agreements (American Geophysical Union, American Physical Society, and Association of Computing Machinery) (50%) includes one or more of the three subcategories (see Table 32). None of the university press publishers include any of the three subcategories in any of the standard agreements reviewed for this study (see Table 33).

With the exception of one commercial publisher in a single subcategory, scholarly society publishers' agreements were the only examples of adoption of this category. As the all publisher Table 34 below indicates, there are no examples identified from the university press agreements and only one from a commercial publisher. Most of the activity in this category is reflected in the scholarly society publishers agreements.

Table 34. Publishers Comparison Completeness of Content

Publishers Comparison Completeness of Content	Commercial Totals	Society Totals	University Press Totals	All Publishers Total
Completeness of Content	16% (1/6)	33% (2/6)	NR (3/3)	16% (3/15)
Definitive Version	NR% (6/6)	33% (2/6)	NR% (3/3)	13% (2/15)
Version of Record	NR% (6/6)	16% (1/6)	NR% (3/3)	8% (1/15)

Category five of this content analysis's section pertains to perpetual or continuing access. Libraries seek perpetual or continuing access to ensure that the content and research that scholars use today will be available for others in the future. Without a guarantee of perpetual access, libraries in general, and college, university and research libraries, in particular, and the users and culture that rely on them, are unable to guarantee the continuity of knowledge.

Two out of the six commercial publishers' standard agreements (33%) include a perpetual or continuing access clause (see table 35). For example, Blackwell Publishing's standard site license agreement, Section 2.2.2, states that:

"2.2.2 On termination of this License, the Publisher shall, if so requested within 30 days of termination, provide the Licensee with assistance in obtaining continuing access for Authorised and Walk-in Users to that part of the Licensed Material which was published and paid for by the Licensee with the Subscription Period 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. The Licensee will be responsible for any access fee due to the third party and for any fees associated with content conversion." (Blackwell Standard License, 2005)

Table 35. Commercial Publishers' Perpetual Access

Commercial Publishers' Standard License Agreements	Blackwell	Elsevier	Kluwer	Taylor & Francis	Thomson	Wiley	Commercial Total
<i>Perpetual or Continuing Access Clause</i>	Y	Y	N	N	N	N	2/6

Table 36. Scholarly Society Publishers' Perpetual Access

Scholarly Society Publishers' Standard License Agreements	ACM	ACS	AGU	AIP	APS	APA	Society Total
<i>Perpetual or Continuing Access Clause</i>	N	N	Y	N	N	N	1/6

Table 37. University Press Publishers' Perpetual Access

University Press Publishers' Standard License Agreements	Cambridge	Chicago	MIT	University Press Totals
<i>Perpetual or Continuing Access Clause</i>	Y	N	Y	1/3

Table 38. Publishers' Comparison Perpetual Access

All Publishers' Standard License Agreements	Commercial Totals	Society Totals	University Press Totals	All Publishers Total
<i>Perpetual or Continuing Access Clause</i>	33% (2/6)	16% (1/6)	33% (1/3)	26% (4/15)

Only one of the six scholarly society publishers' agreements contains a perpetual or continuing access clause (see Table 36). The American Geophysical Union's (AGU's) single institution academic license, Section 2.3, states that:

2.3 On termination of this License, the Publisher shall provide continuing access for Authorized Uses to that part of the Licensed Materials which was published during the Subscription Period and was paid for at the Full Subscription Rate; such continuing access will be provided either from the Server subject to such fees as the parties agree, or by supplying the Licensee electronic files in the then-current format on a medium of the Publisher's choice for a fee that reflects the cost of preparation and delivery." (AGU Standard Academic License, 2005)

Only one of the three university press agreements includes a perpetual or continuing access clause (see Table 36). MIT Press Institutional License Agreement states:

MIT Press promises to do everything possible to ensure continuing access to its electronic publication for a minimum of 10 years." (MIT Press, 2004)

While this category had an overall low adoption rate, each publisher type was represented. The highest number of examples by publisher type for this category came from the commercial publishers (see Table 38).

The right to archive is critical to society and a fundamental component and value of libraries (UNESCO, 2004, Gorman, 2000). College and research libraries, in particular, have always existed not only for present, but also for future generations of students, scholars and society (Battin, 1982). In *Our Enduring Values*, Michael Gorman includes "the preservation of the human record to ensure that future generations know what we know" as one of three components of stewardship in the library. (Gorman, 2000, p. 59).

The sixth category of this content analysis focuses on the occurrence or omission of the right to archive in standard license agreements. This category has two subcategories: the occurrence or omission of the right to archive and whether the publisher offers an archive for sale or lease.

This content analysis reveals that publishers of all types offer their archives for sale or lease but only three of 15 offer any type of right to archive to libraries or their users. The content analysis further reveals that the term “archive” is used by publishers’ agreements to describe a wide range of activities and yet, in each case, stops short of providing the legal right to maintain and use the licensed content over the long-term. Only one of the six commercial publishers’ standard agreements made any mention of the right to archive (see Table 39 next page). Under its Authorized Uses Section, the Kluwer Consortium License Agreement states that the:

4.2 Licensee may make one (1) copy of the Licensed Materials, electronically as well as one copy in print from the electronic versions of the Licensed Materials to be maintained as a backup or for archival purpose. (Kluwer Consortium License, 2003)

Table 39. Commercial Publishers' Right to Archive

Commercial Publishers' Standard License Agreements	Blackwell	Elsevier	Kluwer	Taylor & Francis	Thomson	Wiley	Commercial Total
Right to Archive Clause	N	N	Y*	N	N	N	1/6
<i>Archive for Purchase or Lease</i>	Y	Y	Y	Y	Y	Y	6/6

Table 40. Scholarly Society Publishers' Right to Archive

Scholarly Society Publishers' Standard License Agreements	ACM	ACS	AGU	AIP	APS	APA	Society Total
Right to Archive	N	N	Y*	N	N	N	1/6
<i>Archive for Purchase or Lease</i>	Y	Y	Y	Y	Y	Y	6/6

Table 41. University Press Publishers' Right to Archive

University Press Publishers' Standard License Agreements	Cambridge	Chicago	MIT	University Press Totals
Right to Archive	N	N	Y	1/3
<i>Archive for Purchase or Lease</i>	Y	Y	Y	3/3

Table 42. Publishers' Comparison Right to Archive

All Publishers' Standard License Agreements	Commercial Totals	Society Totals	University Press Totals	All Publishers Total
Right to Archive	16% (1/6)	16% (1/6)	33% (1/3)	20% (3/15)
<i>Archive for Purchase or Lease</i>	100% (6/6)	100% (6/6)	100% (3/3)	100% (15/15)

Only one scholarly society publisher's standard agreement mentioned any provision regarding an archive: this agreement includes a promise by the publisher to "use reasonable endeavors to provide or to make arrangements for a third party to provide an archive of Licensed Material for the purposes of long-term preservation of the Licensed Material," rather than granting the right to archive to the library or individual end user (AGU Standard License, 2004). All six scholarly society publishers' agreements did include provisions or reference to the publisher's archive being available for subscription or sale (see Table 340).

Only one of the three university press agreements includes a right to archive. In this case, MIT Press' standard license provides the broadest and most comprehensive right to archive contained in any of the agreements reviewed. MIT Press Institutional License Agreement specifically authorizes " [a] subscribing library may download and archive materials at its own site and place contents on its own file server" and that "[u]sers may download and print articles for personal use and archive contents on their own personal computers" (MIT, 2004). All three university press agreements cited the availability for subscription or sale of the publisher's archive (see Table 41).

The overall adoption or inclusion of the right to archive in publishers' standard agreements is 20% (see Table 42). Only one of the three university press agreements includes a complete and explicit right for the library or user to archive licensed content. By contrast, all 15 publishers' agreements reference the availability of licensed archival content for subscription or sale.

As previously discussed, non-disclosure clauses are clauses that attempt to prohibit disclosure of all or some of the terms of the agreement (Poltorak, 2004). This final and seventh category focuses on the occurrence or omission of non-disclosure clauses in the publishers' standard agreements. One of the six (33%) reviewed commercial publishers' agreements includes a classic non-disclosure clause (see Table 43). The Thomson ISI Database Internet License Agreement, Section 16 non-disclosure of terms and conditions states:

Except as may be required by law or governmental rules and regulations, Licensors and Licensees agree not to publicly or privately announce or disclose the terms and conditions of this Agreement without first securing the written consent of the other party. (Thomson, 1999)

None of the six scholarly society or university press publishers' agreements includes a non-disclosure clause (see Table 44 next page). Overall, only one out of 15 (75%) of the reviewed standard agreements include a non-disclosure clause (see Table 47)

Table 43. Commercial Publishers' Non-Disclosure

Commercial Publishers' Standard License Agreements	Blackwell	Elsevier	Kluwer	Taylor & Francis	Thomson	Wiley	Commercial Total
<i>Non-disclosure clause</i>	N	N	N	N	Y	N	1/6

Table 44. Scholarly Society Publishers' Non-Disclosure

Scholarly Society Publishers' Standard License Agreements	ACM	ACS	AGU	AIP	APS	APA	Society Total
<i>Non-disclosure clause</i>	N	N	N	N	N	N	-6/6

Table 45. University Press Publishers' Non-Disclosure

University Press Publishers' Standard License Agreements	Cambridge	Chicago	MIT	University Press Totals
<i>Non-disclosure clause</i>	N	N	N	-3/3

Table 46. Publishers' Comparison Non-Disclosure

All Publishers' Standard License Agreements	Commercial Totals	Society Totals	University Press Totals	All Publishers Total
<i>Non-disclosure clause</i>	1/6	0/6	0/6	7% (1/15)

CHAPTER 5: THEMATIC ANALYSIS OF THE DATA

This chapter examines a number of major licensing-related issues raised by libraries and publishers in their open-ended survey responses and interviews. As already discussed, both quantitative and qualitative responses were collected for this study. The quantitative data provide a description of the current licensing landscape as well as benchmarks for future research, especially longitudinal studies in this area. The qualitative data, on the other hand, adds context and perspective to the quantitative findings and helps to clarify which issues and themes are most critical from the respondents' points of view.

This chapter begins with some comparisons between the 1998 *ARL Study on Managing the Licensing of Electronic Product*, the present study, and a brief overview of the current licensing landscape derived primarily from the quantitative data. It concludes with a discussion of the open-ended responses and other comments by libraries and publishers regarding what they consider to be their biggest challenges related to the licensing of digital resources.

While the 1998 ARL study on *Managing the Licensing of Electronic Products* focused primarily on staffing and “how research libraries have organized the licensing of electronic products” rather than on the implications of licensing on long-term access and use of licensed library collections, there are a few areas where comparison

provides for useful analysis and benchmarking (ARL 1998, p. 3). One of those areas concerns how libraries handle the management of licensing activity. Table 47 compares data from the 1998 ARL study and the present research, related to management of licensing activity in college and research libraries. As the table indicates, both studies show that the majority of licensing activity is handled within the libraries themselves.

Another area of comparison is the respective studies' survey response rate. The 1998 survey was sent to the entire 122-member ARL list (including Canadian libraries that were excluded from the present study due to different juridical and legal considerations). The 1998 ARL study received 44 responses from the 122 ARL libraries, for a response rate of 36%. The survey for the present study was sent to a wider group of 197 U.S. college and research libraries, including ARL (U.S. college and university libraries only), Oberlin, and ULG member libraries. Out of these 197 libraries, 112 completed the web-based survey, a response rate of 57%. Both studies confirm that the vast majority of licensing activity continues to be managed almost exclusively within the libraries surveyed.

Table 47. Comparison of Response Rate 1998 ARL Survey and Responsibility for Managing and Coordinating the Licensing of Digital Resources

How does your library ordinarily manage/coordinate the licensing of digital resources (e.g., databases, electronic journals, websites, etc.	<p>44 of 122 ARL member libraries (36%) responded.</p> <p>32 (73%) reported sharing license management with other offices or their parent institution or consortia. 9 libraries (21%) reported managing all licensing within the library. Together, these figures indicate 94% of libraries do almost all licensing on behalf of their libraries</p>	<p>114 of 197 ARL, Oberlin and ULG libraries (87%) responded.</p> <p>114 (87%) reported they did all of their licensing, except that done by consortial partners on their behalf. 8 (7%) libraries responded they did the licensing of all digital resources acquired by their libraries. Together, these figures indicate that almost 97% of the responding libraries do almost all licensing on behalf of their libraries</p>	<p>2004 study larger sample includes ARL, Oberlin and ULG libraries</p> <p>Both studies indicate U.S. college and university libraries managing most, if not, all licensing on behalf of their libraries</p>	

Table 48. Comparison of 1998 Library Policy Requirements for License Agreements with 2004 Results

Specifically, do you have, by policy, requirements in any of the following areas that licensing agreements must meet? Check all that apply (1998 ARL n=36) , (2004 Farb n=33)	ARL 1998	Farb 2004	ARL 1998	Farb 2004
Use by a walk-in user at a public terminal	26	27	72%	81.8%
Fair use rights as defined by copyright law	25	24	69%	72.7%
Insurance that individual's user's identity remain anonymous and that search histories be kept confidential	13	N/A	36%	N/A
Year 2000 compliance warranty on all database and search software	12	N/A	33%	N/A
All usage statistics compiled by the vendor be reported to the library on a regular basis	11	8	31%	24.2%
Use of the electronic material for interlibrary loan	9	17	25%	51.5%
Perpetual access to purchased information	8	14	22%	42.4%
Any usage information compiled by the vendor be used only for the vendor's internal operations and not released to outside parties	8	13	22%	39.4%

Another difference between the 1998 ARL survey and this 2004 study concerns library policy requirements about issues related to library role and mission. In contrast to the 1998 ARL study, the present study includes data on use by walk-in users at public terminals; fair use rights as defined by copyright law; confidentiality of user information; use of digital resources for interlibrary loan; perpetual access; usage information; and the ability to produce and keep archival copies (see Table 48).

It is noteworthy that seven years after the 1998 survey, the percentages remained similar for the areas of highest concern and interest to libraries. In both 1998 and 2004, over 70% of libraries reported having a policy requirement related to license provisions for walk-in users. In addition, in both surveys, fair use was second highest-ranked concern, with 69% of libraries reporting a policy requirement in 1998 and 72.7% in 2004. Equally noteworthy is that the number of responses related to archival requirements has remained more or less unchanged. In 1998, seven libraries (19%) reported having a requirement related to “the ability to produce and keep an archival copy” (ARL, 1999, p. 9). In 2004, 7 libraries (21.2%) reported having such a requirement.

5.1 The Current Licensing Landscape

The respondents' comments indicate that they perceive the current licensing landscape to be dynamic and continuously increasing in scope, size, volume, and complexity. In the late 1990s libraries, publishers and content providers attempted to collaborate on a set of model license terms and conditions that would represent a consensus “to cover

different products and different types of use and [would] set out the more routine conditions of use, but leave a limited number of commercial issues (e.g., price per access, territory) to be added by different suppliers” (JISC, 1999, p. 1). Nonetheless, all the standard license agreements reviewed for this study were unique to the publisher and product, a point reinforced by the publishers who were interviewed. Based on the present data, there would seem to be little or no movement toward the general use of model license agreements.

In 2004, the libraries surveyed for this study reported having an average of 164 signed license agreements; in 1995, over 90% of libraries reported having fewer than 15 license agreements -- an increase of over 600%. While library respondents reported that they found it difficult to determine their libraries' exact percentages and expenditures related to digital resources, due to limitations in their current information management systems, this study and others confirm continuous increases in both the quantity and cost of licensed resources. This finding supports the trend noted by the Association of Research Libraries that "between 1994/95 and 2001/02, expenditures on electronic resources for the typical university research library have grown almost 400%" (ARL, 2004, p. 1). In the present survey, libraries reported that, on average, 27% of their library collections consisted of licensed digital resources.

One factor included in this study that has not been addressed in previous research on libraries and licensing is the proportion of licensed library resources that are either obtained by libraries in digital form only, or where a print counterpart does not exist. As argued previously, such materials are the most vulnerable to the ability of

libraries to ensure long-term access. Thirty-six respondents to the present library survey indicated that, on average, over 65% of their collections consisted of licensed content in digital form only. This percentage represents a significant portion of library material that may be at risk due to license agreements that limit libraries' ability to preserve and archive digital material, technological obsolescence, or limitations placed on preservation strategies by copyright law.

Thematic Analysis

To understand the degree to which the library and publisher respondents were concerned about these and other issues, each group was asked what they considered to be the most difficult issues relating to the licensing of digital resources. The responses to these open-ended questions, plus other comments made by the respondents in the surveys and interviews, were analyzed qualitatively. Several main themes were identified in the library and publisher responses, respectively.

5.2 Library Themes

Thirty-two libraries responded to the survey question, "What do you consider to be the most difficult issues facing your library regarding licensing of digital resources?" The answers often cited multiple topics, issues, or concerns. One respondent, for example, included three issues the response to this question:

- 1) Ensuring that fair use is allowed as digital rights technology becomes more invasive,
- 2) ensuring a usable electronic copy is archived and accessible,
- 3) ensuring that the unsustainable price increases associated

with print journals does not become the defacto model with electronic journals (see Appendix 6).

Nonetheless, despite the range of issues raised, six main themes were evident in the libraries' responses:

1. Volume and complexity of licensing—(the increase in quantity of licensing activity and lack of resources, staffing and tools to support it) (n=14; 30%)
2. Long-term access to licensed content including perpetual access (n=12; 26%)
3. Financial concerns: escalating costs of licensed resources, lack of adequate funding, affordability, variety of business models (n=11; 23%)
4. Lack of archiving (by library, publisher or third party) (n=5; 11%)
5. Usage concerns (*e.g.*, Fair use, and securing broad rights) (n=4; 8%)
6. Cooperation with faculty (n=1; 2%)

Regarding the increased quantity as well as the complexity of licensing, for example, respondents commented:

“Just the sheer volume of agreements makes the job difficult, but long term preservation is one of the most important issues.”

“The proliferation of resources far exceeds our budget and the overlap between similar resources sometimes makes it hard to assess what’s needed and spend dollars wisely.”

“Conglomeration of providers.”

Several libraries mentioned staffing problems, the difficulty of “managing large journal packages,” the “complexity of contracts,” and that “electronic resources have grown faster than staff and processes to keep up the escalating dynamic.”

Regarding long-term access to licensed content, respondents mentioned “perpetual access,” “perpetual access to those electronic materials,” “the need for long-term access to content,” and “long-term-access” as concerns. Financial concerns were also cited: “increasing prices,” “escalating costs + inflation and shrinking budgets,” “cost of materials,” “continuing to have the budget to pay for more and more resources,” “funding,” “affordability.”

Five libraries specifically mentioned archiving or the lack thereof as the most difficult issue, e.g., “ensuring a usable electronic copy is archived and accessible,” “lack of archiving,” “purchase of archive,” “permanent e-content.” Four libraries considered the use of licensed electronic resources to be their most difficult issue, noting that,

“In order to keep inflation rates down, we are committing to long-term licenses that prohibit us from canceling print; as we move toward e-only, we may not be considering as thoroughly as we should our access rights in the future.”

“Ensuring fair use is allowed as digital rights technology becomes more invasive.”

“Securing broad rights.”

“Local commitment to systemwide principles that should be pursued vigorously and uniformly, but a lack of bargaining power when dealing as a single institution which makes achieving perpetual access and other usage rights difficult.”

One respondent cited “Cooperation of faculty for library acquisitions procedures” as the most pressing licensing-related issue at that library.

Although the aforementioned top issues may not be surprising, it is clear that some issues raised more concern than others. Three times as many library respondents

cited “the sheer volume of agreements” as the most difficult licensing-related issue, as cited archiving or lack thereof as most difficult. Interestingly, persistence (long-term access) was mentioned more than twice as frequently as archiving as the most difficult issue, even though archiving would seem to be a necessary prerequisite for long-term access.

5.3 Publisher’s Themes

The publishers interviewed for this study were asked: “As a publisher, what are your biggest challenges regarding licensing digital resources?” Again, the eight interviewees' answers were often complex and multi-faceted. However, four overarching themes were evident in their responses:

1. Financial concerns (e.g., pricing, variety of business models, packaging) (n=8; 88%)
2. Roles and expectations of libraries, publishers and users in the digital environment (n=6; 66%)
3. Sustainability (notions of meeting present needs without compromising the ability of future generations to meet their own needs; (n=3; 33%)
4. Digital archiving (reliable and trustworthy digital repository whose mission is to provide long-term access to managed digital storage now and in the future; (n=1; 11%)

Given the market- and revenue-orientation of this group of respondents, it is perhaps unsurprising that all eight interviewees who answered this question cited financial issues as a major challenge. One publisher noted that he was worried about the ‘big deal’—a term used to refer to large bundled packages of content -- because big deals “benefit very few, large publishers and libraries” who in his view are “squeezing [the] diversity and range” of published content. Several publishers mentioned that their firms were experimenting with new "value-based" or “usage-based” pricing or other business models as alternatives to their standard pricing models, for example by basing prices on the number of full-time equivalent (FTE) students or faculty at an institution, or the bed count of hospitals and clinics served by medical libraries.

Most of the publishers interviewed noted their new roles and relationships with their customers in the digital environment, including new “levels of attention to customer service” and a “committed level of communication never seen before.” One commercial publisher pointed out what he felt was a common misconception among the general public, that “everything on the web is free.” Another acknowledged that for “libraries, publishers and authors,” the whole process in a digital and licensing environment has changed.

Three publishers raised issues related to "sustainability." While none of them explicitly defined what they meant by the term, their concern seemed to be the sustainability of their current business models. Significantly, of the three respondents who mentioned sustainability, two represented scholarly societies. Both of these

respondents specifically cited open access as a threat to their press's current business model.

"Open access" refers to publications that provide "free access to some or all of their research articles," as well as to "a new movement in scholarly publishing" (Lamb, 2004, p. 143). "Open access shifts the burden of paying from the reader to other points—including the author--along the publication chain" (Lamb, 2004, p. 147). One scholarly society publisher was critical of recent legislative and other regulatory attempts related to open access, including the "Sabo bill" (Public Access to Science Act, 2003) and the National Institute of Health's Open Access Policy. In his view, the "subscription model is the best possible and most sustainable model...we believe we charge reasonable amounts for subscriptions." Similarly, the second scholarly society publisher voiced dissatisfaction with the "regulatory," "government intervention" and what he called the "thou shalt" approach to open access

The fourth theme, digital archiving, was mentioned by only one publisher as a major challenge. That publisher, one of the largest scholarly society publishers in North America, strongly advocated the importance of archiving in general, and digital archiving in particular, for preserving the "body of knowledge" and "record of science." The respondent also noted that publication by members of their society increasingly includes items that are "interactive," "multidimensional," and "not flat on a page," and which therefore are not easily reproduced or archived with existing technology.

5.4 Libraries and Publishers: Common Themes

Three themes were common to both the library and publisher responses, although the two groups took different perspectives in each case. Both library survey respondents and publisher interviewees cited financial concerns, roles and expectations of libraries, publishers and users in the digital environment, and archiving as important licensing-related issues.

Both libraries and publishers were concerned about costs, although libraries framed their concerns in terms of rising costs, static budgets or “budgets designed for print.” While all publisher respondents agreed that “the whole process costs more,” this group tended to focus more on competition among various business models and between competitors, rather than on the affordability of their licensed digital products.

About half of the library respondents, and three-fourths of the publishers, noted that the licensing of digital resources is affecting their institutional and organizational roles, expectations and staffing. Libraries were concerned about organizational pressures posed by the “sheer volume of agreements [that make] the job difficult,” particularly given the exponential increase in licensing activity over a relatively short period of time and without warning and said that “electronic resources have grown faster than staff and processes to keep up the escalating dynamic.” Publishers, on the other hand, noted that the digital environment has “changed the perception among users”; the digital environment, they said, is “more complex, with more choices” that requires better communication.

Archiving, another theme raised by both libraries and publishers, also has implications for sustainability and long-term access/persistence. Although archiving has a specific meaning for archivists, relating to records, commercial, scholarly society, and university presses often refer to the “e-journal as the journal of record,” suggesting that digital archiving is essential.

Libraries tended to frame challenges to their roles in practical terms, as one librarian respondent described it,

“...reliance on the vendors/publishers to guarantee ongoing access, and the seller’s market in which we are reliant on the publisher/vendors and therefore vulnerable. We can foresee having to pay whatever they want to charge, with no price control to check the rate of inflation.”

The Themes Reflected in Other Survey Responses

The themes outlined above were also broadly reflected in the libraries' other survey responses. When asked what their libraries were "doing to ensure that licensed digital resources will be affordable over time (Question 19; see Appendix 5), almost three-fourths of the respondents cited pricing-related efforts: “We’re severing most “big deal” arrangements.” “We discuss costs and use with vendor/content providers.” “Annual analysis of cost & price increases.” Generally, libraries also supported “alternative publishing models,” “operations such as SPARC and BioMed Central,” and “serious discussions with providers such as purchase, lower annual access fees, and back-up tapes or other format if annual access ends.”

Libraries also indicated that collaborative efforts and participation with library consortia were among their primary strategies for ensuring long-term access of licensed

digital resources. They said they were “working with consortial partners,” “using consortial arrangement[s] when available,” “enter[ing] into consortial agreements, whenever possible,” and “working with consortia more.”

The second most frequent response to Question 19 involved archiving, although each library respondent used the term slightly differently. One respondent reported a strategy to “have archiving rights to all content based collections, especially e-journals and books.” Another said their library “cancel[s] print when we have the digital archive rights,” yet “encourag[ed] faculty to retain rights and consider self-archiving” and “participating in the Mellon-funded LOCKSS project.”

As with the question of major licensing-related issues, persistence, or long-term access, was less frequently mentioned in this context. Volume and usage concerns were not mentioned at all in response to this question.

Libraries were also asked what they thought to be “the most difficult challenges...regarding the long-term access and use of licensed digital resources.” Long-term access, financial issues, and archiving were clear concerns here.

With regard to long-term access, respondents noted the “need for sustainable access to online journal resources,” “simply, to ensure that we would be able to access the resources,” “ensuring access to content in a rapidly changing environment,” “perpetual access, affordability,” and “developing policies and infrastructure for long-term access and preservation doing this affordably.”

Several respondents focused on financial issues. As one librarian put it, the main constraint on long-term access is

“COST. I am concerned that producers of digital resources will model the STM journal publishers in pricing. I recently spoke with a database sales rep after a demo. The price tag for the database is in the 6 figures.”

Libraries also related archiving to long-term access, noting the need for “ensuring archiving of digital resources” and the “archiving of materials, providing access to material older than 10 years.” One mentioned that their library’s “lack of archive” was due to “renting not owning.” As one respondent put it, “We are very concerned that, as a major research library, we will not have the wherewithal to archive electronic resources as effectively as we have print and other more traditional carriers of information.”

The responses to Question 21 also suggested the role of technology in long-term access and sustainability. Respondents mentioned a variety of technological strategies or solutions to the problem, including “capacity and migration,” “standardizing formats that can be migrated over time,” “authenticating access,” “mutability,” “multiple formats,” and “hardware upgrade.” Digital rights management (DRM), a technological solution to controlling the access and use of digital content, was also cited. Long-term access was also seen as entailing new organizational roles and responsibilities: as one respondent said, it was a matter of “who and how.” Another said, “our library needs to come up with a formal plan.”

CHAPTER 6: IMPLICATIONS AND EMERGENT ISSUES

Concepts, ideas, images—not things—are the real items of value in the new economy. Wealth is no longer vested in physical capital but rather in human imagination and creativity. Intellectual capital, it should be pointed out, is rarely exchanged. Instead, it is closely held by suppliers and leased or licensed to other parties for their limited use.

Jeremy Rifkin, *The Age of Access*, 2000

This chapter presents analysis of the data collected in this study, and explores four main themes. The first three themes focus on the role and impact of, or implications for, institutions, including stewardship in the age of licensing; ownership versus non-ownership of library resources and collections; and licensing and preservation over space and time. The fourth theme, discussed in Section 6.4, focuses on users' and clients' access and use of information, particularly in terms of intellectual freedom, fair use, and values of control..

6.1 Stewardship in the Age of Licensing

Libraries of all kinds during the centuries of their existence have had a common objective—one so generally accepted that it is seldom made explicit. It is the conservation and organization of the world's resources of recorded thought and fact so as to make them available for present and future users.

Robert D. Leigh, *The Public Library in the United States*, 1950

Stewardship is, and has been, a key characteristic, feature, and mission of libraries since their inception. According to Nancy M. Cline, “the stewardship of cultural resources may be the epic challenge for the new millennium...” (Cline, 2003, p. 7). Defined by

the OED Online, stewardship is the “administration, management, control including [the] responsible use of resources” (OED Online, 2005). Stewardship, therefore, incorporates notions of mission, responsibility, integrity, trust, accountability, service, and preservation and sustainability for future use. In terms of this broad definition, stewardship and licensing have something in common—both influence the administration, management and control of use of digital resources. However, the purposes of stewardship and licensing differ starkly. Licensing grants a limited right to access and use of resources, and supports the interests of owners or publishers. Stewardship, in contrast is action taken in trust or on behalf of another (for example, current and future generations of users of resources), with the aim of ensuring the integrity, authenticity, and the sustainability of resources, and thus their future value and use.

Michael Gorman ranks stewardship at the top of his list of eight “core” or “central values” of librarianship (Gorman, 2000, p. 26). He traces the “metaphorical meaning” of stewardship to the King James Bible, as “someone or some entity that preserves the value of something and ensures that future generations enjoy the legacy that comes to them with an equal or enhanced value,” and identifies three components of library stewardship: “1) the preservation of the human record to ensure that future generations know what we know, 2) the care and nurture of education for librarianship so that we pass on our best professional values and practices and 3) the care and maintenance of our libraries so that we earn the respect of our communities” (Gorman, 2000, pp. 58-59).

Licensing, for its part, is about control—in this case control of how, when, where, and under what circumstances digital resources, such as online journals and databases, are used by students, faculty, and staff at college and research libraries. In her article on the implications of “new kinds of contracts” in networked digital environment, Margaret Jane Radin highlights two models of legal agreement or contract; “contract by consent” and “contract as product” (Radin, 2000, p. 1125). According to Radin, “the contract-as-consent model is the traditional picture of how binding commitment is arrived at between two humans” and fits within the traditional freedom of contract point of view, whereas in the contract-as-product model “the product plus terms are a package deal” (Radin, 2000, p 1125). This latter model, the “package deal” (where the license and product are inextricably linked and all access and use of the product is governed by the terms of the license) is the current practice of the largest publishers worldwide. As the preceding chapters indicate, increasingly, digital content is acquired by college and research libraries via license agreements that govern the terms, condition, and duration of access. Such license agreements routinely prohibit preservation copying, archiving, or perpetual access. The standard publisher’s license agreement, therefore, appears to prevent two of Gorman’s three requirements of stewardship from being met.

Stewardship Is Preservation for Future Generations

For libraries, archives, and cultural memory institutions, stewardship in pre-digital times, consisted in large part of the acquisition and preservation management of

collections, artifacts, and papers. Although historically, preservation and collection stewardship were central to the mission and fundamental objectives of college, university, and research libraries, the reality was that preservation expenditures and resources failed to keep pace with the problem of deteriorating collections. In *The State of Preservation Programs in American College and Research Libraries: Building a Common Understanding and Action Agenda*, Anne Kenney and Deirdre Stam note that “preservation expenditures as a percentage of the library's total budget are below 3 percent for all institutional groups...” (Kenney, 2002, p. 3). Patricia Battin, librarian and national leader in the field of preservation, highlighted the global stakes over twenty years ago. In an essay, Battin identified critical challenges to “progressive [analog] deterioration of library collections” and concluded that

[t]he primary managerial challenge is to find a way, within our pluralistic society with a strong tradition of institutional individuals, to forge a coalition among the interested parties—scholars, librarians, university officers, publishers, and all those who use the records of civilization—with a common purpose strong enough to transcend the barriers of apathy, tradition, myth, and institutional self-interest. Our national heritage is at stake. (Battin, 1982, p. 69).

Stewardship, particularly with regard to digital preservation, presents an even more complex, continuous, and highly distributed challenge than does print preservation. Digital materials are even more prone to deterioration and thus to compromised access, especially as libraries become more reliant on content that is available in digital form only. The present study asked library representatives for the proportion of their licensed digital resources that are acquired solely in digital or online form (Appendix 1, Question 7; see Table 4). The average reported proportion was

69.4%; eighteen of the 33 respondents to this question said that between 80% and 98% of their digital resources were acquired in digital or online form only.

This high percentage of licensed library content without any print counterpart, would seem to challenge traditional concepts of library stewardship and mission. Ongoing migrations and upgrades to new technologies, technological obsolescence, legal limitations, and lack of global standards related to the integrity and authenticity of digital products all make preservation much more problematic. Moreover, most license agreements explicitly prohibit libraries and individual end users from making archival or back-up copies, as provided under federal copyright law. Clifford Lynch emphasizes the digital line of demarcation: “[I]n the old world of physical artifacts, simply by publishing their works so that an archive or library could obtain a copy, authors would in effect enter in the necessary agreements to ensure that their works would be archived as a byproduct, but this is no longer the case” (Lynch, 2003, p. 155). Not only authors, but future generations of readers, are affected: licensing does not assure that the materials will be preserved and, therefore, be available for future use. Publishers have never considered these functions to be part of their role.

Digital licensing affects libraries’ stewardship and preservation responsibilities in three ways: 1) lack of the right to archive licensed digital content; 2) lack of a guarantee of perpetual or persistent access; and 3) the degree of planning by libraries and publishers for the preservation of licensed resources, and for digital preservation more generally.

For most college and university libraries, prior to licensing, preservation and access were an implicit part of acquiring the physical item, artifact, or collection. In “the traditional library, access and stewardship are served by the same strategy—assemble in a single place the books, journals, films, sound recordings, prints, photographs, and other artifacts that carry our society’s scholarship and knowledge and combine to shape and reflect its culture” (Greenstein, 2004, p. 9). In a digital environment, license agreements generally prohibit the library or its authorized users from archiving the content.

The findings reported here reflect the overall state of underdevelopment and lack of awareness about the implications of licensing for library stewardship. Of the six commercial publishers’ agreements reviewed, only one contains even a limited right to archive. All six commercial publishers, however, offered archived material for purchase or lease. As one scholarly society publisher interviewed for this study put it, “I don’t think libraries will be able to archive as they did in print.”

Similarly, survey respondents reported that on average, just 36% of their license agreements include the right to archive. In contrast, U.S. copyright law provides libraries and archives with the right to reproduce copyrighted work for purposes of preservation and security without requiring advance permission from the copyright holder (17 U.S.C. Section 108). As libraries continue to acquire more and more digital content, such explicit prohibitions on the right to archive, preserve, and use digital resources are likely to become greater challenges to libraries’ stewardship responsibilities.

Over 50% of survey respondents said they considered “lack of archive,” “preservation and storage of electronic copy,” “replacing print with the electronic version,” or “developing policies and infrastructure for long-term access and preservation [and] doing this affordably” as the most difficult challenges to long-term access and use of digital resources in their libraries (Appendix 1, Question 21). Most publishers did recognize these difficulties, and some said they were involved in developing a plan, experiment, or collaborative effort or venture related to digital preservation of licensed content. To date, however, it is only the largest commercial publishers that have any systematic plan or infrastructure to support long-term preservation and archiving of licensed digital content.

Of course, persistent access to licensed content is a serious issue for college and research libraries and their users. Scholarship requires the ability to check sources and verify information acquired in the past in the future—weeks, months and often years after publication or creation. Derek Law cites three essential requirements for scholarly communication: “permanence, availability and accessibility”; “[o]ne of the unremarked triumphs of librarianship in the last forty years is that we have created a system which allows the researcher reliably and persistently to identify and retrieve any document published anywhere in the world” (Law, 1998, p. 753). In contrast, this is not the case with licensed digital resources available via the Internet (Law, 1998, p. 753).

Effective stewardship and long term-preservation require planning. According to Clifford Lynch, “[p]reservation of digital materials is a continuous, active process” that “requires active management and continual vigilance” (Lynch, 2003, p. 151). Of

the thirty-five college and university libraries responding to the question regarding preservation planning, only nine reported having a plan for long-term preservation, access, and use of licensed resources. So, while over 75% of libraries responding (26/35 libraries) identify the lack of a digital archive of licensed resources as an issue, 25% (9/35 libraries) report having a plan to deal with the issue.

Stewardship as Sustainability of Licensed Digital Resources

Nancy M. Cline defines “stewardship as the responsible use of resources” over time (Cline, 2003, p. 8). The United Nations World Commission on Sustainable Development (also known as the Brundtland Commission) defines sustainability as the ability “to meet the needs of the present without compromising the needs of future generations to meet their own needs” (Brundtland Commission, 1987). Both sources suggest that an inherent value and objective of stewardship is sustainability; and the findings of the present study also indicate that current standard publisher license agreements and licensing practices present serious barriers to sustainability, and thus to long-term access and use, of licensed digital resources.

For U.S. college and university libraries, stewardship and sustainability must be analyzed in the context and mission of the parent institution. The fundamental *raison d'être* of higher education is the creation, dissemination, and advancement of knowledge, and libraries are an essential element in fulfilling this mission. As Louis Shores notes in *The Origins of the American College Library 1638-1800*, “[A]merican higher education began with a library” (Shores, 1934, p. 11). Most academics today

would certainly agree with Shores that “a college without a library was virtually as impossible in colonial times as it is today” (Shores, 1934, p. 212).

The present findings suggest that digital licensing presents several threats to sustainability. First, license agreements for digital content are of relatively short duration (typically from 1-5 years); terms and conditions change over time as new licenses are negotiated. In addition, publishers routinely buy and sell titles, which requires removal and addition, title by title, or publisher by publisher. This situation is particularly problematic with aggregated journal packages and databases. Through sales, mergers, and acquisitions, larger commercial publishers are getting larger. The terms and conditions of any title included in a particular license for a particular package could change repeatedly over time, with the content being governed by different license agreements containing different terms and conditions negotiated by different publishers.

Second, the economics and retail costs of digital resources, particularly of large packages of online journals, have rapidly outgrown those for print, and have risen much faster than traditional library resources when compared to the Consumer Price Index (CPI). For example, between 1986 and 2002, while library budgets remained relatively static and state institutions suffered cuts, library expenditures for journal subscriptions increased 227%. Over the same period the consumer price index increased by only 57% (Van Orsdel, 2004).

Third, the license agreements and terms of use required by most publishers omit any type of standard warranty for accuracy, integrity, reliability or completeness of the

licensed content. The Basic Access Agreement for Wiley InterScience, and its Terms of Use available on the Wiley website, is an example (Wiley InterScience License, 2005) Wiley InterScience is a networked digital product available via license that includes 1000 online full text journals, major reference works, online books, lab manuals, and datasets. Its warranty reads:

Wiley InterScience and the Electronic Journals and all materials contained therein are provided on an 'as is' basis without any warranties of any kind, either express or implied, including but not limited to, warranties of title or implied warranties of fitness for a particular purpose; the use of the electronic journals of the Wiley InterScience and all material is at the user's risk" (Wiley, 2004).

Taylor & Francis, "among the three largest academic publishers worldwide, with a 10% market share," includes an even broader warranty disclaimer in its Terms and Conditions statement for published journals: "to the fullest extent permissible" the "Taylor & Francis Group Ltd disclaim" warranties "of any kind" (Taylor & Francis, 2005; Kassab, 2003).

Stewardship is Integrity and Authenticity of Digital Resources.

Stewardship has always implied an element of integrity—that is, some guarantee of the "completeness or unimpaired condition" of the information resource. However, the new digital environment, where licensing is a prerequisite for library access and use, presents a host of new challenges to the integrity and authenticity of digital resources ("Webster Online," 2005). The steward's responsibility to preserve or protect the

“completeness or unimpaired condition” of resources is affected by several significant factors not found in the print environment. Among the challenges are technological obsolescence, and the limited lifecycles of the underlying technology platforms themselves as well as the software required to support and run or render the content. Digital information can also be subject to technological controls that can restrict access and use beyond that allowed by copyright law. In addition, in a distributed networked digital environment, the authenticity of materials is more difficult to ensure. License agreements frequently contain disclaimers about the integrity and authenticity of digital content covered by the license.

Of the fifteen publishers' license agreements analyzed for this study, only two (less than 15%) contained a warranty for the integrity or authenticity of content subject to the license. Of the three publisher groups whose agreements were analyzed, only scholarly societies included an explicit warranty of the integrity and authenticity of the licensed content.

Stewardship is Service on Behalf of Users and on Behalf of Society

Service has always been a component of stewardship. From the earliest definitions of the term, a steward has acted on behalf or in service of someone or something else (OED, 2005). In *Stewardship: Choosing Service Over Self-Interest*, Peter Block proposes that service is the critical or core element of stewardship.

Stewardship springs from a set of beliefs about reforming organizations that affirms our choice of service over the pursuit of self-interest. When we choose

service over self interest we say we are willing to be deeply accountable without choosing to control the world around us. It requires a level of trust that we are not used to holding” (Block, 1996, p. xxi).

Kay Herr Gillespie highlights the role of service and trust in her definition of a steward. To be a steward “is not to have ownership of something. It is rather to have the responsibility of taking care of something on behalf of another” (Gillespie, 2003, p.147). As licensees of digital content, libraries no longer actually own the physical materials, but are relegated by contract to non-owner status, while still bound by principle, mission, and commitment to stewardship of the licensed digital content on behalf of their users. The implications of this shift may be an important direction for future research.

To summarize, then, the licensing of digital resources, as currently practiced, challenges U.S. college and university libraries’ fundamental stewardship role in several ways:

1. Current publisher practice denies libraries the right to archive licensed digital content.
2. Current publisher practice denies libraries’ right to perpetual access to licensed digital content.
3. Current publisher practice omits fair use guarantees from standard license agreements.
4. Current commercial publisher practice requires libraries to sign non-disclosure clauses that prevent libraries, particularly private college and research libraries, from sharing information related to the terms of the agreement (most states, in contrast, have public records law requirements that prevent the inclusion of non-disclosure clauses in public or state contracts);

5. Current economic publishing models are unsustainable.
6. Most college and research libraries have not developed plans for long-term preservation and use of licensed digital resources.
7. Uncertainty regarding the integrity and authenticity of digital resources, coupled with the lack of any representations or warranties related to the content (including, but not limited to, integrity, authenticity, or completeness of content) in most license agreements.
8. The dynamic nature of digital information technologies and uncertainty regarding technological, legal, economic, social and cultural solutions.
9. Growing dominance of digital publishing and subsequent academic publisher's control of author's copyrights.
10. Escalating costs.

6.2 Ownership versus Non-Ownership of Library Resources and Collections

And now we will extend this vision by reforming great institutions to serve the needs of our time. To give every American a stake in the promise and future of our country, we will bring the highest standards to our schools, and build an ownership society.

President George W. Bush
January 21, 2005 Second Inaugural Address

I don't honestly know which licenses assure perpetual access to content, but I know there are such licenses. As Ms. Carruth points out, however, libraries are agreeing to licenses that provide no guarantee of continued access to the content if the subscription ends. What this means, of course, is that universities are only renting this information.

Kenneth L. Frazier, Director of the University of Wisconsin-Madison Library
Chronicle of Higher Education, 2002

If the commodification of information and the exponential growth and interest in the once-arcane subject of intellectual property are any indication, we are already well on our way to President George W. Bush's vision of an ownership society. What does it mean for libraries to be transformed from owners to renters of increasingly larger and

larger proportions of their collections? What are the respective benefits and responsibilities of owners and renters of licensed library materials and collections? How, if at all, has licensing (i.e., renting) of digital materials and collections, rather than purchase (ownership) affected the long-term access and use of college and university libraries collections? This section explores these questions, and the implications of historic and current models and practices of licensing and the ownership or non-ownership of library resources and collections.

Ownership is defined as the “legal right of possession; property, proprietorship, dominion” (OED Online, 2005). Ownership is often associated with three legal rights: the right to exclude; the right to do whatever you want or to prevent others from doing certain things with the items owned; and the right to preserve. As already discussed, ownership in the library context only pertains to the physical item, not the rights to its content. However, for most college and university libraries, the right to select items for their collections, the right to use those items, and the right to preserve them so that they are available over the long term, are seen as necessary to support teaching, research, and scholarship. In contrast, digital licensing has compelled libraries to move from this traditional approach to an access model, where they lease or rent materials. As non-owners of licensed digital content, which comprises an ever-expanding proportion of their collections, libraries' provision of access and use have become increasingly constrained by the terms and conditions of the license agreements.

Historically, libraries acquired materials and collections either through purchase or gift. Once acquired, the materials became the property of the library. In 1908, the

U.S. Supreme Court case, *Bobbs-Merrill Co. v. Straus*, established the first sale doctrine, providing libraries and used bookstores (and later, video stores) the legal right to lend, resell, or otherwise dispose of lawfully-purchased published copyrighted property. In *Bobbs-Merrill*, the publisher and copyright owners of a mass market novel sought to restrict future purchasers, including libraries, from purchasing the novel for less than the stated price restriction at the time, of \$1. The U.S. Supreme Court held that a copyright owner's control over the physical manifestation of the intellectual property terminates with the first legitimate sale of the property. This key decision confirmed libraries' legal rights to lend and circulate library materials.

A number of benefits and responsibilities come with library ownership of materials in their collections. Libraries and archives enjoy the protections and exemptions of the U.S. Copyright Act, including, but not limited to, first sale and fair use. These fundamental principles are consistent with the long established U.S. (and English) tradition of copyright law beginning with the Statute of Anne in 1710 and Article 1, Section 8 of the U.S. Constitution which established copyright "to promote science and the useful arts" and to provide a temporary incentive and protection for creators. In addition, the selection, cataloging, maintenance, access, and use of physical library materials entails their preservation, and thus libraries' responsibility to ensure accessibility for present and future generations.

As the present findings indicate, non-ownership is the current state of affairs for an ever-growing percentage of licensed digital resources and collections acquired by college and university libraries; on average, licensed digital materials without a print

counterpart comprise about 60% of academic library collections. Furthermore, the duration of license agreements is relatively short, generally from one to five years, which also limits archiving. Libraries' failure to obtain warranties that secure persistent access to and use of the content also limits use. As Adrienne Muir notes, “[i]f libraries do not physically own digital material, they cannot preserve it because this requires physical intervention” and the new “access rather than ownership model [raises] the question of responsibility for preservation” (Muir, 2004, p. 60).

Libraries and publishers who participated in this study echo this uncertainty over who is responsible, and how to ensure long-term access and use of licensed library collections. Several factors have contributed to this uncertainty, including the changing structure and nature of library collection ownership, where libraries that once purchased and owned collections (thus making them available to present and future users) must now license and effectively “rent” materials. Yet publishers, who retain ownership in this scenario, have not traditionally considered themselves responsible for the long-term access and use of their products.

Another factor is that over 70% of academic libraries, according to the present study, do not have a plan for the long-term preservation and use of licensed digital resources. This finding unfortunately contradicts a 1998 prediction by Research Libraries Group members that while “few institutions reported having policies or even codified practices for preserving ‘born-digital’ and converted-to-digital materials” at the time, “*virtually all* those surveyed expect such preservation to be part of their operations by 2001” (“RLG Member Briefing,” 1999, p. 1, emphasis in the original). The

continued lack of planning may also indicate that institutions are more likely to develop plans for materials they actually own, and so as the proportion of licensed or "rented" materials in library collections grows, libraries are becoming less, rather than more, likely to develop preservation and access plans.

Ironically, despite the lack of planning, there is also widespread acknowledgement that the lack of archiving and perpetual access are serious problems for academic libraries. Respondents to the present library survey cited "renting not owning," "ensuring archiving of digital resources," and the "unwillingness of publishers to guarantee and provide perpetual access themselves for whatever reason, while being unwilling to allow the institution itself to archive and offer access intra-institutionally under the condition which [is] held during the subscription" as some of the most pressing problems confronting libraries currently.

6.3 Licensing and Preservation over Space and Time

The world's digital heritage is at risk of being lost to posterity. Contributing factors include the rapid obsolescence of the hardware and software which brings it to life, uncertainties about resources, responsibility and methods for maintenance and preservation, and the lack of supportive legislation.

The United Nations Report Director General
Revised Draft Charter on the Preservation of the Digital Heritage, 2003

Licensing poses several major challenges for preservation over space and time that do not occur in the traditional ownership model, including technological, legal, and policy issues.

The increasing quantity of born-digital material, the rapidly changing technological environment, and the growing preference of users for digital information access and delivery are important technological challenges (Lyman & Varian, 2003; Friedlander, 2002). "[D]igital information is driving the boom. Not only is digital information the largest type of data produced, but traditionally non-digital items—such as books, music, films and medical records—are being digitized at a rapid pace" (Lyman & Varian, 2003, p. 1). In addition, the dynamic nature of digital information requires that to be effective, digital preservation must be ongoing and continuous: "[p]reservation of digital materials is a continuous, active process (requiring steady funding), rather than a practice of benignly neglecting artifacts stored in a hospital environment, perhaps punctuated by interventions every few decades for repair" (Lynch, 2003, p. 155).

There are also new legal challenges to preservation over space and time. The duration of most standard license agreements (one to five years) is relatively short, particularly compared to the permanent ownership of library materials, which historically has permitted what is in effect perpetual access. For example, the Wiley InterScience Basic Access License Agreement contains the clause: "The Term of this License shall commence as of January 1, 2004. The License will be renewed on an annual basis upon payment of the subscription renewal fee at prices to be determined" (Wiley, 2004). The terms of the licensing agreement can change upon termination. Moreover, during the relatively short-term duration of a license, a publisher's portfolio

of content can change for any number of reasons, including reasons not related to the license, as illustrated by the Taylor & Francis “Terms & Conditions of Use” statement:

The Publisher reserves the right to withdraw from this Agreement any Journal or any part of any Journal in order to comply with any legal rule or court order, or if the Publisher is at risk of liability from the continued availability of the Journal or part of it.

Ownership provided libraries the right, as property owners, to determine how and under what circumstances their materials were used and made available for present and future users. License agreements, however, determine the terms and conditions of use and are enforceable by a court of law. Libraries can certainly negotiate the terms and conditions of use, but in contrast to straightforward ownership, libraries cannot unilaterally determine access, use availability, affordability, preservation, persistence or archiving of licensed content over space and time. The need for negotiation suggests that libraries today must be prepared to develop new types of staff expertise, and devote more time and resources to the procurement process, than was required for simple purchase and ownership.

Another legal difference between the ownership and licensing models is the movement from a system in which access and use are governed by federal copyright law to a system where copyright still applies, but only in cases where licensing has not been used. To complicate matters further, due to the dynamic nature of the technology and the market for information products and services, publishers of all types are experimenting with a plethora of new business models related to licensing and costs.

Libraries and publishers are just beginning to study and analyze the policy implications of the current environment; much more research is necessary in this area.

6.4 Uses and Users: Implications of Licensing for Information Access and Use, Particularly Intellectual Freedom, Fair Use and Values of Control

Freedom of expression is the matrix, the indispensable condition, of nearly every other form of freedom

Benjamin Cardozo, *Palko v. Connecticut*, 302 U.S. 319, 327, 1937

As this study has tried to show, licensing of academic library resources and collections has significant implications for library users and for the library as an institution. Not only do license agreements affect the parties to the agreement; the terms and conditions apply to libraries' "authorized users" as well. "Authorized users" are often defined in license agreements as "students, faculty, staff and members of the general public that are authorized to use materials on the premises of the library regardless of location" (CDL, 2004). Gone are the days when libraries purchased materials and then independently determined the terms and conditions for use of books, journals, and other materials by their patrons. In the context of licensing, there are no guarantees related to rights of users or uses of information. Any rights that do exist are granted under the contract, are negotiated on a case-by-case basis, and renegotiated every two to five years. Everything is negotiable, including time-honored user rights and traditions, such as the right to read, quote, criticize, parody, and otherwise use in the creation of new work.

Licensing affects the rights of users of library materials and collections in four important ways. First, the findings here indicate that license agreements frequently restrict access and use of digital information resources more extensively than does federal copyright law. License agreements do not routinely allow personal, educational, and non-commercial uses, such as fair use, and first sale. Interlibrary loan and scholarly sharing must be negotiated on a case-by-case basis. Second, license agreements routinely restrict preservation or archiving by individual users or institutions by specifically prohibiting systematic copying of the licensed content. Third, as libraries acquire many more products, each of which requires a license agreement, there could conceivably be multiple agreements affecting individual titles over time. It might be difficult, if not impossible, for users (indeed, even for the institutions themselves) to understand and follow multiple, conflicting license provisions. Fourth, the transformation of content previously available in another format into digital form could have important effects on the educational and research process.

Licensing and Fair Use

The principle and application of a “fair use” exception to a copyright owner’s exclusive rights has existed since the mid-1800s. The earliest English version, the fair abridgment doctrine, provided for use rights beyond the limited exclusive rights of copyright owners to print, reprint, and vend books. In 1841, Justice Story, in *Folsom v. Marsh* in the Circuit Court in Massachusetts, expanded the notion of what constitutes

copyright infringement and articulated the concept of what we know today as fair use
(*Folsom v. Marsh*, 9 F. Cas. (No. 4901) 342 (C.C.D. Mass 1841)).

It is not only quantity, but value, that is always looked to. It is useless to refer to any particular cases as to quantity. In short, we must often, in deciding questions of this sort, look to the nature and objects of the selections made, the quantity and value of the materials used, and the degree in which the use may prejudice the sale, or diminish the profits, or supersede the objects of the original work. (Story, *Folsom v. Marsh*, 1841)

In 1976, fair use was codified in Section 107 of Title 17 U.S.C. The statute currently provides:

§ 107. Limitations on exclusive rights: fair use

Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include--

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;

(2) the nature of the copyrighted work;

(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and

(4) the effect of the use upon the potential market for or value of the copyrighted work.

The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

17 U.S.C. § 107 (1994). The final sentence of section 107 was not in the original version of that section but was added in 1992. Act of Oct. 24, 1992, Pub. L. No. 102-492, 106 Stat. 3145.

Since its inception, the principle and criteria for fair use have been applied on a case-by-case basis rather than categorically or as an absolute defense to the otherwise exclusive rights of the copyright owner. Unlike the European author's rights law, fair use "can be raised in relation to a large number of different factual circumstances, which the courts examine on a case by case basis according to the factors laid down in Section 107" (Guibault, 2002, p. 19). Assistant Professor Justin Hughes of the Cardozo Law School notes that "fair use is about as far from a bright line test as statutory law should wander" (Hughes, 2003, p. 1-2). L. Ray Patterson agrees, but argues that there is an underlying contradiction regarding the construction of fair use:

Fair use is a derivative concept, derived from the concept of copyright of which it is a part. If copyright is a natural law right, fair use is a natural law concept, an excused infringement and a defense. If copyright is a statutory monopoly, fair use should be viewed as a limitation on the monopoly in the public interest, which means that it is an affirmative right, not excused infringement. The paradox is that while U.S. copyright is a statutory monopoly copyright, fair use is treated as a natural law right to protect that monopoly. (Patterson, 1998, p. 451)

Lawrence Lessig characterizes fair use as a "classic example" of the balance between the rights of copyright owners and the rights of the public to use copyrighted work for certain purposes and under certain conditions without obtaining permission in advance (Lessig, 1999).

Whether one takes a broad or narrow view of what constitutes fair use in a print environment, however, licensing of copyrighted digital information resources has further complicated the landscape. In a licensing environment, there is neither a guarantee of the right of fair use or automatic exception to the copyright holder's exclusive rights; all permitted uses must be negotiated. For fair use to exist in a license agreement, it must be negotiated and agreed upon by the parties involved. While the implications of this change cannot be measured by this one study alone, the present findings do suggest the need for additional studies and research in this area.

In the present study, only about a third of all standard publishers' agreements provided for fair use – meaning that two-thirds of libraries that accept standard agreements "as-is" will lose fair use exemptions. One commercial publisher who was interviewed saw no need for fair use in license agreements at all: “Do fair use guidelines apply equally in print and electronic? In theory, no fair use = why we license. If licensed properly, more access than with fair use” (Publisher's Interview Q12:13) Although digital licenses could, in theory, offer “more access” than what is guaranteed under federal copyright law, the results of this study do not bear out this conclusion. Most federal copyright guarantees and exceptions are not included in most standard publisher's agreements. Libraries must scrupulously negotiate for fair use on a case-by-case, license-by-license basis, if they intend to preserve their patrons' abilities to access and use information for their teaching and research, without specifically obtaining prior permission.

Licensing and Intellectual Freedom

“The tendency of legal systems to treat information as property is creating threats to expression, particularly in the case of copyright and privacy.”

Fred H. Cate, *The Commodification of Information and Control of Expression*, 2002, p. 3

The American Library Association defines intellectual freedom as “the right of every individual to both seek and receive information from all points of view without restriction” (ALA, 2005). Michael Gorman includes intellectual freedom among his list of eight “central or core values of librarianship” and defines it as “the state of affairs in which each human being has the freedom to think, say, write, and promulgate any idea or belief” (Gorman, 2000, p. 27).

The U.S. Constitution suggests the extent to which licensing of digital information resources has consequences for intellectual freedom, in the First Amendment, the Copyright Clause (Article 1, Section 8), and the Fourth Amendment.

The Copyright Clause provides the following:

To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their Respective Writings and Discoveries (U.S. Constitution, Article 1, Section 8, 1787)

The Copyright Clause provides the explicit purpose and objective of federal and governmental authority over copyright. In *Feist Publications, Inc. V. Rural Telephone Service Co.*, 499 U.S. 340 (1991), the Supreme Court was asked to “clarify the extent of copyright protection available to telephone directory white pages” (Feist, 1991).

Writing for the majority opinion in *Feist*, Justice Sandra Day O'Connor observes that "[t]he primary objective of copyright is not to reward the labor of authors, but '[t]o promote the Progress of Science and useful Arts'" (Feist, 1991). She discusses the originality requirement and the inherent conditional users' rights implied, if not explicit, in all copyright cases:

This Court has long recognized that the fact-expression dichotomy limits severely the scope of protection in fact-based works. More than a century ago, the Court observed: "The very object of publishing a book on science or the useful arts is to communicate to the world the useful knowledge which it contains. But this object would be frustrated if the knowledge could not be used without incurring the guilt of piracy of the book. (*Baker v. Selden*, 101 U.S. 99, 103, 1880).

We reiterated this point in *Harper & Row*:

No author may copyright facts or ideas. The copyright is limited to those aspects of the work -- termed 'expression' -- that display the stamp of the author's originality.

Copyright does not prevent subsequent users from copying from a prior author's work those constituent elements that are not original -- for example . . . facts, or materials in the public domain -- as long as such use does not unfairly appropriate the author's original contributions. (*Harper and Row*, 471 U.S., p.547-548) .

Historically, the Copyright Clause was based on the English Statute of Anne, which specifically included in its title of "an act for the encouragement of learning, by securing the copies of maps, charts and books, to the authors and proprietors of such copies, during the times therein mentioned" to underscore the intent and purpose of the Act to "encourage learning" rather than to create a limited monopoly and new economic

rights and guarantees for creators and publishers. In addition, the Statute required a filing of the notice of copyright, and, in later revisions, further required that copies be deposited in nine university libraries located throughout the United Kingdom.

The First Amendment also plays a role in intellectual freedom, providing protection from governmental interference in the free and unfettered expression of speech and ideas, and underlining the importance of this freedom to the building and sustaining of a successful democratic society.

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

(First Amendment, the Bill of Rights to the U.S. Constitution, 1791)

The Fourth Amendment provides for the right of individuals to be “secure in their persons, houses, and papers” and to be free from unreasonable searches and seizures. The right to privacy and the freedom to read without governmental interference is a component of intellectual freedom derived from the First and Fourth Amendments taken together. Although privacy is not the focus of this study, it is an essential component of intellectual freedom, and future studies might explore the relation of privacy to copyright. The Fourth Amendment provides the following:

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized. (U.S. Constitution, 4th Amendment, 1791)

Taken together, the First Amendment guarantee of “freedom of speech,” the Copyright Clause's aim to “promote science and the useful arts,” and the Fourth Amendment right of citizens to be secure in “houses, papers and effects” provide the legal and historical authority for intellectual freedom. In addition to the U.S. Constitutional guarantees, Article 19 of the United Nation’s Declaration of Human Rights provides:

Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek and impart information and ideas through any media and regardless of frontiers. (United Nations Article 19, Declaration of Human Rights, 1948)

L. Ray Patterson, in *Copyright in Historical Perspective*, points out the inherent and fundamental contradiction in creating what the founders thought were “limited” market and economic incentives to authors to create and make publications available, thereby promoting and encouraging learning, education, and advancement of knowledge.

Thus, the problem of copyright today is how best to reconcile the interests of three groups—authors, who give expression to ideas; publishers, who disseminate ideas; and members of the public, who use ideas. (Patterson, 1968, p. 224).

In higher education, intellectual and academic freedom are fundamentally related. In 1940, the American Association of University Professors (AAUP) and the

Association of American Colleges and Universities developed a statement on academic freedom for faculty, which stated:

Teachers are entitled to full freedom in research and in the publication of the results, subject to the adequate performance of their other academic duties (AAUP, 1940).

Clearly, libraries and educational institutions also have institutional interests in both academic and intellectual freedom. In *U.S. v Sweezy*, Justice Frankfurter recognized the importance of the role of the university to determine its own future and intellectual autonomy:

It is the business of a university to provide that atmosphere which is most conducive to speculation, experiment, and creation. It is an atmosphere in which there prevail "the four essential freedoms" of a university--to determine for itself on academic grounds who may teach, what may be taught, how it shall be taught, and who may be admitted to study (*Sweezy*, 1957).

The National Education Association (NEA), the largest professional association of primary- and secondary-school teachers, with over two million members, and whose mission is to "promote the cause of public education and advance the profession of education", defines intellectual freedom as follows:

Intellectual freedom is a basic right of all citizens and essential to preserving American democracy. In the terms of the 1940 "Statement on Principles of Academic Freedom and Tenure" (endorsed by more than 100 professional and scholarly associations, including the NEA's higher education department in 1950, reaffirmed in 1985).

The NEA policy statement outlines the ramifications of intellectual freedom for society:

Institutions of higher education are conducted for the common good and not to further the interest of either the individual teacher or the institution as a whole. The common good depends on the free search for truth and its free exposition.

...Academic freedom is essential to these purposes and applies to both teaching and research. Freedom in research is fundamental to the advancement of truth. Academic freedom in its teaching aspect is fundamental for the protection of the rights of the teacher and of the student in freedom in learning.
(“NEA Policy Statement-Intellectual Freedom”, 1985)

In conclusion, the results of the present study show that licensing of digital resources has significantly affected the library’s traditional stewardship role, and has begun to displace time-honored and federally-protected educational and non-commercial uses of information, such as fair use, preservation and archiving. These trends are likely to accelerate Lynne Brindley, Chief Executive of The British Library, frankly states the imperative for libraries:

We simply do not have the luxury that our predecessors in their curation of printed materials enjoyed, of being able to rely on ‘benign neglect’ as a plank of our digital preservation strategy. Action has to be taken at the outset to ensure viable and sustainable access to digital content. (Brindley, 2000).

CHAPTER 7: CONCLUSION AND FUTURE RESEARCH

This final chapter reviews the key issues, explores policy implications, and identifies areas for further research related to the consequences of licensing for access and use of academic and research library collections. As the preceding chapters indicate, the current practices have already had significant and wide-ranging effects, and have the potential for long-term changes in library operations, values, and practices.

At the outset of this research project, in an area where little, if any relevant prior research has been done, I outlined the "licensing landscape" as an approach to studying licensing of electronic resources in U.S. college and university libraries. The illustration in Figure 1 was developed as a means to understand the elements, variables, relationships, processes, and interests involved, and to help inform the project's research design and data collection. As the figure indicates, four main issues relate to licensing in the academic library context: affordability over time; availability over time; accessibility over time; and usability over time.

Affordability over time, including costs, costs over time, and economic sustainability, was the primary issue cited by both libraries and publishers in interviews and survey responses. Availability over time is affected by legal, physical, technical, and intellectual factors, especially the challenges of preservation. Although further research and discussion is needed to clarify these factors as well as the functional

requirements of digital preservation, the majority of libraries and publishers expressed concern or acknowledged that digital preservation was an important, although under-funded and under-addressed, issue.

Usability over time has to do with whether a licensed digital product can be migrated forward or otherwise sustained so that it remains accessible. The classic and simple example of digital usability over time can be seen in the technological obsolescence of any content created or saved on 3.5" floppy disks: neither the disks nor the equipment used to read them are still manufactured. Another more complex and increasingly more common challenge is posed by the multilayering of content, software, programs or code that is embedded or wrapped or which otherwise prevents access without authorization. Each component layer may have one or multiple rights holders, creating substantial barriers to "translating" content from old formats to new ones.

In addition to the licensing landscape proposed in this study, several existing models for acquiring, developing, and making available academic library collections could be explored further in future research on the consequences of licensing. The "just in time" and "just in case" models of library collection development, for example, each have advocates. The "just in case" model focuses on the need for some type of large, long-term storage facility, such as library or warehouse (Bennett, 1998, p. 1), whereas the "just in time" model "connects the producer to the consumer, eliminating the costs of storage" (Bennett, 1998, p. 1). Historically, most large, elite academic libraries have relied primarily on the just-in-case model; in fact, to this day, rankings of academic libraries are calculated primarily on the quantitative measurement of the total number of

volumes, journals, manuscripts, and now electronic resources, and overall total collection size. The just-in-case model allowed libraries to develop their own institutional collections, to enhance their rankings, and to serve the long-term access aspect of their missions. However, budget cutbacks, space limitations, and continuous price increases (especially for journal subscriptions) have pushed academic libraries toward the just-in-time approach. Today, even the largest and most well-funded academic libraries rely on a combination or hybrid model, with some library materials acquired through purchase on a just-in-case basis, others through shared service delivery methods such as interlibrary loan and document delivery, and increasingly, licensing for access on a just-in-time basis, especially for digital delivery of high-priority services (Morrison, 2004, p. 1).

There are several advantages to licensing as part of such a mixed approach. First, licensing permits more flexibility in terms of institutional time commitment since current license agreements for library digital resources are typically for a limited period. Second, licensing accommodates a greater range of delivery models and options that can be customized to specific users' needs, compared with the traditional item-by-item purchasing model. Third, licensing coupled with digital technologies and delivery permit increased high-value service delivery to end users.

However, cost must also be considered in the evaluation of any new economic or business model. Further research is needed to determine the optimal organizational and economic conditions or requirements for just in time delivery. An additional potential disadvantage of the just-in-time model is that it focuses on current needs

rather than the long-term view, which as this study has demonstrated is needed to anticipate preservation and access needs over time. However, with additional research hybrids of the just-in-case and just-in-time models may prove to be useful, particularly in very domain- or discipline-specific areas where particular combinations might be designed. For example, new digital institutional repositories that allow researchers to self-archive their work may provide a method for increasing availability of scholarly monographs that do not have many readers (Bennett, 1998, p. 1). Although “the application of just in time delivery concepts to publishing and library operations is itself highly problematic,” within limits, “these models can be used to speculate about some fast-evolving possibilities that information technology seems to offer” (Bennett, 1998, p. 2). Interestingly, digital repositories may themselves create a type of just-in-case option given the rapidly-decreasing cost of digital storage. Some writers foresee a time “when the world’s scholarly, peer-reviewed literature can easily be stored by each library and every library in the world—a wise move to ensure its ready access and preservation—is within reach, if indeed it is not here already” (Morrison, 2004, p. 1)

Although further research is necessary to say with any assurance what models may best serve both large academic libraries’ institutional as well as user needs, it is clear that further research (perhaps employing an approach like the Policy Framework Model proposed in Figure 49) would aid long-term planning and the development of strategies and policies to ensure long-term access and use of licensed digital collections.

This study has identified several major consequences of licensing electronic resources in U.S. college and university libraries. First, current licensing practices often

conflict with academic libraries' stewardship role. Licensing also affects the long-term availability, affordability, preservation and use of licensed materials. Third, licensing restricts library and user rights that were previously guaranteed under copyright law (e.g., fair use), and thus affects many essential features of higher education, including intellectual and academic freedom. Fourth, in order to preserve their market advantages, publishers routinely require non-disclosure clauses in licenses that prevent libraries from sharing information that can help them collectively negotiate key terms and conditions, including price and access rights, that would better serve their institutional interests.

In addition, the data presented here suggests that libraries, or at least some of them, are not accepting their heritage role – that is, they are not planning for long-term preservation and access, especially of digital resources. Instead, libraries are increasingly relying on third parties to perform this fundamental function. This shift may have far-reaching implications for higher education over time.

7.1 Libraries and Licensing: Enduring or Competing Values?

Libraries are the crucible of genius. In the 500 years since the invention of the printing press, libraries have been at the center of a remarkable flowering of the human intellect, serving as repositories of the human experience while promoting structured inquiry and critical thinking. Libraries are fundamental to the intellectual experience and the natural creativity of the mind; they are core services at every postsecondary institution. Indeed, there are no great universities without great libraries.

(Kyrillidou & Health, 2001, p. 1)

Of course, no one can guarantee absolute permanence—what we really mean here is preservation for posterity. In the print world, national and other major libraries have always taken care of publications and ensured that they were protected from deterioration and repaired if necessary.

(Morris, 2000, p.64)

If there are no great universities without great libraries, and if basic library values and services are being challenged by digital licensing, the results of the present study raise some interesting questions not only for libraries, but for their parent institutions as well. If libraries do not continue to perform their stewardship role in the interests of their users and parent institutions, who will?

While the data described in Chapter 4 begin to address some of these key questions, more research is needed to fully understand the scope, significance, and potential impact of digital licensing for academic libraries. Library information management systems based on ownership alone, increasingly do not provide the type of systematic documentation and data needed to effectively assess the costs and utility of licensed digital resources. Recently, several large library system developers have announced modules and enhancements specifically designed for electronic resource management that promise to provide the ability for libraries to accurately track resources and expenditures for electronic resources. (see, e.g., “Innovative Interfaces”, “Endeavor Meridan”, “ExLibris Verde”, 2005)

In the following sections, the consequences of the shift from ownership to licensing, particularly for key library values of stewardship, preservation, and intellectual freedom, are discussed.

Enduring Library Values: Stewardship, Preservation and Intellectual Freedom

Values are central to the definition of public problems and the design of public policy
(Overman and Cahill, 1990, p. 804)

The idea of "value" is complex. Although the Oxford English Dictionary Online contains several pages and eight subheadings of definitions, three aspects of "value" are especially relevant to this study. First, values are context-dependent, and serve as a means of exchange between parties in a given situation. Second, they are normative, and as such represent particular interests. Third, they are enduring or long-term.

An example of the first aspect can be found in a speech by Derk Haank, CEO of Elsevier Science, who advocates an electronic publishing model based on exchange or use value. Asking, "is electronic publishing being used in the best interests of science?" Haank responds:

That is, in our opinion, the way to go. What we are basically doing is to say that you pay depending on how useful the publication is for you - estimated by how often you use it. That is something very different from paying by the drink. I do not believe that paying by the drink is a suitable model; it is cumbersome for us, but it is also cumbersome for our contract partners --the libraries and universities--and because, in science, the people who drink are not the people who are paying, it is a disastrous model as any bartender can tell you. So, we should have models where we make a deal with the university, the consortia or the whole country, where we say for this amount we will allow all your people to use our material, unlimited, 24 hours per day. And, basically the price then depends on a rough estimate of how useful is that product for you; and we can adjust it over time. It is a principle, which, in my view, is not immoral. We want to distinguish between big universities vs. small universities, corporate vs. universities, and maybe rich countries vs. developing countries. There is nothing wrong in that and any combination of the three, as long as people pay something for it, because I don't believe in giving it away for free. (Haank, 2001, p. 3)

In contrast, Michael Gorman argues for the widespread adoption of core library values such as stewardship, open access and intellectual freedom. Gorman defines a ‘value’ as “something that is of deep interest (often and quite reasonably self-interest) to an individual or group.” (Gorman, 2000, p. 5). While he recognizes that “values are rooted in realities and do not exist in and of themselves as philosophical entities” he emphasizes that for a “value to be of use, [it] must animate its adherents’ actions and existence over a long period” (Gorman, 2000, p. 5). The OED definition also includes a set of definitions related to “[t]he relative status of a thing, or the estimate in which it is held, according to its real or supposed worth, usefulness, or importance...” (OED Online, 2005).

Libraries of all types have long held that among their fundamental values are the long-term access, use and preservation of library materials and collections. As noted previously, in 2004 the American Library Association (ALA) adopted a Core Values Statement that include “access, preservation, intellectual freedom, service, social responsibility, the public good, confidentiality/privacy, diversity, and democracy” as core values ("ALA Core Values," 2004). The enduring or long-term nature of the values are reflected in both the explicit commitment in the Statement to this set of values over time.

However, values are not static; they must be reviewed, evaluated and reconceptualized over time as circumstances change. By the same token, the

fundamental library values of access, preservation, stewardship and intellectual freedom must be constantly reexamined in light of new phenomena such as licensing, technological controls, and changes in the law governing use of library materials.

Reconceptualizing Stewardship

Stewardship, as defined in Chapter 5, is a core library value that includes notions of mission, responsibility, integrity, trust, accountability, service, preservation and sustainability for future use. For college and university libraries, stewardship has been based on the possession, purchase and ownership of library materials and collections. Collection ownership provided important safeguards for libraries and their users, including the protections of federal copyright law (e.g., fair use, first sale and Section 108 exemptions for libraries and archives). To a great extent, in the print environment, libraries were passive stewards, preserving collections through the act of ownership and minimal conservation efforts, budget permitting; typically, only about 1-2% of a typical academic library's budget was devoted to preservation (Kyrillidou, 2002). In a digital environment, preservation requires continuous and active commitment, additional resource allocation and long-term planning—a new role for most college and university libraries—as well as the need to commit greater financial resources in order to keep digital resources “alive.” In the present study, fewer than 25% of the survey respondents reported having a plan for digital preservation and long-term access of licensed content.

The results of this study also suggest the growing reluctance of some college and university libraries to take on this expanded responsibility for digital preservation. Although publishers supply nearly 100% of their content in both digital and print formats, in this survey libraries reported spending over 35% of their collection budgets on licensed electronic resources; of those resources, over 60% are acquired in digital format only. Libraries surveyed further report that 60% of license agreements in 2004 did not include archiving rights and 55% did not include perpetual access (see Table 4).

The results of this study highlight the critical role of mission with respect to sustainability and long-term preservation and access. As Allen and Bishoff observe, “most cultural heritage institutions are mission driven; their primary purpose is to support and promote the public good...without such a plan, no cultural heritage institution can be sustainable, no matter how compelling its mission or treasured collections” (Allen & Bishoff, 2004, pp. 1-2).

In light of the new challenges and opportunities created by the digital environment and licensing, college and university libraries must reconceptualize their stewardship roles and responsibilities, if they are to meet the expectations of users and continue to support the knowledge and cultural heritage of the larger society. As the literature review for the present study illustrates, most of the research and scholarship about libraries and digital licensing tends to be written by legal scholars who focus on the implications of new copyright legislation, licensing, and technological controls on the reproduction of information. There is almost no literature or advocacy on a national level by library

scholars and practitioners regarding the problems of long-term access to and use of digital content, or how those problems may change libraries' stewardship responsibilities.

Clearly, major academic libraries must begin to study this situation and develop strategic planning, partnerships and collaborations to actively and continuously address the problem and identify possible solutions. It is unlikely, however, that stewardship approaches that worked in the past will be as useful in the future. As economist Ted Bergstrom points out,

University site licenses serve no logistic purpose, but are solely a fiscal instrument. In the case of journals owned by profit-maximizing firms, site licenses allow publishers to price discriminate more sharply than they could if they were forced to sell journal access to individuals. Consumers' surplus of the academic community would be greater if libraries refused to purchase site licenses from publisher that set prices substantially above average cost. On the other hand, university site licenses increase the total benefit to the scientific community by purchasing site licenses from nonprofit journals (Bergstrom, 2002, p. 1).

Instead Bergstrom argues for a more nuanced or customized form of stewardship, in which university libraries would engage in site licensing for non-profit publishers, but not for commercial publishers, in order to advance the welfare of the scientific community instead of serving the profit objectives of private-sector publishers.

The Preservation Imperative

It is important to note, however, that virtually no staff or costs are currently attributed to activities related to the long-term preservation of electronic journal collections.

(King, 2004, p.262)

As more and more of our vital records, entertainment, education and culture are created, accessed and used in digital form, the greater the preservation imperative. Preservation, as the present discussion has emphasized, is a requirement for long-term access and use of any type of library content. Digital resources such as electronic journals, databases and websites are no exception.

As discussed throughout this study, in many respects digital information is more prone to loss and decay than print forms. The hardware and software are subject to rapid obsolescence. Digital license agreements frequently prohibit library preservation and archiving and provide no guarantees as to the accuracy, completeness or usability of the content. New digital rights management techniques can track, monitor, and control every use of licensed digital materials.

Currently a substantial amount of research is underway which addresses various technological issues and solutions related to digital longevity and preservation. However, little work has been done to elucidate the effects of licensing on preservation or long-term access and use of academic library collections. Indeed, much of the existing literature seems to suggest that information glut and overload are more pressing problems than preservation. However, the results presented here confirm that preservation should be a central focus of future research in this area.

No Guarantees for Uses or Users

For now, negotiating equitable license agreements that include fair use provisions for faculty and students appears to be the only effective way to protect this fundamental public right in the electronic environment. (Alexander, 2001, p. 201)

In the pre-digital environment, libraries determined who, how and under what conditions users (e.g., students, faculty, and visitors) accessed library materials and services. Under the provisions of Section 109 of the U.S. Copyright Law, publishers and content providers had little control over how and to what extent lawfully purchased print materials were used in libraries, or by whom (17. U.S.C. Section 109). In addition, the ALA Bill of Rights has consistently held that “books and other library resources should be provided for the interest, information, and enlightenment of all people of the community the library serves. Materials should not be excluded because of the origin, background, or views of those contributing to their creation” (ALA, 1948, 1996). Moreover, traditional published materials, such as books, journals, or video or sound recordings, typically carry the publisher's imprint, which signals to the consumer or reader that the item is authentic and reliable. Because these materials are in fixed form, they are presented as complete works, and not easily modified or tampered with.

However, with digital materials, publishers and content providers can largely determine who has access to licensed materials and under what conditions. Standard publisher license agreements introduce restrictions on access and use that are more extensive than what is allowed under federal copyright law, and provide no warranties of the accuracy, reliability, or usability of the licensed content.

These changes constitute a potentially serious challenge to long-term access and use of academic library materials. Much more research is needed to understand how reliability, authenticity and completeness of content have shifted in the digital licensing

environment. Best practices or standards might be more useful than additional legal warranties or liabilities for insuring reliability, authenticity, and completeness, for example.

Non-Disclosure: Impediments to a Library's Mission

Universities are not businesses (although they have many business-like aspects). They are highly unusual institutions with missions and attributes unlike those of any other entity in with the for-profit or not-for-profit world. (Bowen, 2001, p.1)

Non-disclosure clauses are agreements which require a party to maintain information in confidence (Poltorak, 2004). For most public college and university libraries that own their collections outright, non-disclosure has not been a major issue because these institutions are subject by law to public disclosure and scrutiny. The information involved in traditional library acquisitions included simple purchase orders, prices, and receipts, not terms of use, or provisions for preservation and archiving. First sale and archival copy provisions of federal copyright law governed the lawful acquisition of print and other materials. More generally, U.S. colleges and universities, including private institutions, have embraced the notion of transparency as a means to promote intellectual freedom and to encourage open, rigorous and full debate and to further the creation, pursuit, and dissemination of knowledge.

In the digital environment, however, commercial publishers routinely utilize non-disclosure clauses in their license agreements (scholarly society and university press publishers generally do not). Non-disclosure clauses attempt to prevent libraries from revealing the price and terms of use of the products they acquire from vendors.

That is, such clauses allow publishers unilateral control over communication about the purchase or the terms of use of the product. Proponents of non-disclosure agreements argue that they give both parties in the agreement greater flexibility regarding pricing and product customization. However, non-disclosure also makes it more difficult for libraries to negotiate or to standardize the licensing terms in their own interests and those of their parent institutions. Further research is clearly needed about the economic and access consequences of non-disclosure clauses for libraries and users; for example, library consortia that negotiate licenses collectively may enjoy greater bargaining power because the terms are available to all libraries in the group.

7.2 Publishers and Licensing: New Opportunities and Models

Publishing costs must be shared by users. If these users are allowed without payment to the journal, to make or receive from others copies of the journal papers they may wish to read, it is not likely they will be willing to pay for subscriptions to these journals. If and as free photocopying of journals proceeds the number of subscribers will shrink, and subscription prices will have to rise. The reduction of subscription income may continue to the point of financial destruction of these journals.

(Cairns, 1973. p.114)

It seems clear that licensing of digital content and e-commerce have afforded publishers a whole new range of pricing and business options that were previously unavailable under the ownership model of library acquisitions, from the control and customization of the terms and conditions of agreements. to the very software code underlying the technology itself that tracks, monitors, and controls use.

“[L]icensing is the one existing concept that addresses the nature of information as a commodity” (Evans, 1999). Law professor Gail Evans cites the example of Westlaw, a company that specializes in legal information and databases, which offers

different information and search results to different users based on how they log-in or sign-on. Evans notes that for publishers:

Licensing provides a means of retaining an ongoing interest in the property. In the grant of access to an electronic database the user does not receive a transfer of ownership rights in the copy, but simply a limited transfer of rights to use information on stated terms and conditions (Evans, 1999, p. 267).

The publishers interviewed for this study reported that new business models and new pricing and cost methods were among the biggest challenges they faced with regard to licensing. As Sally Morris, Secretary-General of the Association of Learned and Professional Society Publishers, puts it, “who pays?” (Morris, 2000). She observes that publishers are only likely to archive or preserve material that has:

[a]ctive commercial value,” and points out that “it is not realistic to insist publishers must do this—they have businesses to run; there is little incentive to maintain a proper archive even of printed publications. I do, however, think it is reasonable to ask publishers to undertake that they will make sure someone carries out the archiving, if they are not doing it themselves” (Morris, 2000, p. 67).

It is an open question whether publishers will discover new incentives to take a more long-term view, as the motion picture industry has recently done. As they discovered the commercial value of and demand for their older productions, film studios belatedly began to invest in preservation and digital archiving as a strategy to maintain and preserve their business models. At present, publishers do appear to be interested in experimenting with new business models, as they begin to recognize that continued market shares or profitability may depend in the future on their ability to offer quality content over time.

7.3 Toward a Policy Framework and Agenda for Long-Term Access and Use of Licensed Digital Information

Mandatory licensing of the intellectual property rights of everyone who communicates via the internet is a defacto change in copyright law that should not have been permitted without explicit policy-making attention

(Braman & Roberts, 2003, p.445)

In the United States, there is no tradition of overarching information policy, or a national policy agenda related to information issues. Instead, in the U.S., policy challenges and opportunities shift according to the goals, objectives, and outcomes desired by various interests and players. In this context, what action is required to ensure long-term access and use of licensed digital resources in U.S. college and university libraries?

In the present study, libraries have identified three key barriers to long-term access and use of licensed digital resources. First, current price and business models threaten the sustainability of existing academic library collections and may hinder growth in certain existing or emerging areas of research and scholarship. As just one example, electronic journal costs continue to escalate at a pace well above the consumer price index; and price increases have a direct effect on collection size and scope.

Second, current licensing practices prohibit or severely restrict certain basic library functions, such as preservation and archiving. Unless licensing agreements begin to give libraries, archives and other cultural heritage institutions the rights to

preserve and archive licensed material, the continuous availability of and access to recorded knowledge may be in serious jeopardy.

Third, digital archiving must become a national priority. As this study indicates, U.S. college and university libraries have barely begun to plan for long-term access and use of licensed digital resources; they must collaborate to establish robust standards, reliable resources and clear responsibilities for ongoing digital preservation.

To address these problems, libraries and other stakeholders (such as users of licensed digital resources, publishers, digital preservation experts, and system engineers and developers) must develop a shared policy agenda to guide their efforts regarding digital licensing issues. Effective policy initiatives must involve all the relevant constituencies in the assessment of needs, resources, and economic feasibility, in a three-stage process: 1) problem identification, 2) solution proposals, and 3) standards setting. In the case of digital licensing, there are four main policy arenas: the legislative and judicial arena, the standards-setting arena, the institutional/organizational arena, and the collective/collaborative arena. Ideally, the framework should also be developed and implemented at the international, national, institutional and organizational levels.

A framework for developing such a digital licensing policy agenda is proposed in Figure 6, and discussed in the following sections.

Fig. 6. Framing the Licensing Landscape II: A Conceptual Policy Framework to Ensure Long-term Access to and Use of Licensed Digital Resources

Legislative and Judicial

The first arena of digital licensing policy is the legislative/judicial arena. For example, there have been several attempts recently in U.S. courts to limit the scope and duration of copyright law but to date none has been successful (*Eldred*, 2004; *Kahle*, 2005). Despite these setbacks, however, a number of legislative and judicial efforts might be pursued that would support academic library interests in digital licensing controversies. An educational exemption to the copyright act that would allow libraries and archives to copy or digitize for preservation and access, rather than strictly for preservation and use on library premises only, as the law currently provides, might overcome one barrier to current preservation and access problems. Another possible avenue might examine whether publishers should be subject to legal obligations related to the accuracy and reliability of licensed digital information products.

Publishers might also be required to digitally deposit materials with the Library of Congress, as they must do now for published print work. The United Kingdom recently adopted a limited digital deposit requirement (Legal Deposit Libraries Act of 2003), but it is too early to tell what effects the requirement will have (implementation guidelines have not yet been developed and approved).

Legislative reform might take a targeted approach, for example on a state-by-state or case-by-case basis, as well as national- or federal-level efforts. Because licensing is governed by state contract law, a state-by-state approach to reform might be particularly effective.

Standards Development

There are many different types of standards, but what they all have in common is some degree of consensus as to what, why and how things get done. There are industry standards and technical standards, among others; digital preservation, for example, requires both types. Industries and markets have also become global; international standards for digital preservation technologies could have a dramatic effect on the development of new technologies.

Model license agreements, such as those analyzed in this study, that have been developed collaboratively between libraries and publishers are another kind of standard. Although model licenses have not yet been widely adopted by academic libraries, the adoption of a model license standard could also have important consequences for digital licensing and academic library services.

Institutional and Organizational Policy Development

To insure long-term access and use of licensed digital resources, relevant institutions and organizations (e.g., libraries, publishers, colleges, universities and other cultural memory institutions) must participate in the policy-making process. In 1999, for example, the Association of Research Libraries and OCLC held a meeting with 80 academic leaders; these discussions led to the development of the Keystone Principles, one of which is that “access to information is a public good...scholarly and government information is created

at the expense of public and/or academic institutions. Therefore, there is a public interest in the availability of this information” (“Keystone Principles”, 1999, p. 1).

Institutional policy development could take a number of forms. Research might be undertaken to demonstrate the significance and scope of issues related to digital licensing, and to study possible solutions and alternatives, such as the redesign of library information management systems discussed previously. Another area where institutional policy has played a leading role is the confidentiality of personally-identifiable circulation and patron records, especially in the face of recent law-enforcement demands under the Patriot Act and similar security mandates.

Collective, Collaborative and Consortia Development

No library or publisher, no matter how large, can address the complex challenges of digital licensing alone. Multiple communities and constituencies must work together. Libraries, publishers, and other stakeholders must form partnerships to study and work together on these issues, whether through legislation, standards negotiations, or institutional development.

Another area for further research is how collaborative efforts can serve as a means for advancing library and user interests. The concentration of ownership in the academic publishing industry has made publishers and libraries unequal partners in the license negotiation process; consortial arrangements and other cooperative efforts may help libraries "level the playing field," and thus fulfill their missions and obligations to users.

7.4 Future Research

The pursuit of knowledge is a process in which the emergence of new knowledge builds on and reconstructs the old. Knowledge cannot advance without consistent and reliable access to information sources, past and present.

(Report of the Task Force on Archiving Digital Information, 1996, P. 11)

The present study has presented a variety of findings from two major stakeholders—libraries and publishers—with divergent interests in digital licensing and long-term access and use of library collections. As libraries and other cultural heritage institutions acquire more and more licensed digital content, more research will be necessary to gain a fuller understanding of the problems involved, and to propose policy solutions.

Key issues have been identified that, from the perspective of major academic libraries and top commercial, scholarly society and university press publishers, might be followed up in greater detail in future studies. The current licensing landscape, and preliminary recommendations for policy development, have been outlined. Five areas would seem particularly promising for additional research.

The first area concerns the mission and sustainability of the heritage role of U.S. academic libraries. The results of this study suggest that as academic libraries acquire more and more digital resources covered by license agreements, academic libraries' missions and heritage roles will continue to be challenged and indeed, may be transformed. Much more additional research and policy discussion will be needed to help libraries re-evaluate their priorities, values, and goals.

The second area for further research is the consequences of digital licensing for academic libraries' users or patrons -- faculty, students, and researchers. These issues should be approached from the users' perspective to understand the real, practical effects of licensing for research, teaching, and learning.

There is also a pressing need for more complete, detailed, and continuous quantitative information about the prevalence of licensing, including the number of license agreements, inclusion or omission of specific clauses, percentage of collection total, preservation, archiving or perpetual access, and so on. New electronic resource management systems might permit libraries capture and organize data about their digital products and license agreements on a regular basis. More detailed quantitative study would permit a much more accurate description of the breadth and scope of licensing practices in American academic libraries.

Fourth, building on the results of this study, future studies might employ different research designs and methodologies, for example, more in-depth studies of a selected sample of libraries, or comparative studies that contrast licensing practices in the U.S. and overseas. In addition to publishers and library representatives, university administrators, library patrons, or philanthropic donors might participate and bring their particular perspectives to the issues.

A fifth opportunity for future research relates to the fourth, but deserves separate emphasis. It would be useful to design future studies to be longitudinal, that is, to collect and analyze data over time. Although the present study has provided some useful benchmarks, it was necessarily designed as a cross-sectional study and so only represents

one "moment in time" with regard to digital licensing. The challenges and changes associated with licensing will require a longer-term perspective in future research.

A sixth research opportunity will be to examine the relationship between the control and monitoring aspects of licensing and privacy. Licensing of digital resources for libraries is less than a decade old, and as this study indicates, it has already had a significant impact on publishers, libraries and their users. But licensing has raised new questions about privacy and intellectual freedom that have not yet been carefully considered. If access to and use of information is a critical component and underpinning of a free and democratic society, and if libraries are prevented from fulfilling their traditional stewardship role in that regard, then who will preserve scholarship for future generations access and use? In today's increasingly digital environment, libraries' traditional commitment to stewardship seems, by itself, insufficient to preserve access over time, and thus, to insure the freedom of inquiry that is taken for granted in academic institutions. I hope that this study will provide a starting place for further research, including some benchmarks and a preliminary framework for future studies and for informing various stakeholders in order that scholarship created today will be available for future generations.

Appendix 1

Libraries Licensing Survey Instrument: (administered online)

Note to the reader: the survey instrument below was administered online. Several answer formats were possible including single answer check box, multiple answer check box, open ended narrative, numeric percentage, and ranking as well as combinations of responses that are not easily represented in the paper form presented here. The survey instrument is included below to provide the reader with the content of the questions rather than the online experience of completing the survey which cannot be fully represented here.

This survey seeks to obtain information from major U.S. college and research libraries regarding the current environment, key issues and impacts of licensing digital resources. For purposes of this survey, *digital resources* are defined as electronic journals, databases, websites delivered over a network and *licensing* refers to legal agreements requiring signature that may be negotiated. The survey will take approximately 15-20 minutes to complete. Your participation is completely voluntary. If you have any questions regarding the survey or my research, I can be reached at farb@library.ucla.edu.

Section 1. Licensing Activity

1. How does your library ordinarily manage/coordinate the licensing of digital resources (*e.g.*, databases, electronic journals, websites, etc.)? Check the answer that most closely reflects your situation:

- We do the licensing of all digital resources that the library acquires
- We do the licensing of all digital resources that the library acquires with the exception of those done on our behalf by consortial partners.
- We only acquire digital resources through consortial arrangements
- We do not manage/coordinate the licensing of if any digital resources.
- Other, Please Specify

[Please note that under question 1, if the respondent checks the fourth choice (library doesn't manage), respondent will logically skip to the end of the survey and receive a "thank your for your participation message" as this response eliminates them as a further respondent since most of the subsequent questions are moot]

2. In 1995, about **how many** signed license agreements for digital resources did your library have? Please fill in a number (for example, 60): _____
3. Today (2004), about **how many** signed license agreements for digital resources does your library have? Please fill in a number (for example, 75): _____
4. What is your library's total collection budget for this year, as a **dollar amount**?
\$ _____
5. What **percentage** of your library's collection budget do you expect to spend this year on licensed digital resources? Please do **not** include items like your library's OPAC or other digital project development: _____ %
6. Of the digital resources for which you currently have signed license agreements, what **percentage** does your library also acquire in print, microfilm, CD or other physical forms? _____ %
7. What **percentage** of your library's licensed digital resources are acquired in digital form **only**? (online access only) _____ %

Section 2. License Provisions and Negotiation

8. Does your library have guidelines, principles, checklists, or other policy documents that outline or recommended practices for licensing digital resources?

___ No ___ Yes

If yes, please describe below (or provide document link/URL or email to___):

9. Does your library modify or amend standard license agreements offered by vendors, publishers or providers before they are signed?

___ No ___ Yes

10. What **percentage** of such standard license agreements does your library typically modify or amend? _____%

11. What types of modifications or amendments do you typically propose (for example, *governing law, usage statistics*, etc.), and about how frequently are they accepted by the licensor? Please list:

Example:

Modification Type: governing law Frequency Accepted: 30 %

Modification Type: _____ Frequency Accepted: _____ %

Modification Type: _____ Frequency Accepted: _____ %

Modification Type: _____ Frequency Accepted: _____ %

Modification Type: _____ Frequency Accepted: _____ %

Modification Type: _____ Frequency Accepted: _____ %

12. Please **rank-order** the following factors in terms of their value to your library in finalizing digital resource license negotiations:

_____ User satisfaction

_____ Price

_____ Usability

_____ Copyright guarantees (*e.g.*, fair use, interlibrary loan, perpetual/persistent access, archiving)

_____ Long-term access and use

_____ Authenticity/completeness of content

_____ Other (please specify) _____

Section 3. Access and Preservation Issues

13. As a matter of library policy, which of the following does your library require in digital licensing agreements? (please check all that apply):

- ☐ Agreement permits resources to be used by walk-in users at public terminals
- ☐ Agreement provides fair use rights as defined by Federal copyright law
- ☐ Agreement provides interlibrary loan rights (electronic and print)
- ☐ Agreement allows creation of electronic course packs (electronic and print)
- ☐ Agreement provides perpetual access to purchased information
- ☐ Agreement provides archiving rights (*i.e.*, ability to produce and keep archival copy)
- ☐ Agreement permits creation of preservation copy (for preservation or security only)
- ☐ Agreement ensures confidentiality of user information
- ☐ Agreement requires vendor to provide usage statistics
- ☐ Agreement ensures Open URL compliance
- ☐ Other (please specify:) _____

14. Please estimate the **percentage** of your library's current license agreements that include the library's right to archive digital resources: _____%

15. Please estimate the **percentage** of your library's current license agreements that include the right of perpetual access to licensed digital resources: _____%

16. Please estimate the **percentage** of your library's current license agreements that include provisions for fair use of digital resources: _____%

17. Does your library currently have a plan for the long-term preservation, access and use of licensed digital resources?

___ No ___ Yes

18. In what ways is your library addressing perpetual or archival access to licensed digital resources?

___ Library is responsible for long-term preservation and access

___ A third party is responsible for long-term preservation and access

___ Library negotiates for vendors/licensors to provide physical copy of the material

___ Library has no current strategy but has begun planning

___ Perpetual/archival access has not been considered

___ Other (please specify :) _____

19. What, if anything, is your library doing to ensure that licensed digital resources will be affordable over time? (Please describe :)

Section 4. General Issues

20. What do you consider to be the most difficult issues facing your library regarding licensing of digital resources? (Please describe :)

21. What do you consider to be the most difficult challenges facing your library regarding the long-term access and use of licensed digital resources? (Please describe :)

22. Are you willing to provide examples of your library's license agreements (appropriately redacted) for an analysis of their content and provisions?

☐ No ☐ Yes

23. Are you willing to be contacted for further clarification or additional information?

☐ No ☐ Yes

If yes, please provide your contact information below:

Thank you for your responses to this survey. If you have any questions about the survey or about your rights as a research subject, you may contact the Office for Protection of Research Subjects at 2107 Ueberroth Building, UCLA, Box 951694, Los Angeles, CA 90095-1694; 310-825-8714.

Appendix 2

U.S. Academic and Research Libraries: ARL, Oberlin and ULG

U.S. ARL Libraries--

1. University of Alabama Libraries
2. University of Arizona
3. Arizona State University Libraries
4. Auburn University
5. Boston College
6. Boston University
7. Boston Public Library
8. Brigham Young University
9. Brown University
10. University of California - Berkeley
11. University of California - Davis
12. University of California - Irvine
13. University of California - Los Angeles (UCLA was not included in this study since the researcher is from UCLA)
14. University of California - Riverside
15. University of California - San Diego
16. University of California - Santa Barbara

17. Case Western Reserve University
18. University of Chicago
19. University of Cincinnati Libraries
20. University of Colorado
21. Colorado State University
22. Columbia University
23. University of Connecticut
24. Cornell University
25. Dartmouth College
26. University of Delaware
27. Duke University
28. Emory University
29. University of Florida
30. Florida State University Library
31. Georgetown University
32. George Washington University
33. University of Georgia
34. Georgia Institute of Technology
35. Harvard University
36. University of Hawaii
37. University of Houston
38. Howard University Libraries

39. University of Illinois - Chicago
40. University of Illinois - Urbana-Champaign
41. Indiana University
42. University of Iowa
43. Iowa State University
44. Johns Hopkins University
45. University of Kansas
46. Kent State University Libraries
47. University of Kentucky
48. Library of Congress
49. Louisiana State University
50. University of Louisville
51. University of Maryland
52. University of Massachusetts
53. Massachusetts Institute of Technology
54. University of Miami
55. University of Michigan
56. Michigan State University
57. University of Minnesota
58. University of Missouri - Columbia
59. University of Nebraska - Lincoln
60. University of New Mexico

61. New York University
62. University of North Carolina - Chapel Hill
63. North Carolina State University
64. Northwestern University Library
65. University of Notre Dame
66. Ohio State University
67. Ohio University
68. University of Oklahoma
69. Oklahoma State University Library
70. University of Oregon
71. University of Pennsylvania
72. Pennsylvania State University Libraries
73. University of Pittsburgh
74. Princeton University
75. Purdue University
76. Rice University
77. University of Rochester
78. Rutgers University
79. University of South Carolina
80. University of Southern California
81. Southern Illinois University
82. State University of New York - Albany

83. State University of New York - Buffalo
84. State University of New York - Stony Brook
85. Syracuse University
86. Temple University
87. University of Tennessee - Knoxville
88. University of Texas - Austin
89. Texas A&M University Libraries
90. Texas Tech University Libraries
91. Tulane University
92. University of Utah
93. Vanderbilt University
94. University of Virginia
95. Virginia Tech
96. University of Washington
97. Washington State University
98. Washington University - St. Louis
99. Wayne State University
100. University of Wisconsin - Madison
101. Yale University

Oberlin Group Libraries

1. Agnes Scott College

2. Albion College
3. Alma College
4. Amherst College
5. Augustana College
6. Austin College
7. Barnard College
8. Bates College
9. Beloit College
10. Berea College
11. Bowdoin College
12. Bryn Mawr College
13. Bucknell University
14. Carleton College
15. Claremont Colleges
16. Clark University
17. Coe College
18. Colby College
19. Colgate University
20. College of Wooster
21. Colorado College
22. Connecticut College
23. Davidson College

24. Denison College
25. DePauw University
26. Dickinson College
27. Drew University
28. Earlham College
29. Eckert College
30. Franklin & Marshall
31. Gettysburg College
32. Grinnell College
33. Gustavus Adolphus College
34. Hamilton College
35. Havenford College
36. Hope College
37. Kalamazoo College
38. Kenyon College
39. Knox College
40. Lafayette College
41. Lake Forest College
42. Lawrence University
43. Macalester College
44. Manhattan College
45. Middlebury College

46. Mills College
47. Mount Holyoke College
48. Oberlin College
49. Occidental College
50. Ohio Wesleyan University
51. Reed College
52. Rhodes College
53. Rollins College
54. Simmons College
55. Skidmore College
56. Smith College
57. St. Lawrence University
58. St. John's University/College of St, Benedict
59. St. Olaf College
60. Swarthmore College
61. Trinity College
62. Trinity University
63. Union College
64. University of the South
65. Vassar College
66. Wabash College
67. Washington and Lee University

68. Wellesley College
69. Wesleyan University
70. Wheaton College
71. Whitman College
72. Whittier College
73. Willamette University
74. Williams College

University Library Group

1. American University
2. Baylor University
3. Carnegie-Mellon University
4. Catholic University
5. College of William and Mary
6. DePaul University
7. Fordham University
8. Lehigh University
9. Loyola University
10. Marquette University
11. Miami University

12. Northeastern University
 13. St. Johns University
 14. St. Louis University
 15. Southern Methodist University
 16. Texas Christian University
 17. Tufts University
 18. University of Denver
 19. University of Richmond
 20. Villanova University
 21. Wake Forest University
 22. Yeshiva University
-

Appendix 3

Publishers Interview Instrument

This interview seeks to obtain information from top publishers of digital resources regarding the current environment, key issues, and impacts of licensing digital resources. This interview explores how, to what extent, from the publishers perspective, the change from purchasing to licensing affects publishers and libraries and implications for long-term access and use of licensed digital content. The interview will take less than 20 minutes to complete. Your participation is completely voluntary. If you have questions regarding the interview of my research I can be reached at farb@library.ucla.edu **or 310.206.3388.**

Publishers Interview Instrument

1. How much of your company's content is available in digital form?
2. How much is available also in print?
3. Where you provide digital and print, in what ways is digital different? (or, are digital resources equivalent to print?)
4. Do you currently require license agreements for all digital resources? (If yes, when did your company first start requiring license agreements? If no, what types of digital resources do not require license agreements?)

5. How, if at all, is licensing different than selling content to libraries?
6. Do you use a standard license agreement?
7. Do you routinely modify your standard agreement?
8. Do you use different agreements for different types of libraries?
9. Do you negotiate library by library over terms?
10. What is your company's policy regarding archiving of digital resources?
11. What is your company's policy regarding perpetual or persistent access?
12. What is your company's policy regarding fair use of digital resources?
13. Do you routinely agree to archiving? (If no, why not? If yes, why isn't it included in standard agreement)
14. Do you routinely agree to fair use? (If no, why not? If yes, why isn't it included in standard agreement?)
15. Is it your company's practice to routinely require non-disclosure of license terms? (if yes, why?)
16. As a publisher, what are your biggest challenges regarding licensing digital resources?

Thank you for your responses to this interview. If you have any questions or about the interview or about your rights as a research subject, you may contact Office for Protection of Research Subjects at 2107 Ueberroth Building, UCLA Box 951694, Los Angeles, CA 90095-1964: 310/825-8714.

Appendix 4

Licensing Survey Responses Re Library Policy Requirements (“other” category responses) Question 13

13. As a matter of library policy, which of the following does your library require in digital licensing agreements? (please check all that apply):

Note: While only two points are REQUIRED, nearly all are seriously considered
Walk-up access campus-wide
Insures use by distance ed students and faculty
We try for all of these-but we do not yet have very stipulation in every license. When we negotiate as a small private liberal arts customer, we do not have as much clout as does our state consortium through which we get a lot of things. We are close and we always ask for improvement at every renewal
Allows remote access via proxy server for off-campus users
Licensors warrants it has the right to distribute the information, no limitation on liability for intellectual property infringement

Access by IP verification
1. mutual indemnification and 2. non-discrimination clause”
Agreement ensures remote access via proxy server
(These are not items that we require, but we consider to be good things. We don’t negotiate on these points, we accept what is offered.)
Indiana governing law
Nothing is absolute except governing law and indemnity. Above two are hardest to get.

Appendix 5

Licensing Survey Responses Re Affordability Question 19

19. What, if anything, is your library doing to ensure that licensed digital resources will be affordable over time? (Please describe :)

The responses of the 28 responding libraries are as follows:

Up until now, we've been fortunate with our periodical budget, but we are faced with cuts for next year. We base cuts in general on usage statistics for both print and electronic, and make cuts where we must to make the most of our budget dollars.
Refusing to purchase those which are not affordable. Our view is that arguments, entreaties, etc. have little impact. Market forces DO have an impact, however.
We monitor usage of all of our digital resources. If the usage doesn't justify the cost, we cancel.
We're severing most "big deal" arrangements. We're supporting alternative publishing operations such as SPARC and BioMed Central. We're talking with faculty about the many issues facing us vis-à-vis journal subscription rates. We're carefully monitoring open access systems.
Using consortial arrangements when available. Canceling unreasonable subscriptions. Negotiating for reasonable price. Moving subscriptions to alternative vendors when such an option exists.
Serious discussions with providers as to options such as purchase, lower annual access

fees, and back-up tapes or other format if annual access ends.
Canceling overlapping print subscriptions after.
Supporting alternative publishing models
Enter into consortial arrangements whenever possible
Cancellations for consortial agreements, instituting caps on increases.
Praying. Negotiating every single vendor price increase—getting better results as we work on this.
We are not working with publishers/providers yet. Currently we are trying to avoid duplication, canceling print that is duplicated in electronic form [that does not require paper subscription for electronic access]. Substituting ILL for expensive lightly used print journals.
We discuss cost and use with vendors/content providers.
Annual analysis of cost & price increases
We participate in a number of library consortia, meet with vendors regularly, participate in vendor/library surveys
Collaborative efforts with other libraries. Long-term (3-5 years) contracts with fixed price increases. Buying in bulk (<i>e.g.</i> , several resources at once from the same vendor and negotiating collective cost that is less than cumulative individual prices).
Working with consortial partners
One strategy is to have archiving rights to all content based collections, especially ejournals and ebooks. As we feel more comfortable that the electronic copy will persist,

we can make collection decisions based on a single electronic copy where it is advantageous to have an electronic copy. We also negotiate favorable terms with our consortia where we feel we have leverage.
There is no way to ensure this! Just like there was no way to ensure print serial prices...If we cannot afford and usage is low, we cancel. The best way to attempt to do this is to negotiate price caps into licenses especially for 3 year deals.
Working with consortia more
We review resources on an ongoing basis to assess content and usability in comparison to new or improved resources. As better options become available, we cancel existing resources to add new or different ones.
When possible, not agreeing to licenses that tie print retention to online access.
Negotiating hard against flakey pricing Purchase (if amortization makes sense) rather than rent Seek, where appropriate, multi-year agreements Strive (not always successfully) to cancel unsatisfactory or too expensive or too high- increases-in-price resources
“Our participation in OhioLINK assists one organization which is at the forefront of establishing consortial licensing agreements that are library-friendly”
negotiations with publishers to restrain prices, securing long-term access and archival rights, canceling resources that are perceived to be poor value for money
We are participating in the Mellon-funded LOCKSS project (http://lockss.stanford.edu/)”
“We have cancelled print when we have digital archive rights. Again, OhioLINK has bargained with vendors reasonable annual increases

Encouraging SPARC and open access initiatives, encouraging faculty to retain rights and consider self-archiving, consortial licensing

Appendix 6

Survey Responses Re Most Difficult Issues Question 20

20. What do you consider to be the most difficult issues facing your library regarding licensing of digital resources? (Please describe:)

Just the sheer volume of agreements makes the job difficult, but long term preservation is one of the most important issues.
"Need for long-term access to content.
Publishers who withdraw content from aggregator databases. Database producers who force libraries to subscribe to the same title in multiple formats. For example, we subscribe to the <i>NY Times</i> in paper, microfilm and electronically. Proquest who produces microfilm and the digital Historic Newspapers does not include the <i>NY Times</i> until 2 years after publication. Libraries can't store 2 years of the <i>NY Times</i> so they are forced to purchase the microfilm while they wait for electronic access.
Tough question Sharon! There are a lot. Balancing the full-text expectations of our clientele against a budget designed for print. Purchase of archives, e-content on top of print scripts, "permanent" e-content -- all have thrown our budget out of whack. Staffing would be a close runner-up.
Cooperation of faculty for library acquisitions procedures.
Increasing prices Lack of archiving

clear and accurate wording and continued access to paid content without duplicate of payment for same database content
Escalating costs + inflation and shrinking budgets. No policies regarding licensing in place. Not enough staff to fully review and negotiate licenses.
*ILL provisions *long term access *cost
“continuing to have the budget to pay for more and more resources
Time required for licensing New comers to electronic field (refighting old battles)
Inadequate ERMS at the present time - Electronic Resources have grown faster than staff and processes to keep up the escalating dynamic. We are now working on ERMS plan for future management and growth
To keep it
Conglomeration of providers. Cost of materials. Duplication of materials in packages among vendors. Inability to subscribe title by title to needed products. Tying of electronic access to print subscriptions
In order to keep inflation rates down, we are committing to longer-term licenses that prohibit us from canceling print; as we move towards e-only, we may not be considering as thoroughly as we should our access rights in the future.
The changing nature of providing access to these materials.
Proliferation of licenses Managing large journal packages Price increases
Funding
Affordability.

Complexity of contracts. Voracious vendors who offer only high-priced collections that include items we would not otherwise select.
1. Ensuring that fair use is allowed as digital rights technology becomes more invasive. 2. Ensuring a usable electronic copy is archived and accessible. 3. Ensuring that the unsustainable price increases associated with print journals does not become the defacto model with electronic journals
1. Authenticated access that works on a campus of close to 30,000 FTE is a the biggest challenge. IP authentication through a proxy server gets us by but is not ideal. 2. Rapid, dynamic nature of all e-resources is problematic and the tools available to manage the amount of work encountered are still relatively rudimentary. 3. Attempting to manage e-resources in both a local, centralized manner (Library ILS) and farm needed e-resource information out to other permutations of the library's digital presence (web pages, home-grown databases, institutional repositories, etc.) is still the biggest challenge all libraries face with electronic resources.
First, management tools (software, database, whatever) -- our management needs are why I could not answer many of the questions. Second, staffing that can do the associated work of acquiring and maintaining electronic resources. Third, dealing with the issues that would permit dropping print in favor of electronic, such as the archiving question.
The proliferation of resources far exceeds our budget and the overlap between similar resources sometimes makes it hard to assess what's needed and spend dollars wisely. Inflation for digital resources is now comparable to print serials.
Negotiating licenses that restrict access to one geographic site. We cannot agree to these

licenses for organizational and technical reasons.
Perpetual access to those electronic materials
Maintaining information on agreements in easily accessible usable form and medium Informing users of restrictions that impact their expected behavior Cost Rental rather than archival
Perpetual access
Duplication of print and electronic subscriptions with variety of embargos on release of digital content
securing broad rights and managing the licensing process
There are several. Among these are the acquisition and management of e-resources. It is very much a team effort, requiring collaboration among a number of departments. The other major issue is assuring continued access to all materials by students, faculty, citizens of the state of Indiana
Growth in number and need to review all
Lack of standardization makes it troublesome and time-consuming to get license agreements through the legal process both at our university and with the vendor
Local commitment to systemwide principles that should be pursued vigorously and uniformly, but a lack of bargaining power when dealing as a single institution which makes achieving perpetual access and other usage rights difficult. Local action can impact other campuses and prevent progress toward model terms. Many titles have to be approached individually and their publishers are reluctant or completing unwilling to

entertain changes.

Appendix 7

Survey Responses Re Challenges to Long-Term Access and Use Question 21

21. What do you consider to be the most difficult challenges facing your library regarding the long-term access and use of licensed digital resources? (Please describe :)

Our library needs to come up with a formal plan.

Need for sustainable access to online journal resources. We currently cancel print subscriptions in favor of online only when our sustainable access criteria have been met. So far, only two online journal resources (Muse and BioOne) meet those criteria. We do subscribe to quite a few additional online resources, but those are regarded as supplementary.

COST. I am concerned that producers of digital resources will model the STM journal publishers in pricing. I recently spoke with a database sales rep after a demo. The price tag for the database is in the 6 figures. The database is excellent for all libraries not just academic libraries. I asked him to return to his company and suggest that they chop three digits off of the price and market it to every school, public, and academic library in the country. As it stands now, there are only about 3 libraries in the US that will pay the 6 figure price. Unfortunately, I don't think his company will listen.

Our dependence on publishers to provide such access; the library no longer having control of the information medium.
same
increasing costs
Unproven long-term stability of digital media. Costs of upgrading hardware. Authentication schemes
*cost *lack of archive *"renting not owning"
cannot afford to purchase also print so depend on vendor to provide permanent access
Capacity and migration The latter is greatest because it presumes knowing the unknowable
Constant and unending negotiating with vendors; making sure that our patrons understand both possibilities of use and restrictions of use
Archiving of materials, providing access to material older than 10 years. Increasing costs.
Simply to ensure that we would be able to access the resources.
Ensuring archiving of digital resources
Who and how
Reliance on the vendors/publishers to guarantee ongoing access, and the sellers' market in which we are reliant on the publishers/vendors and therefore vulnerable. We can foresee having to pay whatever they want to charge, with

no price controls to check the rate of inflation. This is setting up another situation similar to scientific journal publishing in which commercial publishers are able to increase prices because there is no competition.

The preservation and storage of an electronic copy will be critical.

Standardizing formats that can be migrated and usable over time. Making sure authorized users can have access to the electronic materials by not requiring costly high end machines, full networked access, and keep free of digital rights management

tools that may block fair use of materials in an academic environment

1. Authenticated access that works on a campus of close to 30,000 FTE is a the biggest challenge. IP authentication through a proxy server gets us by but is not ideal. 2. Rapid, dynamic nature of all e-resources is problematic and the tools available to manage the amount of work encountered are still relatively rudimentary. 3. Attempting to manage e-resources in both a local, centralized manner (Library ILS) and farm needed e-resource information out to other permutations of the library's digital presence (web pages, home-grown databases, institutional repositories, etc.) is still the biggest challenge all libraries face with electronic resources.

Dealing with the issues that would permit replacing print with the electronic version, such as the archiving question. Mutability -- of interfaces, links, and sales of titles between publishers resulting in new contracts and new platforms for delivery of content.

As a small college, our role in providing long-term access differs from a research library but we are still challenged by the cost and space issues associated with the purchase and storage of multiple formats for the same content.
Ensuring access to content in a rapidly changing environment while being forced to cancel print titles for fiscal reasons.
Storage and costs of preservation
Price increases Changes in resource ownership
Perpetual access, affordability
Issues of integrating so many information sources for easier access by our patrons; developing licensing models that foster this development at affordable pricing
“developing policies and infrastructure for long-term access and preservation doing this affordably
We are very concerned that, as a major research library, we will not have the wherewithal to archive electronic resources as effectively as we have print and other more traditional carriers of information
Growth in scale and uncertainties about cost
I wouldn't consider it a difficult challenge, but there is always the fear that a publisher will go away without providing us with the archived materials, even though they are to do so by contract.

Unwillingness of publishers to guarantee and provide perpetual access themselves for whatever reason, while being unwilling to allow the institution itself to archive and offer access intra-institutionally under the conditions which held during subscription. Unsustainability of the current means of funding access.

Appendix 8

Example Standard Commercial Publishers License Agreement

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Revised 3/4/2004 9:37 AM

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I Do Not Accept

I Accept

Appendix 9

Example Scholarly Society License Agreement

ACS Web Editions/ACS Journal Archives Single Site Sales Agreement - Page 1 of 5
American Chemical Society

ACS Web Editions and ACS Journal Archives Access Sales Agreement For 2005 Subscriptions (Single Site)

Revised: May 16, 2005

This Sales Agreement is entered into this _____ (day) of _____ (month) 20____, between the American Chemical Society (hereinafter ACS) and _____ (hereinafter Licensee).

1. Agreement

This Sales Agreement between the ACS and the Licensee grants the Licensee a non-exclusive, nontransferable,

License to access the **ACS electronic journal collection** listed in Attachment A, according to the terms and conditions set forth in this Agreement.

2. Fees for the ACS electronic journal collection

2.a. ACS Web Edition Fee for Current Print Holdings: The Licensee agrees to pay an Electronic

Subscription Fee for the **ACS Web Editions** of _____ for the initial term of this agreement. The electronic access fee must be paid in full before access to the Web Editions will be activated. Licensee is responsible for paying the additional air-expedited postage for their printed subscriptions for locations outside the U.S.

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3. Provisions of ACS electronic journal collection:

3.a. Attachment B. Licensee shall supply the complete names and addresses of all of its locations that are participating in this Sales Agreement (Authorized Sites), plus their ACS account numbers, if available. ACS will identify the ACS institutional customer accounts (not provided by Licensee) at those locations and attach to this Agreement as Attachment B the list

of Authorized Sites and the Current Print Subscriptions for each of those locations. ACS will send Licensee an invoice for the Electronic Subscription Fee for the **ACS Web Editions and/or ACS Journal Archives**. A location that has no Current Print Subscriptions may still participate under this Agreement as an Authorized Site so long as it is identified as provided above. These sites will be subject to a minimum participation fee. The Licensee agrees to be liable for all fees charged under this Agreement, and to advise of any additions to the access list.

ACS Web Editions/ACS Journal Archives Single Site Sales Agreement - Page 2 of 5

3.b. Current Print Subscriptions: Current Print Subscriptions are all print copies of ACS titles now available as ACS Web Editions that were purchased as of January 2002 at the non-member institutional rates at all Authorized Sites. Current Print Subscriptions does not include subscriptions by individuals who work at Authorized Sites.

3.c. Access to All Subscriptions: All Authorized Sites will have access to the **ACS Web Editions and/or ACS Journal Archives** of the collective holdings all journal titles as listed in Attachment A and subscribed to by the Licensee **as negotiated**.

3.d. License Administrator: Licensee agrees to designate a single person to be the administrator of this Agreement for all Authorized Sites. The name, address, phone number, and e-mail address of the License administrator shall be listed in Attachment B. Licensee shall notify ACS of any changes to the assigned administrator or contact information.

4. Agreement Definition, Duration & Payment

4.a. Term: The initial term of this Agreement shall be to December 31, 2005. This Agreement shall then automatically renew for one-year terms unless otherwise terminated as provided for herein.

4.b. Payment: The Licensee agrees to pay ACS the appropriate License fee specified on the invoice for a term of one calendar year starting on January 1 of the current year and ending December 31. Upon receipt of a completed, signed Sales Agreement, access to the journal **Web Editions and/or ACS Journal Archives** will be activated. All License fees shall be paid within 30 days after activation of service through the end of the calendar year in question.

At the end of a calendar year, if renewal payment for the **ACS Web Editions** is not received within 30 days after the end of the calendar year, access to the **ACS Web Editions** will be discontinued. At the end of a calendar year, if renewal payment for the **ACS Journal Archives** is not received within 30 days after the end of the calendar year, access to the **ACS Journal Archives** will be discontinued. ACS reserves the right to modify the terms of this Agreement for any renewal period or to adjust the Subscription Fee or pricing model for any renewal period upon sixty days prior written notice. The Licensee agrees to pay ACS the appropriate Add-On Subscription Fee specified on supplemental invoices received when the Licensee adds Authorized Sites, ACS titles in print or Web formats, or other electronic products to this Agreement.

4.c. Usage Reports: ACS agrees to provide the Licensee ACS standard usage reports on a quarterly basis for applicable ACS Web Editions subscribed to by the Licensee and/or the ACS Journal Archives.

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5.a. Termination For Default: If either party breaches a term of this Agreement, the other may send written notice of the breach, including a reasonable cure period not less than seven (7) business days. If the breach is not cured within that time, or if the parties do not reach a satisfactory agreement on extending the cure period, then the non-breaching party may terminate this Agreement effective immediately upon written notice.

5.b. Termination For Convenience: Either Party may cancel this Agreement at any time by providing the other party with sixty (60) days prior written notice. In the event of such a

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ACCEPTED:

I have read and agree to adhere to and abide by all the terms and conditions of this Agreement.

Licensee: (Institution
name): _____

Authorized Signature: _____

Print name of Authorizing Person: _____

Accepted by ACS _____

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American Chemical Society, Sales & Marketing Department

Attn: Inside Sales Specialist; 1155 Sixteenth Street NW, Room L-5002, Washington, DC 20036 USA

Phone: 800/227-5558 ext. 6145 or 202/872-6145; Fax: 202/776-8290; E-mail: l_briscoe@acs.org

Form: Agreement02; Revised 5/16/05

ACS Web Editions/ACS Journal Archives Single Site Sales Agreement - Page 4 of 5

American Chemical Society

ACS Web Editions/ACS Journal Archives Access

Single Site Institutional Agreement For 2005

Attachment A: ACS Electronic Journal Collection List

This agreement covers the following ACS electronic products:

- *ACS Journal Archives*
- *Chemical & Engineering News Online*
- Current Web Edition subscriptions to the following established journals in the ACS Publications family:
 - ☐ *Accounts of Chemical Research*
 - ☐ *Analytical Chemistry*
 - ☐ *Biochemistry*
 - ☐ *Bioconjugate Chemistry*

- ☐ *Biotechnology Progress*
- ☐ *Chemical Research in Toxicology*
- ☐ *Chemical Reviews*
- ☐ *Chemistry of Materials*
- ☐ *Energy and Fuels*
- ☐ *Environmental Science and Technology*
- ☐ *Industrial & Engineering Chemistry Research*
- ☐ *Inorganic Chemistry*
- ☐ *Journal of Agricultural and Food Chemistry*
- ☐ *The Journal of the American Chemical Society*
- ☐ *Journal of Chemical and Engineering Data*
- ☐ *Journal of Chemical Information and Modeling*
- ☐ *Journal of Medicinal Chemistry*
- ☐ *Journal of Natural Products*
- ☐ *The Journal of Organic Chemistry*
- ☐ *Journal of Physical Chemistry A&B*
- ☐ *Langmuir*
- ☐ *Macromolecules*
- ☐ *Organic Process Research and Development*
- ☐ *Organometallics*

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Web Edition access fees to ACS journals introduced after 1999 must be negotiated separately from the aforementioned titles as they have no historical print background. The fee for the following journals is based on a calculation that will determine a fair cost to the group for site-wide access – one subscription does not necessarily equal access to multiple sites. These journals include:

- *Biomacromolecules*
- *Crystal Growth & Design*
- *Journal of Chemical Theory and Computation*
- *Journal of Combinatorial Chemistry*
- *The Journal of Proteome Research*
- *Molecular Pharmaceutics*
- *Nano Letters*
- *Organic Letters*

ACS Web Editions/ACS Journal Archives Single Site Sales Agreement - Page 5 of 5

American Chemical Society

ACS Web Editions/ACS Journal Archives Access

Single Site Institutional Sales Agreement For 2005

Attachment B: Customer Information and Authorized Sites

Organization Name

Name Of Sales Agreement

Administrator:

Address

(Street, City, State, Postal Code)

Phone Number:

E-mail:

Subscription Agent Used (if applicable)

(Important: Web orders cannot be processed without an e-mail address of contact person. Administrator will be notified by e-mail within 5 days of receipt of completed Agreement that account has been activated. Full Payment must be received within 30 days.)

Authorized Sites: List the full name and address of all organization locations that will participate in the Agreement, with their ACS Account numbers, if available. Attach additional copies of this sheet if necessary. ACS will look up the Current Print Subscriptions at each of the sites and return this with the completed Sales Agreement.

Location Name Address

(Street, City, State, Postal Code)

ACS Account**Number** (if available)**IP Address***

**IP Address Note: Please list digits that are separated by periods. Example: IP address 123.456.7*. IP Address should specify the first two groups of digits, commonly called a Level B address, or the first three groups of digits (Level C address) or may specify the complete IP address of the Proxy server(s) handling the Authorized Sites.*

Mail or Fax the completed Agreement with a complete Attachment B to:

American Chemical Society, Sales & Marketing Department

Attn: Inside Sales Specialist; 1155 Sixteenth Street NW, Room L-5002, Washington, DC 20036 USA

Phone: 800/227-5558 ext. 6145 or 202/872-6145; Fax: 202/776-8290; E-mail: l_briscoe@acs.org

Appendix 10

Example University Press License Agreement

The University of Chicago Press, Journals Division_____

Site License Agreement for Electronic Editions of Journals Published by The University of Chicago Press

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Name of Authorized Signer (please type or print)

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Date

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BIBLIOGRAPHY

Alexander, A. W. (2001). "Wither Fair Use? A Library Consortium Viewpoint." *Portal: Libraries and the Academy*. Vol 1. P. 197-202.

Allen, N, Bishoff, L. (2004). *Business Planning for Cultural Heritage Institutions*. Council on Library and Information Resources. Retrieved may 5, 2005 from <http://www.clir.org/pubs/reprots/pubn124/intro.html>

American Geophysical Union [AGU]. (2005). "Inside AGU." AGU Website. Retrieved April 16, 2005, from. http://www.agu.org/inside/abt_agu.html

American Geophysical Union. [AGU] "AGU Publications". AGU Website. Retrieved April 12, 2005, from http://www.agu.org/inside/abt_agu.html#pubs

American Geophysical Union. [AGU] "AGU Standard Academic License Agreement." AGU Website. Retrieved April 12, 2005, from http://www.agu.org/pubs/institution_forms/Acad_single.pdf

American Association of University Presses. AAUP. (2005.) "Definition of University Publishers". Retrieved April 1, 2005, from <http://aaupnet.org/membership/index.html>

American Association of University Presses. AAUP. (1940). "1940 Statement of Principles on Academic Freedom and Tenure with 1970 Interpretive Comments." Retrieved April 15, 2005 from <http://www.aaup.org/statements/Redbook/1940stat.htm>

American Chemical Society. (2005). "ACS Publications." ACS website. Retrieved April 15, 2005 from <http://pubs.acs.org/mission.html>

American Chemical Society. (2004). "Publication Highlights 2004." ACS website. Retrieved from <http://www.chemistry.org/portal/a/c/s/1/acsdplay.html?DOC=acsinfo%5C2004ar%5Chighlights%5Cpublications.html>

American Institute of Physics. [AIP]. (2005). AIP About. Member Societies. AIP website. Retrieved. April 12, 2005, from <http://www.aip.org/aip/societies.html>

American Institute of Physics. [AIP]. (2005). AIP Publications. AIP website. Retrieved. April 12, 2005, from <http://www.aip.org/ojs/service.html>

American Library Association. (ALA). (1947, 1996). "ALA Bill of Rights" Adopted June 18, 1948. Amended February 2, 1961, and January 23, 1980, inclusion of "age" reaffirmed January 23, 1996, by the ALA Council. Retrieved April 10, 2005, from <http://www.ala.org/ala/oif/statementspols/statementsif/librarybillrights.htm>

American Library Association (ALA). (2000). "ALA Comments. *Comments in the Matter of Rulemaking Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*. Retrieved March 29, 2005, from <http://www.copyright.gov/1201/comments/162.pdf>

American Library Association (ALA). 2004. "Core Values Statement." Adopted June 29, 2004, by the ALA Council. Retrieved March 29, 2005, from <http://www.ala.org/ala/oif/statementspols/corevaluesstatement/corevalues.htm>

American Library Association. (ALA) (2001). "Definition Interlibrary Loan." Interlibrary Loan Code of the United States. Reference and User Services Association Guidelines. Retrieved April 2, 2005, <http://www.ala.org/ala/rusa/rusaprotocols/referenceguide/interlibrary.htm>

American Library Association. (ALA) (n.d.). "Intellectual Freedom and Censorship Q and A." Retrieved April 2, 2005, from <http://www.ala.org/ala/oif/basics/ifcensorshipqanda.pdf>

American Library Association (ALA), American Association of Law Libraries (AALL), Association of Research Libraries (ARL), Medical Library Association (MLA), Special Libraries Association (SLA). (2000). *Comments of the Library Associations Before The Library of Congress, The United States Copyright Office and the Department of Commerce, National Telecommunications and Information Administration*, Washington, D.C.. Inquiry Regarding Sections 109 and 117. August, 4, 2000. Retrieved April 4, 2005, from http://www.arl.org/info/letters/dmca_80400.html

American Physical Society (APS). The American Physical Society: A Brief History. Retrieved January 2, 2004, from <http://www.aps.org/about-aps.cfm>

American Physical Society (APS). The American Physical Society: Standard License Agreement. Retrieved January 2, 2004, from <http://librarians.aps.org/DRAFT10.pdf>

American Physical Society (APS). The American Physical Society: Publications. Retrieved January 2, 2004, from <http://www.aps.org/about-aps.cfm>

American Physiological Society (n.d.). Definition of Scientific Societies. Retrieved from the APA website. Retrieved April 1, 2005, from <http://www.the-aps.org/careers/careers1/GradProf/scisoc.htm>

American Psychological Association [APA]. (2005). APA About. APA website. Retrieved April 14, 2005, from <http://www.apa.org/about/>

American Psychological Association [APA]. (2005). APA Bylaws. APA website. Retrieved April 14, 2005, <http://www.apa.org/about/>

American Psychological Association [APA]. (2005). APA Publications. APA website. Retrieved April 14, 2000, from <http://www.apa.org/about/instprod.html>

Anand, B. N., Khanna, T. (2000). The Structure of License Contracts. *The Journal of Industrial Economics*. Vol. XLVIII. March 2000. No. 1.

Arksey, H., Knight, P.T. (1999). *Interviewing for Social Scientists*. London: Sage.

Arrow, K.J. (1984). *Collected Papers, vol. 4: The Economics of Information*. Oxford: Blackwell.

Association of American Publishers. (2005). "AAP Glossary." AAP website. AAP. Professional Scholarly Publishing (PSP) Division. Retrieved April 17, 2005 from http://www.pspcentral.org/glossary/main_byIssue.cfm?Issue_ID=18

Association of Computing Machinery. (ACM) (2002). ACM Copyright Policy. Version 4 Revised November 1, 2002. Retrieved July 4, 2004 from http://www.acm.org/pubs/copyright_policy/

Association of Research Libraries (ARL) (2005). Waters, D. et al (2005). Urgent Action Needed to Preserve Scholarly Electronic Journals. ARL Press Release. Retrieved October 28, 2005 from http://www.arl.org/osc/EjournalPreservation_Final.pdf

Association of Research Libraries. (2004). "A Snapshot in Time: ARL Libraries and Electronic Journal Resources." By Mary Case. *ARL Bimonthly Report* 235. Association of Research Libraries. Nol. 235. P. 1-10. Retrieved April 1, 2005, from <http://www.arl.org/newsltr/235/snapshot.html>

Association of Research Libraries. (ARL) (2003). *ARL Licensing of Electronic Journals Survey 2003*. Washington, DC: Association of Research Libraries.

Association of Research Libraries. (ARL) (2002). Collections and Access for the 21st Century Scholar: Changing Roles of Research Libraries. *ARL: A Bimonthly Report on Research Library Issues and Actions from ARL, CNI, and SPARC*. 225. December 2002. Retrieved April 2, 2005, from <http://www.arl.org/newsltr/225/index.html>

Association of Research Libraries. (ARL) (2002). ARL Survey on E-Journal Subscription Trends, 2002. Washington, D. C.: Association of Research Libraries. Retrieved April 1, 2005, from <http://db.arl.org/ejrnls02/>

Association of Research Libraries. (ARL) (2002). ARL Supplementary Statistics Questionnaire 2002-2003. Washington, D. C.: Association of Research Libraries. Retrieved April 1, 2005, from <http://www.arl.org/stats/mailling/m03/03ssurvey.pdf>

Association of Research Libraries (ARL) (1999). *Managing the Licensing of Electronic Products: A Spec Kit* compiled by George J. Soete and Trisha Davis. Washington, D.C. Association of Research Libraries.

Attride-Stirling, J. (2001). "Thematic Networks: An Analytic Tool for Qualitative Research." *Qualitative Research*. Vol. 1. No. 3. P/ 385-405.

Ayre, C., Muir, A. (2004). "The Right to Preserve." *D-Lib Magazine*. Vol. 10 No. 3. P. 1-3. Retrieved April 14, 2005, from <http://www.dlib.org/dlib/march04/ayre/03ayre.html>

Basbanes, N. (1993). "Collectors and Libraries: Some Studies in Symbiosis". *Rare Books and Manuscripts Librarianship*. Vol. 8. No. 1 P. 37-48.

Battin, P (1982). "Preservation: the forgotten problem." In *Priorities for Academic Libraries*. Thomas J. Galvin and Beverly Lynch Editors. New Directions in Higher Education. San Francisco, CA: Josey-Bass Publishers.

Bellardo, I. J., Bellardo, L. L. (1992). *A Glossary for Archivists, Manuscript Curators, and Records Managers*. Chicago, IL: (Society of American Archivists

Bennett, S. (1998). "Just in Time Scholarly Monographs". The Journal of Electronic Publishing. Vol. 4. No. 1. Retrieved May 29, 2005, from.
<http://www.press.umich.edu/jep/04-01/bennett.html>

Berg, B. L.(1998). *Qualitative Research Methods for the Social Sciences*. New York: Allyn & Bacon

Bergstrom, T. (2002). "Pricing of Site Licenses". Retrieved May 15, 2004 from
<http://www.econ.ucsb.edu/~tedb/Journals/sitelicense.html>.

Bergstrom, T., Bergstrom, C. T., (2004). "The Costs and Benefits of Library Site Licenses to Academic Journals" Proceedings of the National Academy of Science. 101 (3), pp. 897-902. Postprint available free at: <http://repositories.cdlib.org/postprints/5>

Berelson, B. (1949). *The Library's Public*. New York, Columbia University Press.

Besek, J. (2003). Copyright Issues Relevant to the Creation of a Digital Archive: a Preliminary Assessment (Washington, D.C.: *Council on Library and Information Resources and the Library of Congress*) Retrieved April 1, 2005, from
[http:// www.clir.org/pubs/reports/pub112/contents.html](http://www.clir.org/pubs/reports/pub112/contents.html)

Bethell, T. (1998). *The Noblest Triumph: Property and Prosperity through the Ages*. New York, St. Martin's Press.

Birdsell, D., Muzzio, D., Krane, D., and Cottreau, A. (1998). Web Users are Looking More like America. *The Public Perspective*, April/May, 33-35.

Blackwell Publishing. (2005). "About Blackwell". Blackwell Publishing website. Retrieved April 16, 2005, from. <http://www.blackwellpublishing.com/press/about.asp>

Blackwell Publishing. (2005). "Blackwell Standard License". Blackwell Publishing website. Retrieved April 16, 2005, from. <http://www.blackwellpublishing.com/license/default.asp>

Block, P (1996). *Stewardship*. San Francisco, California: Berett-Koehler Publishers.

Bobbs-Merrill Co. v. Straus 147 F. 15 (2d Cir 1906)

Bollier, D. (2002). *Silent Theft: The Private Plunder of Our Common Wealth*. New York: Routledge.

Bowen, W. G. (2001). "The Academy Library in a Digitized, Commercialized Age: Lessopns From JSTOR." Retrieved May 12, 2005 from <http://www.jstor.org/about/bowen.html>

Branscomb, A. (1994). *Who Owns Information? From Privacy to Public Access*. New York, Basic Books.

Braman, S. (1989). Defining Information: An Approach for Policymakers. *Telecommunications Policy*. 13, 233-242.

Braman, S., Roberts, S. (2003). "Advantage ISP: Terms of Service as Media Law." *New Media & Society*. Thousand Oaks, CA: Sage. Vol. 5 No. 3 P. 422-448

Brindley, L. (2000). *Preservation 2000*: Keynote speech.. An International Conference on the Preservation and Long-Term Accessibility of Digital Materials. York England, December 7-8, 2000. Retrieved April 1, 2005, from http://www.rlg.org/en/page.php?Page_ID=242

Browne, M. (1997). "The Field of Information Policy 1. Fundamental Concepts". *The Journal of Information Science*. Vol. 23. No. 2. 261-275.

Bryan, B. (2000). "Property as Ontology: On Aboriginal and English Understandings of Ownership." *Canadian Journal of Law and Jurisprudence*. Vol. XIII. No. 1. P. 3-31.

Bruntland, G. (ed.), (1987), "Our Common Future: The World Commission on Environment and Development," Report. Oxford, Oxford University Press.

Burk, D., Cohen, J. (2001). "Fair Use Infrastructure for Copyright Management Systems," 15 *Harv. J.L. & Tech.* 41 (2001) (with Dan L. Burk). Retrieved April 8, 2005, from <http://jolt.law.harvard.edu/articles/pdf/15HarvJLTech041.pdf>

Cairns, R. W. (1973). *Hearings before the Subcommittee on Patents, Trademarks, and Copyrights of the Committee on the Judiciary*, United States Senate, Ninety-Third Congress, Pursuant to S. Res. 56 on S. 1361. July 31, and August 1, 1973

California Digital Library. (2005). CDL Model License. CDL website. Retrieved April 17, 2005 from <http://www.cdlib.org/vendors/CDLModelLicense.rtf>

Cambridge University Press. (2005). About the Press. Cambridge University Press website. Retrieved April 19, 2005 from <http://www.cambridge.org/uk/information/introduction/default.htm>

Camp, J., Chien, Y.T. (2000). "The Internet as Public Space: Concepts, Issues and Implications in Public Policy." *Computers and Society*. Vol. 30 No. 3. P. 13-19.

Carnegie Category Definitions (2005). Carnegie Classification Research 1 and 2 Definitions. The Carnegie Foundation for the Advancement of Teaching. Retrieved April 16, 2005, from <http://www.carnegiefoundation.org/Classification/CIHE2000/defNotes/Definitions.htm>

Carnegie Classification 2000. (2005). Summary Information: Table 1. Distribution of Higher Education Institutions by 2000 Carnegie Classification. The Carnegie Foundation for the Advancement of Teaching. Retrieved April 17, 2005, from <http://www.carnegiefoundation.org/Classification/CIHE2000/Tables.htm>

Case, M. (2004). "A Snapshot in Time: ARL Libraries and Electronic Journal Resources." *ARL Bimonthly Report* 235. Association of Research Libraries. Nol. 235. P. 1-10. Retrieved April 1, 2005, from <http://www.arl.org/newsltr/235/snapshot.html>

Cass, R. A. (1999). Copyright, Licensing, and the 'First Screen. *Michigan Telecommunications and Technology Law Review*, Vol. 5, No. 2, 1999

Cate, F. H. (2002). "The Commodification of Information and the Control of Expression." *Amicus Curiae. Journal of the Society for Advanced Legal Studies*. Vol. 43 p. 3-7.

Chan, L. (2004). "Supporting and Enhancing Scholarship in the Digital Age: The Role of Open-Access Institutional Repositories." *Canadian Journal of Communications*. Vol. 29. P. 277-300.

Chen, L. L. (2001). *A Right to Copy and the Copyright: Cultural Identity, Hybridity, and Authenticity*. Ph.D. Dissertation Columbia University. Michigan: UMI.

Clark, C. (1999). "In What Are We Trading? Authors' Rights Publishers' Rights in Traditional and Digital Media." *Learned Publishing*. No. 12, 179-189.

Cline, N. M. (2003). "Stewardship: The Janus Factor." *Journal of Library Administration*. Haworth Information Press, Inc. Vol. 38. No. 1/2 P. 7-17.

Cohen, J. (1996). "A Right to Read Anonymously: A Closer Look at 'Copyright Management' in Cyberspace," 28 *Conn. L. Rev.* 981 (1996). Retrieved April 1, 2005, from: http://www.law.georgetown.edu/faculty/jec/read_anonymously.pdf

Cohen, J (1998). "Lochner in Cyberspace: The New Economic Orthodoxy of 'Rights Management,'" 97 *Mich. L. Rev.* 462 (1998). Retrieved April 2, 2005, from: <http://www.law.georgetown.edu/faculty/jec/Lochner.pdf> .

Cohen, J. (2003). *DRM and Privacy*," 18 *Berkeley Tech. L.J.* 575 (2003). Retrieved April 2, 2005, from <http://www.law.georgetown.edu/faculty/jec/drmandprivacy.pdf>

Cole, C. (1994). Operationalizing the Notion of Information as a Subjective Construct. *Journal of the American Society for Information Science*, 45(7), 465-476.

Cole, D. H., Grossman, P. Z. (2002). "The Meaning of Property "Rights:" Law vs. Economics?" *Land Economics*. Vol. 78. P. 317-330.

Cornell University Libraries. (2000). Cornell University Library Digital Futures Plan: July 2000 to June 2002. Retrieved April 1, 2005, from <http://www.library.cornell.edu/staffweb/CULDigitalFuturesPlan.html>

Council on Library and Information Resources (CLIR), Library of Congress (LC). (2002). *Building a National Strategy for Preservation: Issues in Digital Media Archiving*. Retrieved April 9, 2005, from: <http://www.clir.org/pubs/reports/pub106/contents.html>

Council on Library and Information Resources. (2001). *CLIR/DLF Model License*. Retrieved April 9, 2005, from : <http://www.library.yale.edu/~llicense/modlic.shtml>

Cox, J, (2005). "Model standard licenses for use by publishers, librarians and subscription agents for electronic resources" Licensing Models.com website. Retrieved March 24, 2005 from <http://www.licensingmodels.com/>

Cox, J. Cox, L. (2003). Scholarly Publishing Practice: the ALPSP report on academic journal publishers' policies and practices in online publishing. United Kingdom: Association of Learned Professional Society Publishers

Cox, J. (2000). Model Generic License: Cooperation and Competition. *Serials Review*. Vol. 26 (1): P. 3-9.

Cox, J. (1997). "Publishers, publishing and the Internet: how journal publishing will survive and prosper in the electronic age." *The Electronic Library*. Vol. 15. No. 2. P. 125-131.

Creative Commons. Creative commons is a nonprofit organization that offers flexible copyright licenses for creative works. Creative Commons website. Retrieved May 1, 2005 from <http://creativecommons.org/>

Dan-Cohen, M. (2001) "The Value of Ownership," *Global Jurist Frontiers*: Vol. 1: No. 2, Article 4. Retrieved April 2, 2005, from <http://www.bepress.com/gj/frontiers/vol1/iss2/art4>

Danziger, M. (1995). "Policy Analysis Postmodernized: Some Political and Pedagogical Ramifications." *Policy Studies Journal*. Vol. 23. No. 3. P. 435-450.

Davis, T. L. (1998) "Legal issues: the negotiator's perspective for getting to the heart of the license," in *Virtually Yours: Models for Managing Electronic Resources and Services*. Chicago: American Library Association.

Dellapenna, J. W. (2000). "The Importance of Getting the Names Right: The Myth of Markets for Water." *William and Mary Environmental Law and Policy Review*. Winter 2000. Vol. 25. P. 317-377.

Denzin, N.K., Lincoln, Y.S. (1988). *The Landscape of Qualitative Research*. Thousand Oaks, CA: Sage.

Department of Commerce. (2004). *Digital Economy 2004*. U.S. Department of Commerce, Economics and Statistics Administration.

Digital Library Federation. . Digital Library Federation Survey: Digital Library Policies, Organizations, and Practices, Section II. Digital Library Organization and Finances. Washington, D.C.: Digital Library Federation.

Digital Millennium Copyright Act, 17 U.S.C. Section 1201 et seq

DMCA Summary. (2004). The Digital Millennium Copyright Act of 1998 U.S. Copyright Office Summary. December 1998. Retrieved April 16, 2005, from. <http://www.copyright.gov/legislation/dmca.pdf>

Dowell, J. (1998). Bytes and Pieces: Fragmented Copies, Licensing, and Fair Use in a Digital World. *California Law Review*. 86 Calif. L. Rev. 843.

Duranceau, E. F. (2003). "An Eclipse of the Sun: Acquisitions in the Digital Era." in *E-Serials: Publishers, Libraries, Users, and Standards* (2nd ed.). New York, Haworth Information Press, edited by Wayne Jones

Duranceau, E. F. (1998). "Archiving and Perpetual Access for Web-Based journals: A Look at the Issues and How 5 E-Journal Providers are Addressing Them. *Serials Review*. Vol. 24. No. 2. P. 100- 115.

The Economist (2001). Putting It In Its Place. August 11, pp. 18-20.

Edleman, H. C., Tatum, M. G. (1976). " The Development of Collections in American University Libraries." *College & Research Libraries*. May 1976. P. 222-245.

Eldred v. Ashcroft , Attorney General Supreme Court Certiorari to the United States Court of Appeals for the District Court of Columbia Argued October 9, 2002 and decided January 15 2003. Retrieved January 2004, from <http://www.supremecourtus.gov/opinions/02pdf/01-618.pdf>

Elkin-Koren, N. (2002). "It's All About Control: Rethinking Copyright in the New Information Landscape." In *The Commodification of Information* Edited by Neil Netanel and Niva Elkin-Koren. Kluwer Academic Publishers.

Elkin-Koren, N., Netanel, N. (2002). *The Commodification of Information*. Kluwer Academic Publishers.

Elkin-Koren, N. (2000). "The Privatization of Information Policy" *Ethics and Information Technology*. Vol 2. 201-209. Kluwer Academic Publishers.

Einhorn, M. A. (2003). Digital Rights Management, Licensing and Privacy. Retrieved April 2, 2005, from : <http://ssrn.com/abstract=332720>

Eisenstein, E. (1979). *The Printing Press As an Agent of Change: Communities and Cultural Transformations in Early-modern Europe. Volumes I and II.* Cambridge, U.K: Cambridge University Press.

Emerson, R. M. (1995). *Writing Ethnographic Field Notes.* Chicago: University of Chicago Press.

Endeavor Information Systems. (2005) Meridian Electronic Resources Management Retrieved April 9, 2005, from :
<http://www.endinforsys.com/prods.meridianbrochure.pdf>

English, R., Bridegam, W. (1999). A Brief History of the Oberlin Group. Retrieved April 9, 2005, from:
<http://dewey.willamette.edu/publications/movtyp/spring99/english.html>

EU Developments in IP, IT & Telecommunications Law. *Computer Law & Security Report.* Vol. 18, Issue 5. Oct. 2002. P. 362-365.

Evans, G. E. (1999). "Opportunity Costs of Globalizing Information Licenses: Embedding Consumer Rights within the Legislative Framework for Information Contracts." *Fordham Intellectual Property, Media & Entertainment Law Journal.* 10 Fordham Intell. Prop. Media & Ent. L.J. 267.

ExLibris. Verde: Electronic Resources Management System. Retrieved April 15, 2005, from <http://www.exlibrisgroup.com/verde.htm>

Feist Publications, Inc. V. Rural Telephone Service Co., 499 U.S. 340 (1991)

Finneran, K. (2000). Let Them Eat Pixels. *Issues in Science and Technology*, 16, 30.

First Amendment, the Bill of Rights to the U.S. Constitution, 1791

Fisher, W. W. (1999) "The Growth of Intellectual Property: A History of the Ownership of Ideas in the United States." *Eigentumskulturen im Vergleich* P. 265-91
Vandenhoeck & Ruprecht

Fisher, W. W. (2001). "Theories of Intellectual Property." In *New Essays in Legal and Political Theory of Property*. Edited by Stephen R. Muzer. Cambridge University Press. P.

Fisher, W. W. (1998) "Property and Contract on the Internet." *Chicago –Kent Law Review*. Vol. P. 1203-

Fowler, F. J. (2002). *Survey Research Methods*. Thousand Oaks: Sage Publications, Inc California.

Folsom v. Marsh, 9 F. Cas. (No. 4901) 342 (C.C.D. Mass 1841).

Friedlander, Amy. 2002. *Dimensions and Use of the Scholarly Information Environment. Introduction to a Data Set Assembled by the Digital Library Federation and Outsell, Inc.* Washington, D.C.: Digital Library Federation and Council on Library

and Information Resources. Retrieved April 1, 2005, from
<http://www.clir.org/pubs/abstract/pub110abst.html>

Freedman, A. (2002). *Computer Glossary*. New York: Prentice-Hall.

Gader-Schafran, R. (2004). *Intellectual Property Law Dictionary*. New York: Law Journal Press.

Gassaway, L. (2003). "Libraries, Users, and the Problems of Authorship in the Digital Age." *DePaul Law Review*. 52. DePaul L. Rev. 1193.

Gillespie, K. H. (2003). "Rumination: The Concept of Stewardship Applied to Higher Education." *Innovative Higher Education*. Vol 27. No. 3. Spring 2003. P. 147-149

Ginsburg, J. A. (2002). "How Copyright Got a Bad Name for Itself." *Columbia Journal of Law and the Arts*, Vol. 26, No. 1, 2002. Retrieved April 9, 2005, from
<http://ssrn.com/abstract=342182> .

Giroux, H. (1998). Critical Theory and the politics of culture and voice: Rethinking the discourse of educational research. In R. Sherman & R. Webb (Eds.), *Qualitative Research in Education: Focus and methods* (pp 190-210). New York: Falmer.

Google Press Center. (2004). "Google Checks out Library Books." Retrieved May 1, 2005, from http://www.google.com/press/pressrel/print_library.html

Gorman, M. (2002). *The Value and Values of Libraries*. A Talk Given at the "Celebration of Libraries" Sheldonian Theatre. Oxford, England, September 20, 2002.

Gorman, M. (2000). *Our Enduring Values: Librarianship in the 21st Century*. Chicago, IL: ALA Editions.

Greenstein, D. (2004). "Library Stewardship in a Networked Age" In *Access in Future Tense*. Washington, D.C.: Council on Library Resources.

Guibault, L. M.C.R. (2002). *Copyright Limitations and Contracts: An Analysis of the Contractual Overridability of Limitations on Copyright*. London: Kluwer Law International

Haank, D. (2001). "Is electronic publishing being used in the best interests of science?: The Publisher's view". Derk Haank, Chief Executive Officer, Elsevier Science. Second ICSU-UNESCO International Conference on Electronic Publishing in Science held in association with CODATA, IFLA and ICSTI at UNESCO House, Paris 20-23 February 2001 Retrieved May 20, 2005 from <http://modular.fas.harvard.edu/copyright/DHaankSpeech.txt>

Haavisto, T. (2002). Libraries and Licensing in Central and Eastern Europe: Preliminary report by Tuula Haavisto, Project Manager. Central and Eastern European Licensing Information Platform (CELIP).

Hamlin, A. T. (1981). *The University Library in the United States: Its Origins and Development*. Philadelphia, PA: University of Pennsylvania Press.

Hansmann, H., Reinier, K. (2002). "Property, Contract and Verification: The Numerous Clauses Problem of Divisibility of Rights." *The Journal of Legal Studies*. Vol. 31. P. 373-420.

Hardy, T (1996). "The Ancient Doctrine of Trespass to Web Sites." *J. Online L.* art. 7, par 1.

Hardy, T. (2001). The Copyrightability of New Works of Authorship: "XML Schemas" as an Example. *Houston Law Review*. 38 Hous. L. Rev. 855.

Harrassowitz Bookseller and Subscription Agent. Website. Retrieved August 2, 2005, from http://www.harrassowitz.de/publ_services.html

Hawkins, B. L., Battin, P. (1998). *The Mirage of Continuity: Reconfiguring Academic Information Resources for the 21st Century*. Washington, DC: The Council of Library and Information Resources.

Heller, M. A. (2001). "Contemporary Legal Scholarship: Achievements and Prospects: Contracts and Property Law: The Dynamic Analytics of Property Law." *Theoretical Inquiries in Law*. Vol. 2. P. 79-95.

Heller, M. A. (2000). "Symposium: Critical Approaches to Property Institutions: Three faces of Private Property." *Oregon Law Review*. Summer 2000. Vol. 79. P. 417-434

Hernon, P. (1996). *Service Quality in Academic Libraries*. Norwood, N.J.: Ablex

Hess, C. and Ostrom, E. (2001). Artifacts, Facilities, and Content: Information as a Common Pool Resource. Paper presented at the "Conference on the Public Domain," Duke Law School, Durham, N.C., November 9-11.

Hirtle, P. B. (2003). "Digital Preservation and Copyright". In: *Copyright and Fair Use, Stanford University Libraries*, November 2003. Retrieved April 1, 2005, from http://fairuse.stanford.edu/commentary_and_analysis/2003_11_hirtle.html

Hoffman, D.L., Kalsbeek, W.D., and Novak, T.P. (1996). Internet and Web use in the U.S. *Communications of the ACM*. Vol. 39 No. (12), December, 36-46.

Horrigan, J. B., Rainie, L. (2002). Counting the Internet. Pew Internet & American Life Project. Washington, D.C.

Horwitz, E. , Weinberg, S. M. (2000). Advanced Licensing Agreements for the New Economy 2001. New York, Practicing Law Institute.

Hughes, J. (2003). "Fair Use Across Time." *UCLA Law Review*. Vol 50. P. 775-800.

IMLS Questionnaire. (2001). State of Preservation.

Innovative Interfaces. Electronic Resources Management System. Retrieved April 15, 2005, from <http://www.iii.com/mill/digital.shtml#erm>.

International Federation of Library Associates and Institutions. (IFLA). IFLA Committee on Copyright and other Legal Matters. Licensing Principles (2001). *IFLANET*. IFLA Publications. Retrieved April 1, 2005, from <http://www.ifla.org/V/ebpb/copy.htm>

International Research on Permanent Authentic Records in Electronic Systems.
(InterPARES 2). Terminology Database. Retrieved April 12, 2005 from
<http://www.interpares.org>

Isaac, S., Michael, W.B., Michael, M.. (1995). *Handbook in Research and Evaluation: A Collection of Principles, Methods, and Strategies Useful in the Planning, Design, and Evaluation of Studies in Education and the Behavioral Sciences*. San Diego: CA: EDITS Publishers.

Jewell, T. D. (2001). *Selection and Presentation of Commercially Available Electronic Resources: Issues and Practices*. Washington D.C: Digital Library Federation and the Council on Library Information Resources.

JSTOR. (2005). JSTOR Description. Retrieved, August 24, 2005 from
<http://www.jstor.org/about/desc.html>

John Wiley & Sons. (2005). Wiley InterScience Basic Access License Agreement.
Retrieved May 1, 2005 from
http://www3.interscience.wiley.com/spreadsheet_documents/sample_ballicense.pdf

Joint Information Systems Committee & Publishers Association Working Party 'Model License' Between UK Universities and Publishers. (1999). Model License Retrieved April 2, 2005, from <http://www.ukoln.ac.uk/services/elib/papers/pa/intro.html>

Jones, J. W. (1947). "Forms of Ownership." Vol. 22 *Tulane Law Review*. P. 82-93.

Kahle v. Ashcroft 537 U.S. 186, 221 (2003).

Karjala, D.S. (1997). Federal Preemption of Shrinkwrap and On-Line Licenses. University of Dayton Law Review. Vol. 22. *U. Dayton L. Rev.* P. 511.

Kassab, Sami. (2003). "Taylor & Francis". *BMP Paribas*. Equity Research.

Kaser, D. (1980). "Collection Building in American Universities". In *University Library History* Edited by James Thompson. New York:m K.G. Saur.

Kaye, L. (1999). "Owning and Licensing Content: Key Issues in the Electronic Environment": *Journal of Information Science*. Vol. 25. No. 1. P. 7-14

Kenney, A., Stam, D. (2002) *The State of Preservation Programs in American College and Research Libraries: Building a Common Understanding and Action Agenda*. Retrieved August 27, 2005, from <http://www.clir.org/pubs/reports/pub111/contents.html>

Kerlinger, F. N. (1986). *Foundations of Behavioral Research*. Fort Worth: Texas, Harcourt Brace Jovanovich .

Kerr, C. (1963). *The Uses of the University*. New York: Harper & Row.

Keystone Principles. (1999). The Keystone Principles. ARL/OCLC Strategic Forum held in Keystone, Colorado September 1999. Retrieved April 10, 2005, from <http://www.arl.org/training/keystone.html>

Kincheloe, J. (1991) *Teachers as Researchers: Qualitative paths to empowerment*. London: Falmer.

King, D. W. (2004). "Some Thoughts on Academic Library Collections." *The Journal of Academic Librarianship*, Vol. 30. No. 4. P. 261-264

Knight, P. T. (2002). *Small-scale Research*. London: Sage Publication.

Kreiss, R. A. (1995) "Accessibility and Commercialization in Copyright Theory." *UCLA Law Review*. 43 UCLA L. Rev. 1.

Kyrillidou, M. (2002). "State of Preservation 2000-01" Retrieved April 1, 2005, from http://www.arl.org/stats/pres/imls/ala_0602_files/frame.htm

Kyrillidou, M., Heath, F. M. (2001). "The New Culture of Assessment in Academic Libraries: Measuring Library Service Quality" Preprint version for Spring 2001 *Library Trends*. Retrieved April 1, 2005, from <http://www.arl.org/libqual/events/oct2000msq/ltintro2001.html>

Lamb, C. (2004) *Open Access Publishing Models: Opportunity or Threat to Scholarly and Academic Publishers. Executive Summary*. Shore Communications. Retrieved April 2, 2005, from: http://www.shore.com/research/current/reports/SCI200401openaccess_sum.pdf

Lamb, C. (2004). "Open Access Publishing Models: Opportunity or Threat to Scholarly and Academic Publishers?" *Learned Publishing*. Vol. 17. No. 2P. 143-150.

Layder, D. (1993). *New Strategies in Social Research: An Introduction and Guide*. Cambridge, U.K.: Polity Press.

Law, D. (1998). "Access versus Holdings; the Paradox of the Internet." In Proceeding of the Second European Conference on Research and Advanced Technology for Digital Libraries (ECDL) 1998, Lecture Notes in Computer Science. Edited by C. Nikolaou and C. Stephanidis. Berlin: Springer-Verlag, 1998

Lee v. Runge, 404 U.S. 887 (1971)

Leigh, R. D. (1950). *The Public Library in the United States*. New York: Columbia University Press.

Lemley, M. (1995). "Intellectual Property and Shrinkwrap Licenses," *Southern California Law Review*. Vol. 68. P. 1239-

Lemley, M. (1999). Beyond Preemption: The Federal Law and Policy of Intellectual Property Licensing. *California Law Review*, Vol. 87, p. 111, 1999

Lemley, M., Schultz, J., Mulligan, D. (2002). Brief of *Amicus Curiae* The Internet Archive in Support of Petitioners. In the Supreme Court of the United States in the matter of Eric Eldred et al v. John D. Ashcroft.

Lessig, L. (1999a). *Code and Other Laws of Cyberspace*. New York, Basic Books.

Lessig, L. (1999b). Code and the Commons. Keynote speech given at the conference *Media Convergence*, Fordham Law School, New York, February 9. Retrieved February 9, 2005 from, <http://cyber.law.harvard.edu/works/lessig/Fordham.pdf>

Lessig, L. (2001). *The Future of Ideas: The Fate of the Commons in a Connected World*. New York, Random House.

Library of Congress. (1993). *CONSER Cataloging Manual (CCM)* . *Library of Congress CCM*. Definition of Commercial Publisher. Library of Congress. Retrieved September 28, 2005, from <http://www.itsmarc.com/crs/man11573.htm>. .

Lipinski, T. A. (1998). Information Ownership and Control. *Annual Review of Information Science and Technology (ARIST)*, 33, 3-38.

Lipinski, T. A. (1999a). The Commodification of Information and Extension of Proprietary Rights into the Public Domain: Recent legal (case and other) developments in the United States. *Journal of Business Ethics*, 22, 63-80.

Lipinski, T. A. (2000). The Developing Legal Infrastructure and the Globalization of Information: Constructing a Framework for Critical Choices in the New Millennium Internet -- Character, Content and Confusion. 6 *Richmond Journal of Law and Technology*, 19, Winter. Retrieved April 2, 2005, from :
<http://law.richmond.edu/jolt/v6i4/article2.html>

Licensing Act of 1662, 13 & 14 Car. II, c. 33 Section X (Eng).

Litman, J.: 1994. "Mickey Mouse Emeritus: Character Protection and the Public Domain" *University of Miami Entertainment & Sports Law Review*, vol. 11, 429-435.

Litman, J. (1997). Reforming Copyright Law in Copyright's Image. *Dayton law Review*. 22 *Dayton L. Rev.* 587.

Litman, J. (2001). *Digital Copyright*. Amherst, NY: Prometheus Books.

Lugg, R., Fischer, R. (2003). Agents in Place: Intermediaries in E-Journal Management. A White Paper Prepared with support from Harrassowitz. Retrieved April 10, 2005, from <http://www.ebookmap.net/pdfs/AgentsInPlace.pdf>

Lyman, P, Varian, H. (2003). "How Much Information," 2003. Retrieved April 2, 2005, from <http://www.sims.berkeley.edu/how-much-info-2003>

Lynch, C. A. (2003). The Coming Crisis in Preserving Our Digital Cultural Heritage. *Journal of Library Administration*. The Haworth Information Press. Vol 38. No. 3/4 P. 149-161

Lynch, B. (1995). *Information Technology and the Remaking of the University Library*. San Francisco, CA: Jossey-Bass Publishers

Massachusetts Institute of Technology Press. (2005). "About MIT Press." MIT Press website. Retrieved April 18, 2005 from <http://mitpress.mit.edu/mitpress/history/default.asp>

McLaren, P. (1986). *Schooling as a Ritual Performance: Toward a Political Economy of Educational Symbols and Gestures*. London: Routledge & Kegan Paul.

Maher, W. (2001) "Between Authors and Users: Archivists in the Copyright Vise," *Archival Issues* 26 (2001): 63-75.

McCreadie, M., and Rice, R.E. (1999). Trends in Analyzing Access to Information. Part I: Cross-Disciplinary Conceptualizations of Access. *Information Processing & Management*, 35(1), 45-76.

Meadow, C.T. and Yuan, W. (1997). Measuring the Impact of Information: Defining the Concepts. *Information Processing & Management*, 33(6), 697-714.

Menell, p. S., Dwyer, J. P. (2002). "Reunifying Property." Retrieved April 1, 2005, from <http://ssrn.com/abstract-id=328581>

Merton, R.K. (1988). The Matthew Effect in Science, II: Cumulative Advantage and the Symbolism of Intellectual Property. *Isis*, 79, 606-623.

Moore, R. Baru, C, Rajasekar, A., Ludaescher, Marciano, R., Wan, M, Schroeder, W, Gupta, A. (2000) Collection-Based Persistent Digital Archives - Part 1. *D-Lib*. Vol 6. No. 3. Retrieved. April 10, 2005, from .
<http://www.dlib.org/dlib/march00/moore/03moore-pt1.html>

Morgan Stanley. Equity Research. Europe. *Industry Overview: Scientific Publishing: Knowledge is Power*. Morgan Stanley & Co. International, New York: September 30, 2002.

Morris, S. (2000). "Archiving Electronic Publications: What are the Problems and Who Should Solve Them?" *Serials Review*, 26(3), 64-68.

Morrison, H. (2004). Email to LibLicense dated 13 September 2004. Subject line: A Case for Just in Case. Retrieved May 29, 2005, from <http://www.library.yale.edu/~llicense/List/Archives/0408/msg00192.html>

Mosco, V. (2000, February). *Public Policy and The Information Highway: Access, Equity and Universality*. A Report to The National Library Of Canada, Contract no. 70071-9-5107. Retrieved April 8, 2005, from <http://www.queensu.ca/sociology/Faculty/Mosco/vmpubpol.htm>

Muir, A. (2004). "Digital Preservation: Awareness, Responsibility and Rights Issues." *Journal of Information Science*. Vol 30. No. 1. P. 73-92.

Muir, A. (2003). Copyright and Licensing For Digital Preservation. *Library and Information Update*. Retrieved April 2, 2005, from <http://www.cilip.org.uk/update/issues/jun03/article2june.html>

National Center for Education Statistics. (NCES) "Academic Library Survey. FY 2002 Questionnaire." Washington, D.C.: Institute of Education Sciences, U.S. Department

of Education. Retrieved August 23, 2005, from
<http://nces.ed.gov/surveys/libraries/AcaRRSurvDesign.asp#Why>

National Education Association (NEA) Policy Statement on Intellectual Freedom.
(1985). Retrieved April 2, 2005, from <http://www2.nea.org/he/policy1.html>

National Institutes of Health (NIH) Public Access. (2005) "Policy on Enhancing Public
Access to Archived Publications Resulting From NIH-Funded Research". National
Institutes of Health. Retrieved May 20, 2005, from
<http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-022.html>

National Research Council, Computer Science and Telecommunications Board. (2000).
The Digital Dilemma: Intellectual Property in the Information Age. Washington, D.C.:
National Academy Press.

National Science Board. (2005). *Long Lived Digital Data Collections: Enabling
Research and Education in the 21st Century*. National Science Board. Washington, DC.
Retrieved April 30, 2005 from
http://gladiator.ncsa.uiuc.edu/PDFs/nsf/LLDDC_draftreport.pdf

NECS Data File. (2002). Integrated Postsecondary Education Data System [IPEDS]
Academic Library Survey Data File. Definition of an Academic Library. Retrieved
May 27, 2002, from <http://nces.ed.gov/pubs2002/2002320.PDF>

North East Research Libraries (NERL) Licensing Guidelines and NERL Generic
License. Retrieved January 5, 2005, from
<http://www.library.yale.edu/NERLpublic/licensingprinciples.html>

Oakley, R. L. (1990). Copyright and Preservation: A Serious Problem in Need of a Thoughtful Solution. Washington, D.C.: Council on Library Resources (CLIR).

Office of Fair Trading. (2002). *The Market for Scientific, technical and Medical Journals: A Statement by the OFT*. OFT Report 396. Crown Copyright. Retrieved October 31, 2004, from <http://www.offt.gov.uk/NR/rdonlyres/A56C7602-C0BD-428D-BED2-36784363243B/0/oft396.pdf>

Organisation of Economic Co-Operation and Development. [OECD]. (2002) *OECD Technology Outlook. 2004*. P. 1-13. May 1, 2005, Retrieved March 24, 2005, from <http://www.oecd.org/dataoecd/63/60/1933354.pdf>

Olson, K. K. (2000). *Farewell to Fair Use? Contracts, Copyright, and the First Amendment Values Online*. Dissertation Ann Arbor, Michigan: UMI-ProQuest

O'Mahony, M.M., Muir, A. (2003). Copyright and Licensing for Digital Preservation Project Discussion Paper for First Advisory Board Meeting. December 17, 2002. Updated March 21, 2003. Retrieved April 14, 2005, from http://www.lboro.ac.uk/departments/ls/disresearch/CLDP/Project_reports.htm

Online Computing Dictionary. Definition of Persistence. Retrieved August 23, 2005 from <http://www.instantweb.com/foldoc/foldoc.cgi?query=persistent&action=Search>

Overman, E. S, Cahill, A. G. (1990). "Information Policy: A Study of Values in the Policy Process." *Policy Studies Review*. Vol. 9. No. 4. P. 803-818.

Owen, L. (1991). *Selling Rights: A Publisher's Guide to Success*. London: Blueprint an Imprint of Chapman & Hall.

Oxford University Press. *Oxford English Dictionary*. (1989). Second Edition. Oxford, England. Oxford University Press

Oxford University Press. *Oxford English Dictionary Online* (2005). Oxford, England. Oxford University Press. Retrieved April 1, 2005, from <http://www.oed.com/>

Patterson, L.R. (2002). The DMCA: A Modern version of the Licensing Act of 1662. *Journal of Intellectual Property Law*. 10 J. Intell. Prop. L. 33.

Patterson, L. R., (1998) "The Worst Intellectual Property Opinion Ever Written: Folsom v. Marsh and Its Legacy." *The Journal of International Property Law*. 5. J. Intell. Prop. L. 431.

Patterson, L. R., Linberg, S.W. (1991). *The Nature of Copyright: A Law of User's Rights*. Athens, Georgia: University of Georgia Press.

Patton, M., Q. (2002). *Qualitative Research & Evaluation Methods*. 3rd Edition. Thousand Oaks, CA: Sage Publications.

Pelikan, J. (1992). *The Idea of the University: A Reexamination*. New Haven: Yale University Press.

Peterson, R. A. (2000). *Constructing Effective Questionnaires*. Thousand Oaks: Sage.

Poltorak, A. I., Lerner, P. J. (2004). *Essentials of Licensing Intellectual Property*. John Wiley & Sons, 2004.

Potter, J, & Wetherell, M. (1994). Analyzing Discourse. In A. Bryman & R. G. Burgess (Eds.), *Analyzing Qualitative Data* (pp. 47-66) London: Routledge.

Professional Publishing Markets: Forecasts and Analysis 2004-2005. (2004). Executive Summary. Simba Information: Stamford, CT. Bowker.

Public Access to Science Act. H.R. 2613. *Public Access to Science Act*. Introduced June 26, 2003 by Rep. Sabo. Referred to the Subcommittee on Courts, the Internet, and Intellectual Property, September 4, 2003.

Prodhon, P. *What is Property?* Edited and Translated by Donald R. Kelly and Bonnie Smith. 1994. Cambridge, United Kingdom: Cambridge University Press.

Publishing for Professional Markets. (2004) Publishing for Professional Markets: Forecasts and Analysis 2004-2005. Simba Communications.

Queau, P. (2000, January). Defining The World's Public Property: Who Owns Knowledge? *Le Monde Diplomatique*. Retrieved April 5, 2005, from http://mondediplo.com/2000/01/14queau?var_recherche=who+owns+knowledge

Radin, M. J. (1996). *Contested Commonodites*. Cambridge, Massachusetts: Harvard University Press.

Radin, M. J. (1999). "Humans, Computers, and Binding Commitment." Addison C. Harris Lecture, October 26, 1999, published in *Indiana Law Journal*. Retrieved May 1, 2005 from <http://www.law.stanford.edu/faculty/radin/indiana.html>.

Radin, M.J. (2000). "Humans, Computers, and Binding Commitment". *Indiana Law Journal*. 75. Ind. L.J. 1125.

Radin, M.J. (2002). "Information Tangibility". *Stanford Public Law and Legal Theory Research Paper Series*. Research Paper No. 48. Stanford, CA: Stanford Law School.

Radin, M. J. (2001). "Online Standardization and the Integration of Text and Machine". *Fordham Law Review*. 70 *Fordham L. Rev.* 101.

Reed Elsevier Group. Elsevier. Elsevier Science Direct Web Editions License Agreement. Retrieved June 2, 2005 from <http://www.web-editions.com/license.html>

Reese, R. A. (2003). "The First Sale Rule Doctrine in the Era of Digital Networks" 44 *Boston College Law Review*. 577.

Report of the Task Force on Archiving of Digital Information. (1996). *Preserving Digital Information*. Commissioned by The Commission on Preservation and Access and the Research Libraries Group.

Research Library Group (RLG). (1999). Digital Library Federation (DLF) "Task Force on Policy and Practice for Long-term Retention of Digital Materials": Retrieved April 2, 2005, from, www.rlg.org/preserv/diglgdlf99.html from the RLG-DLF Project Website.

Research Library Group. (RLG). (1999). Member Briefing. "RLG-DLF Task Force Addresses Digital Information Retention". Retrieved April 2, 2005 from http://www.rlg.org/en/page.php?Page_ID=298

Research Library Group (RLG). (2002). *Trusted Digital Repositories: Attributes and Responsibilities. An RLG-OCLC Report*. Mountain View, California. Retrieved April 1, 2005, from, <http://www.rlg.org/longterm/repositories.pdf>

Rice, D.A. Legal-Technological Regulation of Information Access.

Rice, D. A. (1992). Public Goods, Private Contract and Public Policy: Federal preemption of Software License Prohibitions Against Reverse Engineering. *University of Pittsburgh Law Review*. 53 U.Pitt L. Rev. 543.

Rifkin, J. (2000). *The Age of Access: The New Culture of Hypercapitalism, Where all of Life is a Paid-for Experience*. New York: Putnam.

Roe, E. (1994). *Narrative Policy Analysis: Theory and Practice*. Durham, North Carolina: Duke University Press.

Rose, Carol Marguerite, "Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age" (February 2002). Yale Law School, Public Law Research Paper No. 10 . Retrieved January 29, 2004, from <http://ssrn.com/abstract=293142>

Rose, C. M. (1998). "The Several Futures of Property. Essay." *Minnesota Law Review*.

Rose, M. (1993). *Authors and Owners: the Invention of Copyright*. Cambridge, Massachusetts: Harvard University Press.

Samuelson, P. (2003). "Digital Rights Management {and, or, vs.} the Law", Vol. 46, no. 4, April 2003. Retrieved April 3, 2005, from http://www.sims.berkeley.edu/~pam/papers/acm_v46_p41.pdf

Samuelson, P. (2002). "Mapping the Digital Public Domain: Threats and Opportunities," *66 Law & Contemp. Probs.* (forthcoming 2002), portions republished in Margaret Jane Radin, John Rothchild & Gregory Silverman, *Internet Commerce: The Emerging Legal Framework*

Samuelson, P. (2001) "Digital Information Digital Networks and the Public Domain" from Conference on the Public Domain Held at Duke University Law School November 2001. Retrieved March 26, 2005, from <http://www.law.duke.edu/pd/papers/samuelson.pdf>

Samuelson, P. (1999) "Copyright, Commodification, and Censorship: Past as Prologue—But to What Future? In *The Commodification of Information* Edited by Neil Netanel and Niva Elkin-Koren. Kluwer Academic Publishers

Samuelson, P. (1998). "Does Information Really Have to Be Licensed?," *41 Comm. ACM* 15 (Sept. 1998), republished in *Journal of Electronic Publishing*, Retrieved March 29, 2005, from <http://www.press.umich.edu/jep/04-03/samuelson.html> and in

Intellectual Property In The Age Of Universal Access (ACM Press 1999); and in Internet And E-Commerce Law: Cases And Materials (Anne Fitzgerald & Brian Fitzgerald, eds., Prospect Media, 2001)

Samuelson, P. (1996). The Copyright Grab. *Wired*. January 1996. 134-136.

Samuelson, P. (1994). The NII Intellectual Property Report: National Information Infrastructure. *Communications of the ACM*, 37(12), December, 21-27.

Samuelson, P. (1991). Digital Media and the Law. *Communications of the ACM*, Vol. 34. No. 10.

Samuelson, P. (1989). "Information As Property: Do Ruckelshaus and Carpenter Signal a Changing Direction in the Law?." Vol. 38 *Cath. U. L. Rev.* P. 365.

Sax, J. (1970). The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention. *Michigan Law Review*, 68, 471-565.

Schiller, H.I. and Schiller, A.R. (1989). *Libraries, Public Access to Information and Commerce*.

Schiller, H.I. (1983). The Privatization of Information. In E. Wartella and D.C. Whitney (Eds.), *Mass Communication Yearbook*, 4, 537-568. Beverly Hills, CA: Sage.

Schoenfeld, R. C. (2003). *JSTOR: A History*. Princeton, N.J.: Princeton University Press.

Scholarly Societies Project. (2005). The Scholarly Societies Project website. Retrieved March 28, 2005 from <http://www.lib.uwaterloo.ca/society/overview.html>

Schonlau, M., R. D. J. Fricher, et al. (2001). *Conducting Research Surveys via E-mail and the Web*. Santa Monica, CA: RAND Publications.

Serageldin, I. (1999). Cultural Heritage as Public Good: Economic analysis applied to historic cities. In Kaul, I., Grunberg, I., and Stern, M.A. (Eds.), *Global Public Goods: International Cooperation in the 21st Century*, pp. 240-263. Oxford: Oxford University Press.

Shapiro, C., and Varian, H. R. (1997). *U.S. Government Information Policy*. Berkeley, CA: University of California. Retrieved April 8, 2005, from <http://www.sims.berkeley.edu/~hal/Papers/policy/policy.html>

Shemberg, M., Grossman, C.(1999) "Electronic Journals in Academic Libraries: A Comparison of ARL and Non-ARL Libraries." *Library Hi Tech* 17, no. 1 (1999): 26-45.

Shores, L. (1934). *Origins of the American Colleges Library. 1638-1800*. Dissertation. Nashville, Tennessee: George Peabody College for Teachers

Shuff, J. D., Holtz, G. T. "Copyright Tensions in a Digital Age." *Akron Law Review*. 34 Akron L. Rev. 555.

Smith, A. (1999). *The Future of the Past: Preservation in America's Research Libraries*. Washington, D.C. Council on Library and Information Resources.

Soete, G. J., Davis, T. (1999). *Managing the Licensing of Electronic Products: A Spec Kit* compiled by George J. Soete and Trisha Davis. Washington, D.C. Association of Research Libraries.

Soy, S. (2000). "Will Permanence Exist in the Digital Age: Introduction to Preservation for Libraries and Archives LIS 392P1. University of Texas, Austin. Retrieved February 2005, from <http://www.gslis.utexas.edu/~ssoy/pubs/permanence.htm>

Spar, D.L. (1999). The Public Face of Cyberspace. In Kaul, I., Grunberg, I., and Stern, M.A. (Eds.), *Global Public Goods: International Cooperation in the 21st Century* (pp. 344-363). Oxford: Oxford University Press.

Statute of Anne. (1710). *A Bill for the Encouragement of Learning and for Securing the Properties of Copies of Books to the Rightful Owners thereof*.

Stiglitz, J.E. (1999). Knowledge as a Global Public Good. In Kaul, I., Grunberg, I., and Stern, M.A. (Eds.), *Global Public Goods: International Cooperation in the 21st Century* (pp. 308-325). Oxford: Oxford University Press.

Sullivan, D. (2005). "Nielsen NetRatings Search Engine Ratings". *Search Engine Watch*. Retrieved August, 22, 2005 from <http://searchenginewatch.com/reports/article.php/2156451>

Sweezy v. New Hampshire, 354 U.S. 234, 263 (1957)

Taylor & Francis . (2005). Taylor & Francis Terms and Conditions of Access 2005. Taylor & Francis Group website. Retrieved February 2, 2005 from <http://www.tandf.co.uk/journals/pdf/terms.pdf>.

Taylor & Francis . (2003). Taylor & Francis Studies in Women and Gender Abstracts License 2003. Taylor & Francis Group.

Taylor & Francis . (2001). Taylor & Francis Online Journals License 2001. Taylor & Francis Group.

Thibodeau, K. (2002). "Overview of Technological Approaches to Digital Preservation". In *The State of Digital Preservation: An International Perspective*. Conference Proceedings. Documentation Abstracts, Inc. Institutes for Information Science. April 24-25, 2002. Washington; DC, Council of Library Information Resources. (CLIR)

Thibodeau, K. (2001). Building the Archives of the Future. *D-Lib*. Vol. 7. No. 2. Retrieved, March 2005, from <http://www.dlib.org/dlib/february01/thibodeau/02thibodeau.html>

Thomson Corporation. (1999). Thomson ISI Databases Internet License Agreement. Retrieved June 1, 2003 from <http://orpheus-1.ucsd.edu/acq/license/cdlisi.pdf>

Thompson, J. S. (1980). *University Library History: An International Review*. New York: K.G. Saur.

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2004). Archives and Human Rights. Retrieved May 12, 2005 from http://portal.unesco.org/shs/en/ev.php-URL_ID=7086&URL_DO=DO_TOPIC&URL_SECTION=201.html

United Nations. Article 19. Declaration of Human Rights. (1948).

United Nations. Resolution 34. Draft Chapter on Digital Heritage. (2002). Retrieved May 1, 2005 from <http://unesdoc.unesco.org/images/0013/001311/131178e.pdf>

United States Constitution. Article 1, Section 8. Clause 8 (1789).

United States Copyright Act. Retrieved January 2004, from <http://www.law.cornell.edu/uscode/17/>

University Library Group (ULG) website. Retrieved August 23, 2005, from <http://www.lehigh.edu/~inulg/>

University of California. Office of the President. (2003). *Collection Management Initiative. Preliminary Findings from the Journal Use and User Preference Studies*. Retrieved April 10, 2005 from http://www.ucop.edu/cmi/docs/cmi_prelim_findings_072103.pdf

University of California. Office of the President. (2004). *Collection Management Initiative. Collection Management Strategies in a Digital Environment: A Project of*

the Collection Management Initiative of the University of California Libraries.
Retrieved April 20, 2005 from <http://www.ucop.edu/cmi/finalreport/cmireportfinal.pdf>

University of Chicago Press. (2005) Website. Retrieved August 23, 2005, from
<http://www.journals.uchicago.edu/>

University of Michigan News Service. (2005). "Google/U-M Project Opens The Way to Universal Access To Information." Ann Arbor, Michigan, Regents of University of Michigan. Retrieved February, 12, 2005, from
<http://www.umich.edu/news/index.html?Releases/2004/Dec04/library/index>

Vaidhyananthan, S. (1999). *Unoriginal Sins: Copyright and American Culture*. Dissertation. Ann Arbor: Michigan: UMI ProQuest.

Van Orsdel, L, Born, K. (2004). Periodical Price Survey 2004: Closing In on Open Access. Library Journal. Retrieved April 4, 2005, from
<http://www.libraryjournal.com/index.asp?layout=articlePrint&articleID=CA408358>

Varian, H.R., Shapiro, C. (1999). *Information Rules: A Strategic Guide to the Network Economy*. Boston, MA: Harvard Business School Press.

Varian, H. R.. Lyman, P. (2003). *How Much Information? 2003*. Retrieved June 13, 2005 from <http://www.sims.berkeley.edu/research/projects/how-much-info-2003/>

Waters, D. (2004). Preserving the Scholarly Commons in the Digital Era. Preliminary Draft. Workshop on Scholarly Communications as a Commons. Indiana University. Bloomington, Indiana. March 30-April 2, 2004.

Waters, D. et al (2005). Urgent Action Needed to Preserve Scholarly Electronic Journals. ARL Press Release. Retrieved October 28, 2005 from http://www.arl.org/osc/EjournalPreservation_Final.pdf

Merriam-Webster Online (2005). Merriam-Webster Online. Retrieved June 18, 2005 from <http://www.m-w.com/>

Weiner, S. G. (2005). "The History of Academic Libraries in the United States: A Review of the Literature." *Library Philosophy and Practice*. Vol. 7. No. 2.

Weiner, R. J. (2002). "Technology and Legal Practice Symposium Issue:Evaluating Electronic Resources: Criteria Used By Librarians." *Syracuse Law Review*. 52
Syracuse L. Rev. 1207

Wiley, L. (2004). "License to Deny." *Interlibrary Lending and Document Supply*. Vol. 32. No. 2. P. 94-102.

Wilson, L. R., Tauber, M. F. (1956). *The University Library: The Organization, Administration, and Functions of Academic Libraries*. Second Edition. New York: Columbia University Press.

Wolters Kluwer. (2003). Kluwer Consortium License Agreement. Kluwer Online. Retrieved January 29, 2004 from <http://orpheus-1.ucsd.edu/acq/license/kluwonl.pdf>

World Intellectual Property Association (WIPO). (1996) World International Property Association Copyright Treaty. Retrieved March 21, 2005 from http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html#preamble

Wyatt, A. M. (2005). "Licenses, the Law and Libraries." In *Licensing and Libraries: Practical and Ethical Aspects*. Edited by Karen-Rupp-Serrano. New York: Haworth Press.