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This study compares library usage of monographs in both print and electronic formats at the University of North Carolina at Chapel Hill. The purpose of the study was to assess the value of comparing usage statistics for collection development as well as to evaluate how subject areas affected user preference for the print or electronic format.

For this study, a sample of thirty titles was taken in ten separate subject categories. The number of usages was aggregated for UNC's print collection and their netLibrary collection of electronic books for each of the ten categories. Comparing the usage data, the overall trend showed that on the average, print books were used more than their electronic counterparts. Within the different subject categories, comparative usage varied, with some subjects having higher usages of electronic books and others having higher usage of print books.

Headings:

Use studies – Electronic books

College and university libraries – Book collections

College and university libraries – Collection development

A USAGE COMPARISON FOR PRINT AND ELECTRONIC BOOKS IN THE
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

by
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I. Introduction

Following the growth of electronic information sources in the past decade, the concept of the virtual library was a natural result. Theoretically, the virtual library allows users to access its holdings electronically, eliminating the need for a physical building to house its works. Many virtual library models currently exist; one of the most widely used models is that of netLibrary. NetLibrary was introduced in 1999; since then, the company has continued to expand and is currently owned by OCLC. The netLibrary model allows academic, public, and special libraries to develop collections of electronic books, or e-books. As this model is conceived, libraries acquire titles through netLibrary which their users are able to access remotely. The netLibrary model bears many similarities to physical libraries. Libraries, or library consortia, buy copies of titles from the company; users may then “check-out” these titles for a specified period of time. The length of the checkout period is determined by the lending library or consortia. Although the books in the collection have no physical presence, the traditional “one book, one reader” model applies to netLibrary. If one user has checked out a title, other users cannot access it during that period. When the loan period for the book expires, it is automatically “checked-in,” thus obviating the possibility of overdue books or late charges. In the formative years of the company, their primary target users were mainly academic libraries and consortia. While the company has expanded to

servicing public and special libraries, academic libraries are still one of the areas of focus for the company.

The focus of this study is to compare a digital collection of netLibrary e-books to a physical collection of books. This study seeks to compare circulation for titles that are available in both electronic and physical formats. Such a comparison can be beneficial for a library, as it can lead to a better understanding of the existing collections, and how they serve the library's users. The electronic and physical collections at the University of North Carolina at Chapel Hill will be evaluated for this study. For the two-year period between 2001 and 2002, circulation statistics will be gathered and compared for titles in both electronic and physical formats. Based on the data gathered, user preference over the electronic book format versus the traditional physical format will be analyzed. One of the questions the study seeks to address is, "Do library users gravitate towards one option when given the choice between viewing a book electronically or physically?" Additionally, usage statistics will be analyzed across multiple subject areas in order to ascertain what subjects are more popular in an electronic format, and possibly what subjects are more suited to an electronic format. The study will address a number of issues relevant to academic librarianship, such as how circulation statistics and user preferences can contribute to library functions like collection development. It will also analyze the changing nature of information and how it is delivered to the user.

As increasingly more information becomes digitized, it has been speculated that paper based formats will decline in use. However, the traditional book format has endured for hundreds of years and continues to thrive. As digital libraries continue to expand, it is important to understand them and their similarities and differences to

traditional library models. Part of the rationale for studying netLibrary stems from its similarities to traditional models, which makes it a logical progression from the physical library to a digital library model. This study aims to reach a better understanding of virtual library models and how they contrast and complement the traditional library.

II. Background and Setting

Established in 1999, netLibrary offers thousands of books in an electronic format for registered users to browse and check out. The company's business model resembles that of a traditional library; only one user can access a given title at one time and loan periods are set so that when they expire, the title is automatically returned from the user's account. The company is affiliated with numerous academic, public, and corporate libraries. As part of the netLibrary business model, individual libraries or library consortia build their own electronic book collections based on the titles offered by netLibrary. NetLibrary is able to provide content through its affiliations with publishers; currently, it is affiliated with over two hundred publishers. Working closely with netLibrary, publishers chose what titles they want to provide in an electronic format. Conversion to print or electronic format is done by the publishers themselves or netLibrary (netLibrary, 2003). Users who are members of an affiliated library can access their libraries' collection of netLibrary titles by registering a user account through their library.

The collection of netLibrary e-books at the University of North Carolina at Chapel Hill (UNC) was made available through the library's affiliations with library consortia. The titles in UNC's netLibrary collection are shared among all the participating libraries in the NC LIVE (North Carolina Libraries for Virtual Education)

consortium. This consortium consists of North Carolina libraries among four defined user communities: public libraries, community colleges, the state's university system, and members of the North Carolina Association of Independent Colleges and Universities (NCLive, 2002). NC LIVE resources can be accessed by users at their affiliated library or at home; the consortia was initially established in 1998. The NC LIVE consortia is also part of a broader consortia, the Southeastern Library Network (Solinet). The netLibrary titles offered by the NC LIVE consortia libraries were chosen and made available by the Solinet consortia (Solinet, 2003).

The UNC netLibrary collection is available through the library's affiliation with NC LIVE. Although the collection is made available to all libraries in the consortium, the actual e-books in the UNC collection are only available to UNC library users. In this sense, the e-books are similar to physical books, since they can only be checked out to library users and only one user can access an e-book at a given time. The UNC netLibrary collection was initiated in 2000; the next year, catalog records were added for the netLibrary titles. The addition of catalog records was an important milestone in increasing awareness of and access to netLibrary titles; before then, UNC library users could only locate the titles by going directly to the netLibrary website. With the records added, library users were able to locate and access e-books through the same online public access catalog they used to locate print resources.

To access netLibrary titles at UNC, users must first create an account. This can be done by registering at the netLibrary website on any computer that is part of the university network. Once they have registered an account, users can remotely access netLibrary titles at any computer with their user name and password. They can either

browse e-book titles for a short time or chose to checkout titles. Checkout times for e-books are determined by the affiliated institution; for UNC, the netLibrary checkout period is four hours. There are also a number of internal safeguards placed in netLibrary e-books for reasons of copyright and legality. While printing and copying text from an e-book are possible, netLibrary limits the amount of text that can be printed or downloaded to 5,000 characters. NetLibrary also contains internal software that measures access for titles, both by subject area as well as for individual titles. The unit of measure for circulation is an “access;” an access occurs anytime a book is browsed or checked out.

While access to netLibrary e-book titles is done remotely by computer, physical books at UNC are checked out at the university libraries. The UNC library system consists of a number of physical libraries located across the university. The main library is Davis Library, however, there are a number of specialized libraries at UNC, such as the Health Science Library and the Law Library. Check out periods range from 30 days for undergraduate students and staff to 90 days for graduate students and 180 days for faculty members (UNC Libraries, 2001). Circulation is tracked by the Data Research Associates (DRA) system which can provide information on the total number of times a title has circulated. Circulation can also be measured by the stamp cards within each physical title, which are stamped with a due date every time a book circulates. For the purposes of this study, the unit of measure will be individual checkouts; a circulation for a physical book will be considered equivalent to an access for an e-book.

III. Literature Review

While there has been much written about digital libraries and electronic books, there is only a small body of literature on studies of electronic book collections, particularly at the academic level. Given the relative youth of the company, there is also a fairly small amount of literature pertaining to netLibrary. The literature review found several articles in trade publications, but few actual research studies conducted on the service. Littman (2002) describes a preliminary study comparing electronic and print book usage in Colorado libraries. Statistics for the study were gathered from five public colleges, four public universities, seven community colleges, and four private non-profit institutions for the 2000-2001 academic year. For the institutions surveyed, the electronic book collections were provided through netLibrary. Total accesses were compared among the user groups for print and electronic books; more detailed analysis by subject area was not considered for the study. Among the results reported was that for the academic libraries surveyed, scaled usage of electronic books was equal to or greater than that of print books.

A study by Gibbs (2001/2002), assesses the state of electronic books at North Carolina State University (NCSU) after two years. The study analyzes netLibrary usage for 2000 and 2001, as well as some other issues pertaining to electronic books. Usage statistics are included in the study and popular subject areas for the NCSU netLibrary collection are identified. The study identifies computer science, engineering, business, medicine and literature to be among the most popular subject areas for the collection. Additionally, overall netLibrary statistics for the NCSU libraries are compared to statistics for the NC LIVE/Solinet consortia's collection.

In another collection development study of netLibrary, Ramirez and Gyeszly (2001) analyze circulation statistics for netLibrary titles by subject area. Statistics were analyzed for netLibrary usage at Texas A&M University; these statistics were compared to usage statistics for two library consortia, the Amigos Library Services consortium and the Texas State Library and Archives Commission. The study placed computer science, business, and literature as among the subject areas with the highest volume of circulation. It also acknowledged the collection development benefits of analyzing usage statistics, stating that they give an indication of what subject areas and types of books patrons would likely prefer in an electronic format. This followed a similar study by Cannon and Watson (2001) that explained the criteria used by the Tampa Bay Library Consortium in creating an e-book collection. The criteria used by the consortia for purchasing electronic books was to acquire books in popular subject areas as well as subject areas they believed would translate well to an electronic format. Ultimately, the group limited acquisitions to selected subject areas, including computers and technology, Florida, literature, business, and a few other topics. Nelson (2001) describes a study of the netLibrary collection at Victoria University, a member of the CAVAL (Cooperative Action by Victorian Academic Libraries) consortia. The study included a statistical comparison of usage for the university and the consortia as a whole. Individual subject areas were not compared, though economics was identified as the most popular subject at both the university and consortia level.

Other usage studies of electronic materials assess electronic versions of different media, such as electronic journals. Many of the studies compare the print and electronic formats for journals. Rogers (2001) analyzes the use of electronic journals at Ohio State

University. In the formative stages of electronic journals, the general conclusion was that to be accepted among scholars, electronic journals would have to offer the same advantages as their print counterparts. Rogers' study surveyed the opinions of graduate students and university faculty regarding electronic journals. While it was hypothesized that the students would more readily accept the new technology, it was found that both students and faculty supported electronic journals in relatively equal numbers. The study also reported that while electronic journal usage increased from 1998 to 2000, print journal usage declined, albeit at a slower rate. In terms of the collection development implications for the study, the findings suggested that the Ohio State University academic community might be supportive of canceling print journal subscriptions in order to redirect resources for other materials. The report includes that as acceptance for the relatively new electronic journal format increases, new pricing models for subscriptions and access will likely develop.

A similar earlier study by Mercer (2000) analyzed the usage of electronic journals at the Washington University School of Medicine in St. Louis. One of the studies' findings was that physical usage of print journals with electronic counterparts had declined. The obvious factor in this decline was the convenience of the electronic format, which allows users to access the journals remotely. At the time of the study, most evaluations of journal usage focused only on how print collections were utilized. For this particular study, usage was analyzed at the individual journal level. For a specific title, it was analyzed which subjects and articles were being accessed more frequently and which were not. The study noted the benefits of usage surveys in terms of collection development, and described how such statistics factored into decisions of what

journals to retain or cancel. Mercer concludes that usage data collection will not result in mass subscription cancellations, but will instead allow informed decision making for libraries to better respond to the information needs of their users.

Another more general article by Dole (2000) defines the concept of Decision Support Systems in electronic collection management. The article explains how these systems are used to assist managers in decision-making. The review also uncovered some more materials that were more general in scope relating to collection development of electronic resources. Gregory (2000) gives an overview of a variety of collection development issues for electronic resources. Fowler (2000) describes collection development issues pertaining to electronic resources, and encourages cooperation between collection development and information technology departments within academic libraries. Fowler goes on to describe the importance of usage statistics in assessing user demand for titles. With the growth of electronic resource usage, the article goes on to emphasize the need for gathering data on these sources. Dillon (2000) writes of the experiences of implementing a netLibrary collection at the University of Texas at Austin. The university is part of the Amigos library consortia, which went on to create a collection development committee, made up of personnel from libraries within the consortia, to develop collection guidelines for selection. While Dillon states that UT-Austin generally disregards usage statistics for electronic resources, it was noted that circulation for their netLibrary titles was uniform across nearly every subject area. Around the time of the company's formation, Flowers (1999) evaluated the potential of netLibrary from the perspective of the libraries at the University of North Carolina at Chapel Hill. UNC librarians initially speculated that computer books would be a popular

area in which to acquire electronic books, as their contents are prone to become outdated more quickly due to technological advances. For example, a book on Microsoft Office 98 would be outdated after the release of Microsoft Office 2000.

In recent years, the development of usage measures for electronic information resources has become a more visible issue in the information science field. In December of 1999, the Association of Research Libraries (ARL) began a project to establish such usage measures. With the increasing development of electronic resources in research libraries, the importance of developing usage measures for these resources was recognized (ARL, 2003). The project to measure electronic resources, now termed E-Metrics, is still currently ongoing, and has entailed a number of usage studies at participating universities. Other early research and findings on the usage of resources such as electronic books were presented at Pricing Electronic Access to Knowledge (PEAK), a conference that was held at the University of Michigan in March of 2000. The focus of the conference was to share recent research on the economics and usage of electronic resources and evaluate potential business models (University of Michigan, 2000). One of the issues addressed by the conference was how usage of electronic resources compared to that of print resources. Details on usage as well as pricing of electronic resources are two important issues with implications for collection development.

In terms of earlier studies on electronic book usage, one of the major early e-book projects was the Online Books Evaluation Project at Columbia University, a four-year study that lasted from 1995 to 1999. As the concept of the electronic book was in its infancy at the time, the project sought to evaluate how scholars would adopt and react to

the new media, how costs were comparable to print books, and the likely potentials for electronic books. In an article published a few years after the conclusion of the Columbia project, Summerfield, Mandel, and Kantor (2001) reflect upon their findings. One of the early findings was that reference works were clearly suited for the online format; consequently, these online works were quickly adopted by scholars. The scholarly monographs in the online collection also received a similarly positive response from the Columbia academic community; in spring of 1999, the average online monograph was viewed three times as much as its print version circulated. A total of six reference works were adapted to an online format for the Columbia project, and while patterns of usage varied, they were all used greater than their print counterparts. The study also noted that users were unlikely to closely read a book online, but had the tendency to browse online and then print out relevant portions or acquire print copies for closer readings. This finding correlates with general trends for electronic versions of books and journals. In terms of pricing, the project found that online books would be cheaper than print books in terms of ownership costs. However, the study did precede the development of e-book business models such as that of netLibrary.

An earlier article by Summerfield, Mandel, and Kantor (1999) also includes comparisons of the titles in the online books project to their print equivalents. For the individual titles in the collection, online usage was compared to print circulation. The article notes the potential for the online books to be viewed a significantly greater amount than their print counterparts. One important consideration to note is that the books in the project were simply converted to HTML and put online, where they could be accessed by an unlimited number of users at any times. This model markedly contrasts the netLibrary

model, which follows a more traditional library model of “lending” an e-book to only one individual user at a given time. Overall, the Columbia University Online Books Evaluation Project found electronic books to be a viable resource for scholars and speculated that usage would increase with the development of e-book business models.

While some of the existing literature assesses usage statistics and popular subject areas for netLibrary and other electronic book models, the implications for collection development are typically not discussed in detail. Additionally, very few comparatively discuss circulation of physical volumes in similar subject areas. This study will seek to analyze usage statistics by subject area and determine patterns of user preference regarding electronic and physical book formats. The methodology will be based on a combination of methodologies from previous studies in the literature. As in Littman’s study, netLibrary e-book access will be compared to physical circulation, although only for one particular library. Usage totals will not be aggregated for the institution as a whole; rather, individual titles in print and electronic formats will be compared, similar to Summerfield et al (1999). Usage totals will then be aggregated by subject area, as in Ramirez and Gyeszly’s study, in order to measure how subject areas factor into user preference of the electronic format versus a print format.

IV. Methodology

This study will be based on usage data gathered for the electronic netLibrary collection as well as the physical book collection at the University of North Carolina at Chapel Hill. The study will be based on a fixed design approach. It will measure electronic and physical book usage across a range of subject areas. For each subject area,

data will be gathered on the number of usages of titles in these subject areas. The gathered circulation statistics will be compared by subject areas, as well as for both collections as a whole. The study will aim to ascertain how usage of electronic titles compares to that of physical titles. Additionally, the study will also attempt to discern how subject matter factors into the preference of electronic versus physical books.

The data for the study will be collected by using the internal statistical features of the netLibrary system. The system includes Library Extranet software that can be used to assess usage of the collection's holdings. While the system is password protected, it can be accessed by obtaining access rights from the system administrator. The system's Usage Reports function allows the user to generate a number of different reports. Reports can be viewed based on activity, title, or subject area. Circulation statistics will be gathered for the two-year period beginning January 1, 2001 and ending December 31, 2002. Ten separate subject areas will be used for data collection, using the subject areas predefined by netLibrary, such as "Literature" and "Computers." Then, a usage report will be generated, using the extranet software, with information by subject area for each individual title and the number of times it circulated. From this report, a random sample of thirty titles will be selected for each subject area. Then, each title will be searched for in the UNC library catalog, to see if a physical copy of it is held in addition to the electronic copy. For electronic books without physical counterparts, a new title will be randomly selected until the sample size of thirty books in both physical and electronic form is arrived at. Since some e-books may have disproportionately high circulations, they will not be included in the sample so as not to skew the results. The extranet software will provide data on the number of usages of each individual title for the time

period being examined. For the physical counterparts, the number of usages will be determined by counting them on the book's circulation card. For each individual title, the number of physical and electronic usages will be gathered and compared.

V. Analytical Approach

The data gathered in the study will be analyzed quantitatively. The Library Extranet software allows users to export the data reports generated. Data can be exported in two formats, either tab delimited or into a Microsoft Excel spreadsheet. For this study, an Excel spreadsheet will be created with statistical information organized by subject area. For each subject area, the total and mean number of usages will be tallied for electronic and physical books within the subject. Similar totals will also be tallied for the entire sample. Given the level of analysis anticipated for the study, the functionality of Excel is best suited for it. The software allows for basic searching and organizing of the data, and allows for formatting the data into both tabular as well as graphic forms. Using this tabular representation of the data, analysis will be facilitated. The focus of the analysis will be to discern how usage of electronic and physical books compares by subject area, and which formats receive greater usage in selected subject areas. The potential use of this analysis has implications for library activities such as collection development. By analyzing book usage by format and subject area, it can be determined in what subject areas it would be preferable to increase the electronic collection over the physical collection, or vice versa. Additionally, this analysis will potentially provide insights into reader behavior. While user behavior is susceptible to a high degree of individual subjectivity, analyzing statistical trends can be useful for making inferences

regarding user choices. While preferences and motivations vary by user, findings in the statistical data can assist in well-informed judgments regarding overall trends in usage.

VI. Data Findings and Analysis

The initial step in the data collection process was to view netLibrary usage statistics by subject area. This was done using the program's internal Library Extranet software. Using a password provided by the system administrator, the "Library Resource Center" web page for UNC's netLibrary statistics was accessed. From there, the "Collection & Usage Reports" page was accessed, which allows users to generate a number of reports based on the institution's netLibrary statistics. A report was generated for "Activity by Subject," which displays e-book usage by subject heading. The report generator page allows users to specify a date range for the data collected, how many titles to display per page on the report generated, and what collections to view usage statistics for. In this case, usage statistics were generated for the UNC e-book collection for the two-year time period beginning January 1, 2001 and ending December 31, 2002. The generated report displayed the subject areas with the total number of accesses for each, ranked in descending order by the highest number of accesses. A tabular representation of the top ten subject areas in the report can be seen in Table 1.

Although netLibrary lists 31 different subject headings, the highest ten were selected for data sample. The reason for this was twofold: logically, it would be more likely to generate an accurate sample from the higher circulating subject areas. Furthermore, choosing the most popular subject areas would lead to a more accurate portrayal of the usage for the netLibrary collection. Based on the statistics for the e-book

collection usage, the subject areas chosen for the sample were: Social Sciences: General, Literature, Business, Economics and Management, Medicine, Computers, Religion, Arts, History: World and General, Education, and Psychology.

Table 1. UNC netLibrary accesses by subject area for 2001/2002

Subject	Accesses
Social Sciences: General	2647
Literature	2643
Business, Economics and Management	2172
Medicine	1812
Computers	1796
Religion	871
Arts	856
History: World and General	691
Education	669
Psychology	529

The next step in the data collection process was to collect a sample of titles in the selected subject areas. This was again done by accessing “Collection & Usage Reports” from the “Library Resource Center” web page. For this data collection, the “Popular e-books” report was selected, which displays e-book activity in descending order by number of accesses. As with “Activity by Subject,” usage statistics were generated for the UNC e-book collection for the two-year time period beginning January 1, 2001 and

ending December 31, 2002. By default, the report displays individual titles in descending order by highest number of accesses. However, the report can also be displayed by subject area in alphabetical order, which facilitated the gathering of the sample. Once the list was ordered by subject area, a sample of thirty titles was gathered for each of the ten areas in the study. Then, the physical copies of the titles selected in the sample were found at the UNC libraries. The number of circulations for these physical titles were counted for 2001 and 2002. Finally, the total number of physical circulations was compared to e-book accesses for each subject area. Table 2 represents comparative data for physical and electronic accesses for the subject areas, with data for both the total and mean accesses.

Table 2. Comparison of physical and electronic accesses

Subject	Total Physical Accesses	Mean Physical Accesses	Total Electronic Accesses	Mean Electronic Accesses
Social Sciences: General	97	3.23	89	2.97
Literature	111	3.70	69	2.30
Business, Economics and Management	63	2.10	78	2.60
Medicine	82	2.73	86	2.87
Computers	67	2.23	112	3.73
Religion	65	2.17	87	2.90
Arts	92	3.07	69	2.30
History: World and General	89	2.97	56	1.87
Education	91	3.03	76	2.53
Psychology	68	2.27	70	2.33
Total	825	2.75	792	2.64

Following is a more detailed analysis of each of the subject areas used in the data sample. The purpose of the individual subject analysis is to make inferences, based on the findings, as to what user behaviors influenced the data and shaped the comparison of print and electronic formats.

Social Sciences: General

In terms of e-book accesses, Social Sciences: General was the most popular category for the two-year sample period. Part of the reason for the subject's popularity may stem from the broad range of topics it covers. Monographs that appeared in the sample ranged from books about women's studies, to popular culture, to country studies. In terms of access, accesses of physical and electronic editions were fairly even, with physical books being accessed slightly more. This followed the general trend within all of the subject areas. Given the generality of the subject area, it is appropriate that users would not demonstrate a defined preference over the electronic or physical format.

Literature

Literature was another popular subject area with nearly as many total accesses as Social Sciences: General. For the most part, the titles in this category were literary criticisms, although some anthologies and story collections were included as well. This category also saw one of the largest discrepancies between electronic and physical usage, with physical titles getting almost 1.5 more usages on average than their electronic counterparts. Given the subject area of literature, it seems reasonable that users would prefer to look at a physical copy of a text than an electronic text. Since the titles are

mainly literary criticisms, it would seem unlikely that users would read the entirety of the monographs. Electronic texts can be useful for finding particular references within a book, but less for close reading. The literary criticisms in this category would likely be closely read by users, which may account for the preference for physical texts. Additionally, users who read the titles in this category would likely be used to and comfortable with physical works, which also helps to account for the preference.

Business, Economics and Management

The titles in this subject area ranged from studies of international economies to books about effective business leadership. While physical and electronic usage were fairly close, there was a preference for electronic texts. On the average, electronic texts circulated 0.5 times more than their physical counterparts. Part of the preference for electronic versions may stem from the subject area. For example, a user may only need a book to glance at some tables of economic data within it. In a case like this, the electronic text is better suited for the user needs than the physical text. Also, many business and economic information resources, such as databases and journals, are increasingly electronic. The high number of electronic resources in this subject area may explain the user preference for electronic texts.

Medicine

Medicine was a popular subject area for the UNC netLibrary collection. This is most likely in part due to the fact that UNC has a large medical school. The titles ranged from health textbooks to nursing guidebooks. Circulation for titles was nearly even, with

electronic texts being accessed slightly more than their physical counterparts. Given that medicine is a constantly and rapidly evolving field, it is likely that users get information more from medical journals than published monographs. There is more immediacy in publishing in journals than publishing a monograph, and medical information can change or become outdated quickly. Furthermore, a large number of medical journals are now accessible electronically. A user preference for electronic texts may stem from this fact, since users in the field of medicine may be more likely to access information electronically.

Computers

The subject area of Computers saw the greatest discrepancy on average between usage of physical and electronic texts. The electronic titles were accessed on average a full 1.5 more times than their physical counterparts. Given the subject area, it seems appropriate that users of books about computers would be the most likely to read the books on a computer. The titles ranged from highly theoretical books to practical books on programming languages and particular brands of software. In terms of technical works such as these, the user preference for the electronic format is natural. If a user needs to consult a manual or guidebook for work they are doing at a computer, it is logical to access it on the computer. Electronic publishing is also logical for works within this subject area, specifically software manuals. Since upgrades and new versions of software are constantly being released, the less static electronic format is well suited for this documentation.

Religion

The titles in this subject area included not only monographs about Christianity, but also books on Native American and East Asian religions. For this subject area, there was a marked preference for electronic texts over physical texts. This finding was interesting, since books in the humanities lend themselves more to the physical format than to the electronic format. Generally, books in the humanities are used for close reading, which can be done more easily with physical texts. A user of a humanities monograph is more likely to want to read the entirety of a chapter or essay within the monograph, rather than scan the work for a particular figure or quotation. In this case, the user tendency to choose the print format stems from the fact that most readers would prefer to read large amounts of text off of a page rather than a computer screen. Also, users in humanities fields typically work with print resources rather than electronic resources.

Arts

As the broad nature of the subject area name suggests, the titles in this category encompassed a wide range of monographs. Titles included books about television, film studies, and architecture. In terms of usage, the physical editions of books in the sample were accessed a good deal more than their electronic counterparts. As with other humanities subject areas, physical titles are more suited for the subject and users of this subject area are generally more inclined to view physical titles. For this subject area in particular, a physical format is particularly appropriate since many of the works are

visually oriented and contain illustrations or photographs in color as well as in black and white. While the netLibrary editions do typically contain the illustrations in the work, the quality of them can suffer either due to transition from physical to electronic format or due to the computer monitor on which they are being viewed on. For visually oriented works in the arts, physical monographs would seem to be better suited.

History: World and General

For the subject area of history, netLibrary defines two subcategories: World and General and United States. World and General is the more popular of the two in terms of accesses, likely due to the fact that it covers a greater range and there are a larger number of titles. This subject area has a wide range of monographs covering world history and also United States history as it pertains to larger events, such as World War II. A preference was shown for physical titles, with them getting on average over one access more than their electronic counterparts. Once again, this preference for physical monographs followed the general trend for titles in humanities subject areas. Users of works in the field of history are likely to deal with physical resources more than electronic ones, so it is logical for them to exhibit a preference for physical monographs.

Education

In the subject area of Education, physical monographs were accessed more than electronic ones. On average, the physical titles were accessed 0.5 times more than their electronic counterparts. The titles in this area ranged from textbooks, to books about education, to guidebooks and manuals for teachers. Given educators traditional reliance

on physical materials, a preference for physical monographs is logical. However, electronic resources are increasingly being integrated into education, so users of titles in this category would likely also be comfortable with electronic texts. For works like textbooks and teacher manuals, a physical edition would probably still be preferable though.

Psychology

The works in this subject area to range from monographs on figures such as Freud and Jung to works on abnormal child psychology. In terms of usage, accesses for physical and electronic titles were fairly even. In this case, there was a small though fairly negligible difference. Psychology is a social science which does not seem to lend itself to the physical format as much as humanities disciplines do or to the electronic format as much as books in the Computers subject area do. Like the general social sciences subject area, electronic and physical texts were accessed fairly evenly. Following this trend suggests that social sciences disciplines are equally suited to physical and electronic formats.

The overall trend for all of the titles within the data collection sample was that physical monographs were accessed more than electronic monographs. In general, average circulation for both formats was fairly close, although physical monographs were accessed slightly more. From this data, it can be inferred that library users would be more likely to use physical texts over electronic ones. Given the relatively even usage numbers for both electronic and physical texts, it is interesting to note that the loan period

for e-books is disproportionately smaller in comparison to that of physical books.

According to the circulation policy established at UNC, a netLibrary e-book is checked out for only four hours. The circulation period for a physical monograph ranges from one to six months.

With such a discrepancy in circulation periods, there is a potential for e-book usage to be disproportionately higher than physical book usage. The short loan period for e-books could allow a high number of users to access a certain title in the span of a month; conversely, one single user could retain a physical copy of a text for an entire month. With e-books, there is the potential that a single user could continually check out the same title whenever the loan period expired, although each check out would count as an individual access. However, the usage statistics were fairly even, with physical books retaining a slightly higher amount of accesses than e-books. This suggests that, relatively, physical books continue to be more highly used than e-books. It is possible that the longer loan periods for may contribute to a preference for physical books, as a user would likely want to keep a title for longer than four hours. The short loan period for e-books also emphasizes the concept that they are more useful for quickly finding references rather than actually reading a text.

In terms of academic disciplines, the data collected also fell into general trends. For the social science subjects within the sample, Social Sciences: General, Education, and Psychology, circulation of physical and electronic books was fairly even. The general trend for the social science books was that they were equally likely to be used in a physical or electronic format. The trend for monographs in humanities disciplines was that they were accessed more in the physical format over the electronic format. This

trend followed for Literature, Arts, and History: World and General; the one exception was Religion. This seemed appropriate, since books for these subject areas are more likely to involve close, detailed readings which are more easily done with a physical text. It was also appropriate given these subject areas traditional reliance on physical materials. The subject area of Business, Economics and Management is somewhat of a discipline unto itself. For this area, electronic books were accessed more than physical books. One possible explanation is that users in this subject area may only need to access a specific set of tabular or numeric business data within a text instead of having to do a close reading. For this kind of focused data search, electronic books, which have enhanced electronic searchability, may be more suitable.

The only scientific subject area covered within the data sample was Medicine. For this subject, electronic and physical circulation was fairly even, with electronic accesses only slightly higher. One possible explanation would be users' familiarity with other electronic resources, such as online medical journals. The only technical subject area covered within the data sample was Computers. Not surprisingly, accesses for electronic books were significantly higher than they were for physical books in this category. Given that users in this area are likely comfortable using electronic resources, they would be likely to look at electronic texts. The texts would also make a logical counterpart, particularly if a user were using a software program and reading an electronic manual for that software at the same time. Generational aspects may also factor into user preference, as younger users who have read electronic text for much of their lives may be more willing to read electronic books. This factor would not seem to

be inherently limited to certain subject areas, as a user of books in the humanities would not necessarily be older or younger than a user of books in the social sciences.

Measuring circulation statistics for both physical and electronic monographs has inherent benefits for collection development. In terms of usage of any library, circulation is a useful indicator of what titles or subject areas are more heavily used than others. By comparing physical and electronic monograph circulation, decisions could be made about when to consider acquiring a physical text instead of an electronic text, or an electronic text instead of a physical text, or when to acquire both. For example, for texts in the humanities disciplines, it may be more logical to collect physical monographs instead of electronic monographs, since they will likely receive greater usage. For monographs in the Computers subject area, electronic texts seem more suitable and more economical. Another issue that relates to this is the lasting value of the text. A monograph on a specific piece of computer software will only be useful until the next version or update of the software is released, which can often be within a year. A monograph of literary criticism is unlikely to become outdated in so quick a time. In some cases, it may be logical to acquire both an electronic and physical edition of a text. This would seem likely in the social science disciplines, where usage for monographs in both formats is fairly even and materials have historic value. User preference should be an important consideration in collection development decisions. The gathering of usage statistics for a collection is a sound method for measuring user preferences. A collection that is designed with user preferences in mind will likely better serve the users.

Since the netLibrary e-books in the UNC system are not chosen by UNC's collection development department, but rather a library consortium that is part of a larger

consortium, decisions for the netLibrary collection could not be affected at UNC.

However, it is possible that UNC could follow other libraries that have multiple netLibrary collections: a collection that is shared by a consortia as well as an individual collection that is chosen for and exclusive to that library. Most of the netLibrary titles physically owned by UNC are scholarly monographs; however, there are a number of e-book titles with no physical counterpart at UNC. For example, there are some “Cliff’s Notes” in the Literature subject area as well as books in the “For Dummies” series for many categories. These are titles that an academic library generally would not collect in a physical format. However, since the titles are chosen by a consortium that is made up of academic, community college and public libraries, it is logical that the collection would consist of more than just scholarly monographs. Were UNC to develop its own individual collection of netLibrary titles, it could select books that better suit the user and collection needs of the library. In this manner, the electronic collection of books would better serve to complement the physical collection. With a separate and exclusive collection of e-books, usage statistics could be used to formulate a policy in terms of e-book collection development.

VII. Conclusions

With the expansion of usage for electronic resources in academic libraries, much speculation has been made regarding the role of traditional print resources, such as print monographs and journals. Among the findings of this study is that in terms of collection usage, print monographs are generally accessed in equal or greater numbers than their electronic counterparts. What is more, it seems that the print format for books is still

significantly preferred to electronic, given the closeness of accesses for both mediums, particularly since the loan period for e-books at UNC Chapel Hill is disproportionately shorter than that for print books. Theoretically, a significantly larger number of users can gain access to an e-book for any given period of time. The study's findings suggest that while e-books have been generally accepted by users of the UNC libraries, print books are still as widely used. Since the study focused on titles that were available in both a print and electronic format, the findings suggest that generally, library users at UNC are equally likely to access either version. These findings suggest that users are equally comfortable with both formats, and may use either as suits their reading needs. This is a logical conclusion, as both formats have their own inherent advantages. Ultimately, the electronic book collection may serve best as a compliment to the traditional print collection.

The study's findings for individual subject areas also support the view that different types of reading are better suited for either the print or electronic format. For example, the general finding in the humanities disciplines studied, such as Literature and the Arts, was that print books were accessed more often than their electronic counterparts. This finding is logical, since texts in the humanities generally require a close reading. Since most library users will typically want to avoid eyestrain from looking at a computer monitor and prefer turning pages than scrolling down screens, it is understandable why they would prefer a print edition of a book to read. The users' background can also factor into their preferences; scholars and students of the humanities generally deal with physical materials in their discipline, so it would follow that they would prefer to read physical books in their field.

Conversely, a subject area like Computers saw a noticeably higher number of accesses for electronic books over their print counterparts. Once again, the background of the user may be a factor in their format preference. A user of a book on computers is likely to have a more technical background, and therefore a greater familiarity with electronic resources, so reading text from a computer screen may be more natural to them. Many of the titles in the Computer subject area also pertained to particular programs or applications, so the potential to use a program and a related manual on the same desktop machine was a particular advantage of the e-book format. Other subject areas sampled in the study, such as Social Sciences disciplines, saw access for print and electronic versions of monographs to be relatively even. In this case, the suggestion was that some disciplines could be equally suited for either of the two formats.

The findings of a usage analysis study such as this can be useful in terms of library collection development. One important aspect of collection development is to assess how the current collection meets the needs of the users, and usage statistics are a good measure of this facet. For example, if statistics indicate that print copies of books in the subject of Literature are used significantly greater than their electronic counterparts, a library may choose to mainly acquire print editions for titles in that field. Conversely, if the subject area is Computers and the electronic versions of titles in this area receive greater use than their print counterparts, the library may choose to go the opposite route and focus on acquiring electronic editions for these titles. Perceived permanence may also be a determinant of whether to acquire print or electronic titles. The immediacy and dynamic nature of the electronic format makes it more suited for a book on a particular version of software, whose timeliness may only continue until the next version of that

program is released. Conversely, a historical monograph on the Civil War is unlikely to contain material that will be “outdated” or proven false, so it would be more sensible to acquire the title in print, a format that lends itself more to permanence. Additionally, if it is found that titles in a subject area are accessed equally in both formats, it may be logical to acquire these titles in both a print and electronic edition. By this logic, if a user were to find a particular title checked out in print, they could just as easily access the same title electronically.

This final point suggests what the immediate future for electronic books in libraries may be. Currently, as demonstrated by the UNC Chapel Hill netLibrary collection, electronic books are useful in complementing the existing collection of print books. The relatively equal usage figures for both formats suggest that library users find both formats useful, and likely for different reasons. Given the comparable usage, the ability to choose which format to access is a considerable advantage for library users, as they can exercise preferences so as to better meet their information needs. This is what ultimately should be the goal of any library collection, regardless of its format. It is unlikely that the electronic monograph will eclipse its print predecessor; however, collections of electronic books can make available for library users the inherent advantages of the electronic format. A library that can find a successful model for utilizing both formats practically will be well suited to address the needs of its users.

While this study focused on usage statistics for print and electronic books in an academic library, there are other areas of similar research which are yet to be explored in terms of comparing print books and their electronic counterparts. For example, the primary type of book that was covered by this study was the scholarly monograph. This

was a practical consideration, as most of the print titles at a large academic library such as UNC will be scholarly monographs, so it was these types of titles that were found in both print and electronic formats. However, the netLibrary collection consists of other types of books, such as self help books and “do it yourself” guides that did not have print equivalents at UNC, but would likely be found at a public library. The reason for this was that the netLibrary collection was not chosen by an academic library collection development department, but rather a library consortium that consists of academic, public, and special libraries. A usage study similar to this could be undertaken at a public library, to determine if usage of print and electronic materials was still relatively close and to see how well the e-book collection served the public library user group. Such a study could also determine the viability of the electronic format for works other than scholarly monographs, such as self help books or practical training manuals. Interestingly, the netLibrary e-book collection did not include works of fiction, or collections of poetry or plays. Likely this stems from the fact that these types of works are generally read in their entirety, and most readers would not even consider reading a complete work on a computer screen.

The user perspective is another area of possible study. Currently, netLibrary is the dominant e-book business model, at least in terms of e-book collections owned by traditional libraries. When the service was first introduced, there were some initial product reviews in trade publications, but no extensive surveys of actual users were actually performed. Conducting a user group survey for the netLibrary system would be a beneficial way of gauging users views of the software, what they found to be useful about it, and what they disliked about it. Such a survey would be a practical measure of

the scholarly advantages to netLibrary e-books as well as where the technology lacks in comparison to the printed monograph. Survey groups could be further divided by their disciplines; in that way, responses and attitudes could be measured and compared among users in the humanities, the sciences and technology fields. In this manner it could be further analyzed how well electronic books were suited to specific subject areas. A detailed study of actual electronic book users could uncover insights as to what preferences factor into the choice of an electronic or print format.

Such further research would be helpful in assessing use of electronic resources compared to traditional print sources in libraries. Although electronic books are a relatively recent development, the usage statistics for UNC libraries suggest that they have been preliminarily well received by library users. Currently, the electronic book collection can serve as a useful compliment to the traditional print collection, working towards the overall goal of better fulfilling user needs. One of the advantageous facets of electronic resources, including electronic journals and databases, is that they provide added value to their traditional print counterparts. By providing both print and electronic resources that are complementary, libraries will progress towards the future while retaining their traditional function.

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Appendix A

List of titles in sample selection for Social Sciences: General

Echoes of the Past, Epics of Dissent : A South Korean Social Movement
The Two-headed Household : Gender and Rural Development in the Ecuadorean Andes
The Morning After : Sexual Politics At the End of the Cold War
Violence in Urban America : Mobilizing a Response : Summary of a Conference
Welfare, the Family, and Reproductive Behavior : Research Perspectives
Poplore : Folk and Pop in American Culture
Letters to a Young Feminist
Myths and Legends of the British Isles
Old Age in Late Medieval England
Sisters of the Shadow
Religious Violence and Abortion : The Gideon Project
Living in the Rock N Roll Mystery : Reading Context, Self, and Others As Clues
Becoming Japanese : The World of the Pre-school Child
Intellectuals and the Crisis of Modernity
The Wild East : Crime and Lawlessness in Post-communist Russia
From Hegel to Madonna : Towards a General Economy of "Commodity Fetishism"
Abortion and American Politics
The Politics of Motherhood : Activist Voices From Left to Right
Peer Power : Preadolescent Culture and Identity
Of Orphans and Warriors : Inventing Chinese American Culture and Identity
Feminist Nightmares : Women At Odds : Feminism and the Problem of Sisterhood
From Barbie to Mortal Kombat : Gender and Computer Games
Other Modernities : Gendered Yearnings in China After Socialism
Diversity : Gender, Color, and Culture
Japanese Women : Constraint and Fulfillment
Nation, Empire, Colony : Historicizing Gender and Race
Return to Havana : The Decline of Cuban Society Under Castro
The Door in the Dream : Conversations With Eminent Women in Science
Off With Her Head! : The Denial of Women's Identity in Myth, Religion, and Culture
Slaves, Sugar & Colonial Society : Travel Accounts of Cuba, 1801-1899

Appendix B
List of titles in sample selection for Literature

The Tempest As Mystery Play : Uncovering Religious Sources of Shakespeare's Most Spiritual Work
William Faulkner and the Tangible Past : The Architecture of Yoknapatawpha
God and the Land : The Metaphysics of Farming in Hesiod and Vergil
Dante's Political Purgatory
William Faulkner : The Making of a Modernist
Vietnam and the Southern Imagination
Dearest Beloved : The Hawthornes and the Making of the Middle-class Family
Women/writing/teaching
The Returns of Odysseus : Colonization and Ethnicity
American Science Fiction and the Cold War : Literature and Film
Unruly Tongue : Identity and Voice in American Women's Writing, 1850-1930
Class and Gender in Early English Literature : Intersections
Mad to Be Saved : The Beats, the '50S, and Film
Our Moonlight Revels : A Midsummer Night's Dream in the Theatre
Rediscovering Nancy Drew
Out of Bounds : Male Writers and Gender(ed) Criticism
Writing Tricksters : Mythic Gambols in American Ethnic Literature
Sarah Orne Jewett : Reconstructing Gender
Children of the Dark House : Text and Context in Faulkner
A Web of Relationship : Women in the Short Stories of Mary Wilkins Freeman
The Woman With the Flying Head and Other Stories
The Saga of the Volsungs : The Norse Epic of Sigurd the Dragon Slayer
The Three-inch Golden Lotus
Following Djuna : Women Lovers and the Erotics of Loss
Umberto Eco and the Open Text : Semiotics, Fiction, Popular Culture
Reading Sappho : Contemporary Approaches
Melodrama and the Myth of America
The White Logic : Alcoholism and Gender in American Modernist Fiction
Unbroken Thread : An Anthology of Plays By Asian American Women
The Orphic Moment : Shaman to Poet-thinker in Plato, Nietzsche, and Mallarmé

Appendix C

List of titles in sample selection for Business, Economics and Management

Corporate Creativity : How Innovation and Improvement Actually Happen
Weak Foundations : The Economy of El Salvador in the Nineteenth Century
Strategic Development : Methods and Models
Our Common Journey : A Transition Toward Sustainability
E-profit : High Payoff Strategies for Capturing the E-commerce Edge
Gender On the Market : Moroccan Women and the Revoicing of Tradition
The Government Role in Civilian Technology : Building a New Alliance
The Affluent Society
European Misunderstanding
From Promise to Performance : A Journey of Transformation At SmithKline Beecham
Power Structure : Ownership, Integration, and Competition in the U.S. Electricity Industry
Farewell to the Factory : Auto Workers in the Late Twentieth Century
Winning Through Innovation : A Practical Guide to Leading Organizational Change and Renewal
New Orleans Dockworkers : Race, Labor, and Unionism, 1892-1923
Methods of Macroeconomic Dynamics
Gender Trials : Emotional Lives in Contemporary Law Firms
Doing Business With the Japanese : A Guide to Successful Communication, Management, and Diplomacy
Economics of Regulation and Antitrust
Discipline Without Punishment
Moundville's Economy
Oligopoly Pricing : Old Ideas and New Tools
China in the Twenty-first Century : Politics, Economy, and Society
Marxism for Our Times : C.L.R. James On Revolutionary Organization
Knowledge-based Decision Support Systems : With Applications in Business
American State and Local Politics : Directions for the 21st Century
China's Unfinished Economic Revolution
Knowledge Management and Virtual Organizations
Structural Adjustment and African Women Farmers
Coca, Cocaine, and the Bolivian Reality
Leading Change

Appendix D
List of titles in sample selection for Medicine

Fundamentals of Psychoneuroimmunology
Autism and Autistic-like Conditions in Mental Retardation
The Handbook of Pediatric Audiology
Pharmacokinetics : Regulatory, Industrial, Academic Perspectives
Clinical Child Psychology : Social Learning, Development, and Behaviour
Arsenic in Drinking Water
Lesbian Health : Current Assessment and Directions for the Future
Between Zeus and the Salmon : The Biodemography of Longevity
Effects of Ionizing Radiation : Atomic Bomb Survivors and Their Children (1945-1995)
DNA Technology in Forensic Science
Nurse As Educator : Principles of Teaching and Learning
Cognitive Case Conceptualization : A Guidebook for Practitioners
Physicians, Colonial Racism, and Diaspora in West Africa
Molecular Diagnosis and Treatment of Melanoma
Therapeutic Recreation : Processes and Techniques
AIDS and Behavior : An Integrated Approach
Why We Age : What Science Is Discovering About the Body's Journey Through Life
Neurobehavioral Anatomy
Introduction to Human Disease
Men's Health and Illness : Gender, Power, and the Body
The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine
Strong Feelings : Emotion, Addiction, and Human Behavior
Stress, Coping, and Depression
Disease Mapping and Risk Assessment for Public Health
Fatal Protein : The Story of CJD, BSE, and Other Prion Diseases
Brain Imaging in Clinical Psychiatry
The Hidden Epidemic : Confronting Sexually Transmitted Diseases
The Motion Aftereffect : A Modern Perspective
Concepts of Athletic Training
Streptococcus Pneumoniae : Molecular Biology & Mechanisms of Disease

Appendix E

List of titles in sample selection for Computers

Designing Information Technology in the Postmodern Age : From Method to Metaphor
Software Visualization : Programming As a Multimedia Experience
U.S. Government On the Web : Getting the Information You Need
The Bit and the Pendulum : From Quantum Computing to M Theory-- the New Physics of Information
Recursive Algorithms
The Turing Test and the Frame Problem : AI's Mistaken Understanding of Intelligence
The Software Conspiracy : Why Software Companies Put Out Faulty Products, How They Can Hurt You, and What You Can Do About It
Knowledge Spaces : Theories, Empirical Research, and Applications
Oscillations in Neural Systems
Foundations of Knowledge Acquisition
Snap to Grid : A User's Guide to Digital Arts, Media, and Cultures
The Computational Beauty of Nature : Computer Explorations of Fractals, Chaos, Complex Systems, and Adaptation
Spatial and Temporal Reasoning
Affective Computing
A History of Modern Computing
Trust and Risk in Internet Commerce
Object-oriented Behavioral Specifications
Neural Networks
Internet Dreams : Archetypes, Myths, and Metaphors
The Simple Genetic Algorithm : Foundations and Theory
Beyond the Book : Technology Integration Into the Secondary School Library Media Curriculum
Natural and Artificial Minds
Architects of the Information Society : 35 Years of the Laboratory for Computer Science At MIT
The Art and Science of Computer Animation
Great Jobs for Computer Science Majors
Programming Perl
Access Database Design & Programming
Director in a Nutshell : A Desktop Quick Reference
PalmPilot : The Ultimate Guide
Running Linux

Appendix F
List of titles in sample selection for Religion

Power & Purity : Cathar Heresy in Medieval Italy
African-American Christianity : Essays in History
Who Was Saint Patrick?
Piety and Humanity : Essays On Religion and Early Modern Political Philosophy
In Search of God the Mother : The Cult of Anatolian Cybele
The Jewishness of Israelis : Responses to the Guttman Report
Soul Snatchers : The Mechanics of Cults
In the Beginning : The Navajo Genesis
Ancient Sisterhood : The Lost Traditions of Hagar and Sarah
Paradise and Paradigm : Key Symbols in Persian Christianity and the Baháí Faith
Religion and Magic : Approaches and Theories
From Sin to Salvation : Stories of Women's Conversions, 1800 to the Present
Muhammad and the Origins of Islam
Risks of Faith : The Emergence of a Black Theology of Liberation, 1968-1998
Ethics and the Catechism of the Catholic Church
Death, Ecstasy, and Other Worldly Journeys
The Puritan Tradition in America, 1620-1730
The Great Goddesses of Egypt
The Evidential Argument From Evil
The Seductiveness of Jewish Myth : Challenge or Response?
Religion As Critique
Lao-tzu and the Tao-te-ching
The Female Face in Patriarchy : Oppression As Culture
Reinventing American Protestantism : Christianity in the New Millennium
Cathedral Shrines of Medieval England
Hearing the Voices of Jonestown
The Christianity of Constantine the Great
Monsters & Madonnas : The Roots of Christian Anti-semitism
Islam, Gender, & Social Change
The Hidden and Manifest God : Some Major Themes in Early Jewish Mysticism

Appendix G
List of titles in sample selection for Arts

Spectacular Nature : Corporate Culture and the Sea World Experience
Ethnic Vision : A Romanian American Inheritance
The Mexican Corrido : A Feminist Analysis
The Situationist City
Body of Vision : Representations of the Body in Recent Film and Poetry
The Passion of David Lynch : Wild At Heart in Hollywood
Justified Lives : Morality & Narrative in the Films of Sam Peckinpah
The Art of the Funnies : An Aesthetic History
Frida Kahlo : An Open Life
Star Trek and Sacred Ground : Explorations of Star Trek, Religion, and American Culture
Savage Cinema : Sam Peckinpah and the Rise of Ultraviolent Movies
The Historiography of Modern Architecture
Literature and Film in the Historical Dimension : Selected Papers From the Fifteenth Annual Florida State University Conference On Literature and Film
Cultures of Vision : Images, Media, and the Imaginary
Love and Ideology in the Afternoon : Soap Opera, Women, and Television Genre
Arts and Politics of the Everyday
Recreational Terror : Women and the Pleasures of Horror Film Viewing
The Transparency of Spectacle : Meditations On the Moving Image
Bad Girls and Sick Boys : Fantasies in Contemporary Art and Culture
African American Quilting in Michigan
Modern Hamlets & Their Soliloquies
Architecture in the United States
The Films of the Eighties
Movies As Politics
Erotic Faculties
Under the Spell of Orpheus : The Persistence of a Myth in Twentieth-century Art
Melodrama and Meaning : History, Culture, and the Films of Douglas Sirk
More Than Night : Film Noir in Its Contexts
The Private Worlds of Marcel Duchamp : Desire, Liberation, and the Self in Modern Culture
The Building Program of Herod the Great

Appendix H

List of titles in sample selection for History: World and General

Dialogue, Conflict Resolution, and Change : Arab-Jewish Encounters in Israel
Japan in Traditional and Postmodern Perspectives
Lost Kingdoms : Celtic Scotland and the Middle Ages
Aryans and British India
Crossing Borders : An American Woman in the Middle East
The First Immigrants From Asia : A Population History of the North American Indians
Diaries to an English Professor : Pain and Growth in the Classroom
The Devil's Crown : A History of Henry II and His Sons
The Waterloo Campaign, June 1815
Voices From Exile : Violence and Survival in Modern Maya History
Spectacle and Society in Livy's History
The Making of Modern Colombia : A Nation in Spite of Itself
People of the Peyote : Huichol Indian History, Religion, & Survival
Theoderic in Italy
Postmodernism and the Other : The New Imperialism of Western Culture
Salo Wittmayer Baron : Architect of Jewish History
Luminous Debris : Reflecting On Vestige in Provence and Languedoc
The Rise of a Party-state in Kenya : From "Harambee" to "Nyayo!"
Call of Duty : A Montana Girl in World War II
The Conservatives and British Society, 1880-1990
Fighting Slavery in the Caribbean : The Life and Times of a British Family in
Nineteenth-century Havana
Philosophical Perspectives On the Israeli-Palestinian Conflict
Campus Wars : The Peace Movement At American State Universities in the Vietnam Era
Women Writers and Fascism : Reconstructing History
Shades of Mao : The Posthumous Cult of the Great Leader
Dreams of Difference : The Japan Romantic School and the Crisis of Modernity
Orientalism and the Postcolonial Predicament : Perspectives On South Asia
Vichy : An Ever-present Past
Past Into Present : Effective Techniques for First-person Historical Interpretation
Images and Ideologies : Self-definition in the Hellenistic World

Appendix I
List of titles in sample selection for Education

Writing in Disguise : Academic Life in Subordination
Troubled Times for American Higher Education : The 1990s and Beyond
Sexual Harassment On College Campuses : Abusing the Ivory Power
Hurricane Andrew, the Public Schools, and the Rebuilding of Community
Logomachia : The Conflict of the Faculties
The Story of Elderhostel
The Politics of Academic Culture : Foibles, Fables, and Facts
Education and Justice : A View From the Back of the Bus
Critical Squares : Games of Critical Thinking and Understanding
Peer-assisted Learning
Literature Links to Phonics : A Balanced Approach
Beginning in Retrospect : Writing and Reading a Teacher's Life
The Calling of Education : The Academic Ethic and Other Essays On Higher Education
Improving Schooling for Language-minority Children : A Research Agenda
Charter Schools : Another Flawed Educational Reform?
Understanding and Supporting Children With Emotional and Behavioural Difficulties
Free Speech in the College Community
Emergent Issues in Education : Comparative Perspectives
Metacognition in Educational Theory and Practice
Professional Development for Cooperative Learning : Issues and Approaches
Community Service and Higher Learning : Explorations of the Caring Self
Cultural Diversity in Schools : From Rhetoric to Practice
Opposing Censorship in the Public Schools : Religion, Morality, and Literature
Critical Perspectives On Project Head Start : Revisioning the Hope and Challenge
Forging a Fateful Alliance : Michigan State University and the Vietnam War
Play and Literacy in Early Childhood : Research From Multiple Perspectives
Learning, Creating, and Using Knowledge : Concept Maps As Facilitative Tools in Schools and Corporations
Practicing Virtues : Moral Traditions At Quaker and Military Boarding Schools
Testing, Teaching, and Learning : A Guide for States and School Districts
Motivation and Learning Strategies for College Success : A Self-management Approach

Appendix J
List of titles in sample selection for Psychology

Behavioral, Social, and Emotional Assessment of Children and Adolescents
A Child's Play Life : An Ethnographic Study
Time and Psychological Explanation
Metaphors of Interrelatedness : Toward a Systems Theory of Psychology
Changes of Mind : A Holonomic Theory of the Evolution of Consciousness
Reasoning and Thinking
Variations On a Theme : Diversity and the Psychology of Women
Identification and Character : A Book On Psychological Development
Learning, Remembering, Believing : Enhancing Human Performance
Cognition in the Wild
Mind As Motion : Explorations in the Dynamics of Cognition
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