
Impact of Electronic Resources on Collection Development, the Roles of Librarians, and Library Consortia

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ABSTRACT

AS LIBRARIANS ADDED AUDIOVISUAL MATERIALS to their collections and then electronic materials, they moved from selection as an individual activity to selection as a group activity. Librarians made every effort to mainstream the resulting selection process and incorporate it into the existing library organization. However, with the advent of the Internet and the ability to simultaneously share virtual resources, cooperative collection development, through consortial arrangements, became popular once again. The ability of consortia to purchase products at a better price than individual libraries can has made them very popular with funding agencies. However, the result is that the role of the selector has been diminished. As the purchase of virtual resources accelerates, particularly through consortial agreements, the autonomy of the local library will fade and the roles of librarians will change drastically. This rapid transformation is illustrated by a discussion of OhioLINK and its effects, both positive and negative, on one member library.

INTRODUCTION

There was a time when librarians primarily bought books and periodicals and it was easy to rely on book reviews and standard reference works as selection tools. Before the *Thor Power Tool Co. v. Commissioner* (439 U.S. 522, 1979) decision, publishers kept an inventory of their publications (Loe, 1986). Librarians could wait for book reviews in order to make thoughtful selections for library collections. Selection was essentially an

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individual activity regardless of who did it or how the activity was organized.

As libraries began to purchase audiovisual materials, selection decisions became more complex. Content and relationship to the collection were no longer the only major selection factors under consideration before purchase. An item that might be appropriate for its content and relationship to the collection might not be compatible for use with existing equipment. As the acquisition of audiovisual materials increased, librarians probably faced the issue of licensing content for the first time.

License agreements that require adherence to a set of contractual obligations are usually far more restrictive than copyright law. Libraries have independent control over the copyrighted works that they own. However, that is not the case with licensed materials, thus licensing introduced a fundamental change in the relationship between the library and some of the information being made available to the public. Thus licensing became yet another important factor that had to be considered before purchase. Added to this increased complexity was, in many cases, a much higher price per item than generally paid for books. It was clear that individual decision-making was not adequate for the task at hand (Coyle, 1997, pp. 108-09).

These factors and others led many libraries to adopt a group decision-making model for the selection of these expensive and complex materials. The new model brought together not only those with subject expertise but also those with technical expertise. Thus, when the electronic information age began to impact libraries in the mid-1980s, librarians had some experience in selecting similar complex materials. It is doubtful, however, that librarians understood the extent to which these new products would affect traditional library processes and procedures.

This article examines some of the ways in which electronic resources have impacted traditional library practices and how some of these practices have begun to change. From the evolving roles of the bibliographer, cataloger, and the reference librarian, to the impact of the new library consortia on the local mission, librarianship is rapidly transforming from a paper-based industry focused on ownership of physical items to a virtual industry where future roles may blur together. The experiences of one library will illustrate the speed at which this transformation is now occurring.

GROWTH OF ELECTRONIC RESOURCES

Although information in electronic format was created with the advent of the computer in the 1950s, it was not until the early 1960s that the first database suitable for searching was developed. MEDLARS was the first on-demand computer-based information retrieval service, and it was developed primarily for the medical profession. In 1971, MEDLINE, the

online version of MEDLARS, was the first major online dial-up database search service. In the following year, DIALOG offered the first public online commercial database. With these first databases, there were no real acquisition decisions, as they were offered as access services to which libraries could subscribe. Actual searching of these databases produced charges that many libraries passed along to users. While the information revolution was clearly underway, it was not until after the introduction of the CD-ROM in the mid-1980s that electronic resources began to have a major impact on selection practices in libraries (Meadow, 1988).

Many of the first CD-ROM products offered to libraries were versions of larger online databases and were supplied on a subscription basis with ownership of the data remaining with the publisher/producer. Initially, the price of the product included licensing of the content and possibly the purchase of a computer and CD-ROM player as well. Products were guaranteed to work only with specified CD-ROM players, as standards were not yet established. The purchase of this equipment as part of the cost of the information product was not always easy. Often equipment was not considered an appropriate use of the library's materials budget. However, equipment budgets were not always large enough or flexible enough, initially, to accommodate this new demand. As with audiovisual materials, the unit price of these products was high and use was often limited to one individual at a time.

Although very expensive at first, CD-ROM products gradually became more affordable. As personal computers became widely available in most libraries, these products also became very popular. Initially, these CD-ROM databases could be used by only one person at a time, a major drawback, especially considering their high cost. The alternative was to purchase the needed database on magnetic tape and mount it on the local computer system, which could provide simultaneous access to many users. This, however, was a very expensive solution and one that most libraries could not afford. Gradually, hardware and software solutions were found that allowed several users to access the same CD-ROM database simultaneously. Some libraries even found ways to provide access to CD-ROM products to sites outside of the library.

As librarians grappled with these technological advances, they continued to make careful selection decisions for these high cost products. Most typically, a group that included subject specialists, reference librarians, instruction librarians, and technical staff made the selection decisions. However, just when librarians appeared to have mainstreamed the selection of electronic materials as they had audiovisual materials, another new technology arrived—the World Wide Web.

THE INTERNET

A communication network called Advanced Research Projects Agency

network (ARPANet) was created in the 1960s and 1970s by the Department of Defense to support military research and linked some military, research, and academic computer centers. Recognizing the value of connecting computer centers for all kinds of research, the university community created its own internetwork in 1981 which was soon called the Internet. Gradually other networks developed, including NSFNet which connected the six NSF supercomputer centers in the United States. Soon it began to carry data traffic between the university Internet sites and thus became the real backbone of today's Internet (Coyle, 1997, p. 18). The Internet is now international and connects all kinds of networks in over seventy-five countries of the world (Johnson, 1994, p. 64).

By the early 1990s, individuals at all levels in higher education had begun to have access to electronic mail. Using Telnet, librarians could search the online catalogs of many libraries and, by using FTP, electronic information could be transferred from one site to another. Publishers were also beginning to experiment with different approaches to publishing journals electronically, and, by 1993, there were more than 3,000 titles available in electronic formats (Evans, 1995, p. 204). However, it was not until the development of the World Wide Web (WWW) in the mid-1990s that it became clear that another truly transforming information revolution had begun.

The Web, now a major portion of the Internet, is based on a technology called hypertext, and it merges this technology with the techniques of information retrieval (Johnson, 1994, p. 75). Information can be stored on the Web in any format including text, graphics, sound, and video. Although initially limited by text-only interfaces, with the development of the full graphical user interface (GUI), this powerful but easy to use information system has experienced tremendous growth in only a few short years. The advent of the GUI made computerized library catalogs easier to access and use than ever before, and most libraries provide users with Internet access to them. For libraries, however, one of the most innovative uses of the WWW is to provide access to databases that no longer must be mounted on central computers or purchased on CD-ROMs. In addition, individuals, institutions, and businesses everywhere have posted an incredible amount of information on the Web. And, of course, the Web has provided a tremendous boost to the development of electronic publications of all types.

THE CHANGING ROLE OF THE TRADITIONAL BIBLIOGRAPHER: SOME VIEWS WITHIN THE PROFESSION

In 1987, Bryant described the organization of collection development in academic libraries as ranging from collection development performed by a single librarian, to collection development performed by a committee of librarians, to collection development handled by a separate unit of

the library. In 1991, Creth suggested a model for collection development that has a primary administrator combined with teams of "librarians from throughout the library who have the appropriate subject knowledge to accept collection management responsibilities" (p. 79). G. Edward Evans, in his 1995 standard collection development text, *Developing Library and Information Center Collections*, states that the organization of selection activities in libraries is the "element in which the greatest variations exist among and within the types" of libraries and, within academic libraries, he describes several different methods of selection: "[F]aculty only, joint faculty/library committees, librarians only, or subject specialists" (p. 24).

Evans acknowledges that, while some writers suggest the demise of collection development with the advent of the virtual library, he believes that selection and collection development will "remain an important function in whatever environment technology will bring" (p. 26). Whether or not Evans is right about the future of collection development, over the past twenty years, much has changed in how libraries perform basic functions. Librarians are beginning to take notice that some of the old methods (for example, subject selectors working in their offices to build the comprehensive collection) are no longer relevant to the needs of the organization. For many years, selectors were faced with the disruption caused by the serials pricing crisis, which was coupled with the lack of new money for library material purchases. Now, "economic forces and technological advances have combined together to create a new environment, one where access to collective scholarly resources that no one library could ever afford supersedes the historic quest for the great comprehensive collection" (Harloe & Budd, 1994, p. 83).

In this new environment, where users are rapidly creating their own virtual libraries and where everyone seems to be a Web "expert," it is only prudent for librarians to reexamine their roles and functions. Numerous library programs and institutes have explored the challenges facing librarians as they examine the library's time honored mission "to collect materials that appeal to our user base over time, and to make them locally, readily available" (Strauch, 1992, p. 13).

Nancy Cline (1994), now Roy E. Larson Librarian of the Harvard College Library, has addressed this issue. She suggests that, rather than look at what is happening to the positions held by collection development personnel, we should examine how collection development programs are meeting the emerging needs of institutions. She believes that merely buying materials does not make them valuable. Rather, it is the conventions of access, instructional programs, and an understanding of how scholarship and research are actually conducted that inform collection development. She concludes that these factors suggest that collection development activities should involve the maximum number of people in this important activity rather than limiting it to subject bibliographers (p. 18).

As early as 1981, Paul Mosher, vice provost and director of libraries at the University of Pennsylvania, called for a shift from collection development as acquisitions, selection, and collection building, to collection management which includes "a much broader range of policy, planning, analysis, and cooperative activities" (in Branin, 1994, p. xii). In 1993, Mosher urged "collection development librarians to connect their past to the present by effectively managing the convergence of print and electronic information systems" (in Branin, 1994, p. xii).

Ross Atkinson (1994), deputy university librarian at Cornell University, believes that, while this convergence will not necessarily eliminate the need for selection in the sense of source assessment as an information service, it will "almost certainly...render obsolete collection development as an operationally separate function" (p. 102). He concludes that "collection development as a separate library operation . . . probably will not survive the eventual disappearance of paper . . . [but] will have, nevertheless, a critical role to play in the transition from paper to online access" (p. 102). Atkinson believes that the most critical and most important responsibility of collection development in the transition "will be to ensure that selectors begin to learn more about, and to form closer administrative links to, what are now the cataloging and reference operations in order to prepare the way for what will be the inevitable fusion of selection with those two operations" (p. 106).

VIRTUAL MATERIALS ARE CHANGING THE ROLE OF THE SELECTOR

Librarians who are currently involved in selection and collection development activities are feeling particularly threatened as they struggle to maintain their relevance to their organizations. According to James Campbell (1998), the increased availability of information over the Internet along with "the ubiquity of the Web means that our users are moving toward the digital library whether we like it or not" (p. 44). One of the first challenges for selectors in the electronic information age was whether or not to purchase these new materials due to the nature of license agreements that changed the control libraries had over the product. Another challenge was to involve the appropriate technical specialists, in addition to subject selectors, in the decision-making process due to the complexity of making these new materials available to users (Davis, 1997, p. 392). Librarians then struggled to mainstream the selection and processing of electronic materials within traditional functional channels but kept tripping up over issues such as whether or not to catalog materials that were licensed but not owned by the library, not to mention *how* to catalog them.

While catalogers struggled with issues of how to incorporate these new materials into catalogs, reference librarians took action. As Kathleen Kluegel (1998) has described:

In the virtual reference space, many reference libraries are creating support structures for their kaleidoscopic collections through their homepages, providing mental mapping of the intellectual space and signposting the Web. Some of these homepages divide the resources by type: directories, encyclopedias, indexes, etc. Others divide it by function: finding facts, writing a paper, etc. In all cases, reference librarians are devising intellectual access systems that their user communities can find and use. (p. 24)

Although electronic resources have expanded far beyond the initial abstracting and indexing tools, Kluegel believes that reference librarians have an important role to play in shaping access tools for all these materials. She states: "I believe that the creation of the intellectual infrastructure for electronic resources would be more readily achieved if the processes of identification, selection, and description were combined with the reference and access services of a library" (p. 27). She further states that the organizational structure of the library needs to shift to accommodate an expanded role for the reference librarian in collection development so that these goals can be more readily achieved. Bonnie MacEwan (1998) believes that "one of the most critical issues facing collection development today is how to bring together subject, technical, and service expertise in the most effective manner" (pp. 11-12).

However, as librarians are seeking to tame the Internet and mainstream the selection and processing of electronic resources, another development may ultimately change the very nature of how collections are selected and provided to users. Librarians have long sought solutions to the dilemma of too few dollars chasing too many resources. Thus, cooperative collection development schemes of all kinds have come and gone over the years. One of the stumbling blocks of these programs has been the difficulty in sharing cooperatively acquired materials. However, now that libraries have the ability to access shared virtual resources at the instant of need, new cooperative purchase programs are inevitable.

LIBRARY COOPERATION AND COLLECTION DEVELOPMENT

Libraries have a very long history of cooperating to share resources. Traditionally, libraries formed networks with goals to facilitate interlibrary loan through the creation of union catalogs, to provide reciprocal borrowing privileges to patrons of member libraries, and to develop cooperative collection development plans. In the 1970s, automation arrived and libraries again looked to cooperative arrangements to share equipment, software, and expertise. For example, in the case of the Colorado Alliance of Research Libraries, the member libraries pooled resources in an effort to create a shared library system; that in turn facilitated the sharing of resources via a centrally shared computer system. For the most part, all these activities were aimed at facilitating the sharing of physical resources, primarily books and journals.

Of these three goals, cooperative collection development efforts have been the least successful. Traditionally, cooperative collection development schemes involved dividing responsibility for acquiring peripheral materials, defined as research material unlikely to be in high demand among the consortial partners. However, despite the widespread belief that by cooperatively building collections the quality of library service could be significantly improved, these efforts did not create the desired results. The reasons for this failure range from the reluctance of libraries to fund the efforts needed for its accomplishment, unwillingness of libraries to give up autonomy and the competitive academic culture, to unrealistically placing consortial demands above local priorities (Shreeves, 1997, pp. 373, 376).

Despite the failure of traditional approaches to cooperative collection development, Shreeves (1997) notes that "the future of cooperative collection development is inextricably linked to the future of collection development itself" (p. 383). He further states that "the innate grounding of collection development in the physical object, its focus on the distinction between what Atkinson called the collection and the anti-collection, renders its function in the coming digital world questionable at best" (in Shreeves, 1997, p. 383). Shreeves continues to outline the emergence of a new kind of collection development in the electronic age based on the lack of ownership. Whereas, in the past, cooperative collection development schemes were based on the ownership of little-used materials, the new plans are based on licensing of heavily used materials. As Shreeves notes, "even when this is research-intensive information, the ability to provide immediate access from anywhere makes it far more shareable than the peripheral material that was the traditional object of cooperative collection development" (p. 385).

Not only does Shreeves see a transformation in the traditional meaning of cooperative collection development, he also foresees a fundamental change in the nature of all collection development work. He believes that "the function of selection will likely pass more and more into the hands of users, who will exploit the tools provided by libraries and others to identify and retrieve material through the network" and that collection developers will become the managers of electronic rights ensuring that institutional users get the access and information that they need (p. 386).

COOPERATIVE COLLECTION DEVELOPMENT AND THE REBIRTH OF CONSORTIA

Although libraries have long joined consortia, it seems that recently, consortial arrangements have become more popular than ever before. According to William Potter (1997), "academic libraries are forming consortia to provide common access to electronic resources across the Internet, and they are forming these consortia on a statewide basis" (p. 416). Many

of these new cooperative efforts have been mandated by governing bodies for the sole purpose of sharing a core of electronic products. In other cases, older consortia have gained a new lease on life by also taking on the challenge of cooperatively developing electronic or virtual libraries.

Whether old or new, today's most successful consortia provide three basic functions. These include sharing physical resources, providing connections to the Internet and the WWW, and providing access to electronic resources. This last function may be achieved in a number of ways. The consortium may act as a collective purchasing agent to obtain the best quantity price for electronic products that can then be selected by individual libraries at will as long as the minimum quantity is purchased. Another popular approach is for the consortium to purchase an electronic product for the group, mount it on a local server, and provide dial-up or Internet access to the entire member base. The third, and increasingly popular method, is for the consortium to license the product for the entire member base and provide a gateway to the third party product or member access directly to the product's Web site (Potter, 1997, p. 429).

The first and possibly most viable reason for the success of these new consortia has been their ability to obtain more favorable pricing for products than libraries have been able to obtain individually. Furthermore, by having access to a large pool of funds, consortia directors have been able to more easily attract the interest of producers/publishers who can now negotiate for larger sums of money from fewer purchasers. Other more idealistic reasons for the success of these consortia have also been identified. These include the ability to provide greater access to core materials needed by the smaller libraries within the group, improved level of service and convenience to users previously excluded from expensive resources their individual library could not provide, and the possibility that consortia will be able to help contain future costs (Potter, 1997, pp. 430-31).

The very success of consortia in cooperatively developing shared electronic resources has also created some dilemmas for librarians, particularly those involved in selection decisions. Librarians readily acknowledge that consortia purchases have provided access to a larger group of resources than ever before possible, an undeniable benefit. However, as Patricia Iannuzzi (1998) has explained:

Even if one is the person sitting at a table representing your institution, one does not have control over the decisions that get made by the group. Conflicting priorities, the consensus-building process, and the systems infrastructures of the member libraries are all contributing factors to the final selection of services. (p. 2)

Or, as expressed by Kluegel (1998), "the role of consortia in acquiring electronic resources for reference has diluted the influence of reference librarians in shaping the reference collection, but it has increased the variety of resources available" (p. 23). This lack of influence in the selec-

tion process can leave reference librarians feeling alienated from the very collection for which they provide service. In some cases, this alienation stems from the fact that institutional dollars are spent on electronic resources with less perceived value to the local clientele, while there is not enough money left to purchase other materials perceived to be of greater value to local users (Iannuzzi, 1998, pp. 2-3).

A CLOSER LOOK AT ONE OF THE "NEW" CONSORTIA

OhioLINK is a consortium of seventy-five Ohio college and university libraries, including both public and private institutions. The original concept for OhioLINK began as an effort to control the building of new libraries by providing regional storage facilities. From there the concept grew to sharing primarily print-based materials through a central library system, which remains a vital part of the consortium's program today. "However, its function has evolved to provide electronic resources, and it could be argued that its larger purpose now is to leverage the weight of its consortium for the purpose of providing as many electronic resources as possible at the lowest negotiable price" (Potter, 1997, p. 424).

OhioLINK provides a wide variety of electronic resources, including more than 90 research databases, 2,500 electronic journals and, more recently, a digital media center. Many of these products are fully funded by OhioLINK. Others are collectively purchased at a discount price by the individual library, if selected, from funds contributed to a "war-chest" by both consortial members and the central consortia office or funded by the entire consortium based on a formula that usually includes some incentive funding by the central consortium office as well. Although all these materials are extremely important to the consortium members, it is perhaps the Electronic Journal Center (EJC) which is the most exciting development in OhioLINK's program.

The EJC now contains the complete electronic journal collections of seven publishers: Elsevier Science's *ScienceDirect OnSite* (1,200+ titles), Academic Press (180 titles), Project Muse (46 titles), Kluwer Academic (300+ titles), Springer-Verlag (400 titles), John Wiley & Sons (400 titles), and 8 titles from the American Physical Society. Prior to these acquisitions, each of Ohio's major universities held, on average, only 280 of the Elsevier titles, so clearly these consortium purchases significantly increased the research capacity of Ohio's academic institutions. The EJC began operations in April 1998 with only the Elsevier and Academic titles and has been heavily used ever since. At the time this article was written, the peak usage had occurred the last week of January 1999 when 12,500 articles were downloaded by OhioLINK users. Altogether, during the first seventeen months of operation, the EJC surpassed all expectations with over 450,000 articles downloaded and more than 50 percent of these from journals that were not originally owned by the requesting institution.

David Kohl (1997), dean and university librarian at the University of Cincinnati Libraries and an active OhioLINK member, has called OhioLINK a new kind of library consortium and believes that it will have a major influence in restructuring collection development at the local level in Ohio. He believes that this restructuring will fall under three rubrics: stewardship, consortium level participation in the information revolution, and the transformation of the role of the bibliographer. Under the rubric of stewardship, Kohl has suggested that responsibility for collecting marginal, esoteric, or highly specialized research material should be divided up on a coordinated, statewide, or regional basis, although heavily used core materials would still be purchased locally. Consortium-level participation in the information revolution requires the development of new tools and new funding formulas that take advantage of the economies of scale. Finally, he sees the role of the bibliographer changing from that of developing the local collection to that of mapping the existence of materials and how they are accessed. Kohl believes that bibliographers will play a major role in redefining their responsibilities and the shape of the new organizations in which they will work.

A CLOSER LOOK AT ONE CONSORTIUM MEMBER

Cleveland State University (CSU) is an urban state-assisted university serving over 16,000 graduate and undergraduate students or 10,518 full time equivalents in the liberal arts and sciences, business administration, engineering, education, urban affairs, and law. Although a relatively young institution, its library collection benefitted from receiving the older collection of Fenn College, which became a part of Cleveland State University when it was formed in 1964. It also benefitted from very robust library funding during its formative years. Among the eleven Ohio public universities, Cleveland State University is tenth in size of enrollment. At the end of fiscal year 1997, before OhioLINK's EJC had made an impact on journal holdings, CSU held 5,943 current periodicals and had the sixth largest collection of current journals of the public institutions. At the same time, the institution experienced a drop in enrollment over a several year period, thus the library did not receive significant increases in the materials budget for several years. This situation should have resulted in the cancellation of many of these journal titles but, hoping for a turnaround in enrollment, which has indeed occurred, the library retained its journal subscriptions at the expense of book acquisitions. This strategy could have been effective for the CSU Library if the materials budget had grown; however, it has had an unexpected side effect.

OhioLINK receives a significant portion of its funding from the State of Ohio. Initially, when OhioLINK began to purchase electronic resources for member libraries, these electronic resources were funded by the central consortium office with public dollars. However, as the program be-

came more successful and the possibilities for providing even more electronic resources grew, the consortium began to look for other ways to fund these very desirable materials. For the electronic journals, the decision was made to charge the cost of the electronic journals back to the OhioLINK libraries based on the paper subscription lists held by the individual libraries and with the central consortium office picking up some additional costs and providing some incentives. The determination of each library's portion of the entire bill was thus fixed in time, based on the titles to which each subscribed with no future opportunity to change that formula based on cancellations either due to programmatic changes or economic circumstances. Had Cleveland State University Library actually canceled journals in 1995, as it should have based on the economic situation at that time, its current portion of the OhioLINK bill would have been reduced. However, it now no longer has the flexibility to cancel titles provided by the EJC despite changing needs unless the entire consortium agrees to the cancellations. OhioLINK does track very carefully the actual use of EJC titles. These statistics show that 40 percent of the EJC titles are delivering 80 percent of the downloaded articles. It is hoped that this type of information will help OhioLINK finely tune its future subscription list, thus reducing the cost to individual consortium members.

On the other hand, Cleveland State University faculty and students have been heavy users of the EJC. From July 1998 to June 1999, CSU users downloaded 11,347 articles from the EJC. Of these articles, 82 percent had not been held in print previously at CSU. Additionally, many of these article requests represented more than five requests from the same journal, for a total of 304 journals not previously held in print with more than five requests per title. In comparison with the fifteen Ohio academic institutions that previously had print subscriptions to Elsevier and Academic titles, CSU's total use places it as the ninth heaviest user of EJC articles.

For Cleveland State University, access to the EJC has clearly been a success. However, the economics are very difficult given the recent history of very modest increases to the library's materials budget. In FY 1997, the first year that OhioLINK had a fixed impact on the budget, that impact was 1 percent. In FY 2000, the fixed impact had risen to 17 percent and is projected to consume 23 percent of the budget in FY 2001 if no new electronic resources are selected at the consortium level. Since OhioLINK is aggressively pursuing new electronic resources, it is more realistic to assume that future fixed payments to OhioLINK will increase even more dramatically than described here.

These economic realities have forced Cleveland State University Library to take a risky step. There is a small financial incentive to cancel duplicate paper subscriptions for those titles held electronically. CSU found it necessary to cancel its paper subscriptions for Elsevier and Academic titles as soon as the first bill for these electronic titles arrived, as CSU

could not afford to carry these materials in both formats. In the case of the first two publishers, consortium members had several months of "free" electronic service when paper and electronic resources overlapped since OhioLINK funded the initial purchase. With the new publisher packages recently finalized, CSU cannot afford the luxury of any overlap between the paper and electronic subscriptions. Fortunately, OhioLINK has negotiated to actually own and archive the electronic material currently available in the EJC, thus it appears that the risk of not having a paper archive at CSU is somewhat diminished at the present time.

While this experience at Cleveland State University may represent only a coincidence, it is more likely a harbinger of the future. Indeed, as a greater percentage of the materials budget represents consortium expenditures and becomes fixed, there will be less discretionary funds to spend at the local level. It appears that the trend for the "new" consortia is to aggressively seek new deals for electronic resources, a trend that touts cooperative selection and sharing of resources, a goal all funding agencies support. Thus it only stands to reason that the OhioLINK portion of CSU's materials budget will increase, leaving even less for local discretionary purchases unless the materials budget grows dramatically.

This situation will soon force other changes at Cleveland State University as well. Currently the library's materials budget is divided among the academic departments who can choose what they wish to purchase. Traditionally, they have also had the freedom to cancel journal titles to add other titles, purchase monographs, or purchase other materials. However, as the commitment to the EJC grows, departments will no longer be able to cancel any title that is a part of the EJC in order to purchase other needed materials. Clearly, this will necessitate a complete rethinking of how departmental acquisition funds are allocated. Likewise, it is clear that the role of the current selectors will change drastically. Rather than working primarily with the faculty to spend departmental allocations on needed local materials as they do now, will their larger role become one of spending CSU acquisitions dollars to create a highly specialized research collection that might be of marginal interest to students and faculty at CSU? Or will they become primarily managers of Internet connections, working with students and faculty to ensure that they get access to needed materials? Whichever it is, one thing is certain. Selectors will have less control over how local funds are spent.

CONCLUSION

The future look of the academic library will be very different from what it is now. Clearly, consortia will become even more important forces in the electronic information world. As long as they can prove that they are providing a cost-efficient product that is used, they will continue to receive the support of funding agencies. Although probably far too early

to draw any solid conclusions, the current use statistics of OhioLINK's EJC suggests that libraries did not always successfully meet user needs in the print world. Thus, it is very difficult to continue to defend the age-old position that the local library selected the best of the best and made that available to users. As more and more libraries find themselves facing the choice, as did CSU, of providing either paper or electronic journal subscriptions but not both, the very nature of the library will clearly change and change more rapidly than anticipated. Not only will collection developers become the managers of electronic rights, as Shreeves has predicted, but it is likely that many more traditional roles will be changed as the distinctions between them blur.

Librarianship is in the process of being rapidly transformed, as these changes at Cleveland State University and its interaction with OhioLINK illustrate. For those who remain interested in providing information services in the future, Ross Atkinson (1994) has provided the very best advice, "study the changing information needs of the academic community, design services that will meet those needs more effectively than services offered by other agencies inside or outside of academe, and survival will take care of itself. That is the only practicable and responsible strategy to follow" (pp. 92-93).

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Digital Library Information Resource Electronic Resource Electronic Library Virtual Library. These keywords were added by machine and not by the authors. This process is experimental and the keywords may be updated as the learning algorithm improves.Â Thornton, G. A. (2000). Impact of electronic resources on collection development, the roles of librarians, and library consortia. *Library Trends*, 48(4), 842-856. Google Scholar. Twidale, M. (1995). How to study and design for collaborative browsing in the digital library. A paper presented at the 37th Allerton Park Institute of the Graduate School of Library and Information Science. Retrieved August 2002, from the World Wide Web <http://edfu.lis.uiuc.edu/allerton/95/twidale.html>. Twidale, M. (1996). 2 THORNTON/IMPACT OF ELECTRONIC RESOURCES 843 individual activity regardless of who did it or how the activity was organized. As libraries began to purchase audiovisual materials, selection decisions became more complex. Content and relationship to the collection were no longer the only major selection factors under consideration before purchase.Â From the evolving roles of the bibliographer, cataloger, and the reference librarian, to the impact of the new library consortia on the local mission, librarianship is rapidly transforming from a paper-based industry focused on ownership of physical items to a virtual industry where future roles may blur together.