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Chapter 7

Sharing Digital Collections & Content

J. Silvia Cho and LeEtta Schmidt

The information environment that librarians help information seekers to navigate has experienced a radical shift. With the addition of electronic content to print materials, how information seekers access information, as well as how librarians collect, manage, and share information resources, is evolving. As for interlibrary loan (ILL) services, new challenges and opportunities in library resource sharing are emerging, now that interlibrary loan specialists facilitate the sharing of digital, as well as print, information. This chapter examines the successes that library resource sharing specialists have achieved, as well as the challenges they face, with respect to providing access to e-books and e-serials, including the impact on information sharing of licensing models, digitization, open access publishing, and digital preservation archiving.

At first blush, it appears that the popularity of digital formats would facilitate the sharing of information. Technically, this is true. For instance when material is published through open access models, it may be easily discoverable and freely available with a quick Internet search (although search algorithms may not privilege OA in all cases) . However, for the majority of digital scholarly information, published by traditional publishers, as well as any new fiction or non-fiction in popular demand at public libraries, the opposite is the case—sharing is oftentimes more restricted, and even more costly, than in the print environment. License terms for digital journal subscriptions and Digital Rights Management (DRM) technologies can now restrict information sharing, while embargo models place the latest scholarship behind steep publisher paywalls.

Nonetheless, when ILL specialists can legally and technologically share digital content, they are finding new and more efficient ways to do so. Furthermore, even when they find themselves unable to help their library users to access online content, they are often in a position to communicate with those in their libraries who are overseeing the purchase and licensing processes of online materials about the best material to purchase and the best license terms to accept. The perspective of ILL specialists is also valuable when talking directly with authors about their rights to share what they write, and why they might prefer to publish in open access arenas, how they can submit their work to online repositories and what terms they should negotiate with publishers so that they retain the right to share what they write.

E-SERIALS AND RESOURCE SHARING

When librarians first started replacing subscriptions to print journals with licensed access to e-journals, they helped their communities to access information anywhere at any time. At the same time, however, those interested in resource sharing faced three major barriers: (1) a lack of information about what license terms say about interlibrary loan, (2) publisher embargoes that mean that the newest issues of journals remain unavailable for a certain amount of time – usually 12-18 months – unless librarians also purchase print copies or pay much higher access fees or pay high per-article fees, and (3) insufficient holdings information to determine which libraries had the specific issues with the articles that a library user needs. Today, with considerable progress in the acceptance of license terms that acknowledge library rights to share information that they pay for and a greater level of understanding between journal publishers and librarians, who are generally eager to work together to provide greater access to information, ILL

specialists regularly share articles from electronic journals. Still, they cannot do so always because of the following ongoing problems.

Licenses

One important shift affecting the ability of interlibrary loan operations to share information is the change in the legal framework that governs information sharing. While copyright law regulates information sharing in the print environment, it is contract law that takes precedence in the digital environment and contracts can require librarians to agree to certain specific, sometimes even restrictive, license terms. In the U.S., for instance, in the print world, interlibrary loan services are enabled by limitations and exceptions to U.S. copyright law. The first and most powerful precedent is known as the First Sale doctrine (§109 U.S. 17). This allows the owner of a lawfully obtained copy of a work to dispose of it as they see fit. In the world of libraries, this means circulating books to local patrons, as well as lending them, through ILL, to other libraries, and transferring collections to other branches and repositories.

In contrast, another legal program, currently used in 33 countries, attempts to compensate authors for the potential loss of sales due to library circulation of their work is called Public Lending Rights (PLR). Public Lending Rights are a system by which authors can receive payment from a governmental agency when their books are checked out at public libraries. PLR schemes work in tandem with the European Union Lending Right Directive that gives authors exclusive right to control the dissemination of their works, including prohibiting the lending of those works by libraries. Countries can deviate from this exclusive lending right scenario if they provide remuneration rights to authors based on the use of their work by libraries (PLR International, nd).

Fair Use (§107 U.S. 17) is another strong and extremely flexible exception to copyright law that allows copying under certain circumstances, like research, scholarship and teaching. Similarly, fair dealing, in the UK, Canada, and other countries, allows the use of copyright protected content within certain situations, like education. Without fair use, or fair dealing permissions, library patrons would not have the right to make or use copies of copyrighted materials. (The first sale doctrine, in contrast, only concerns the right of a copy owner to share that copy, not the right to make and share reproductions). It is yet another exception, specifically regarding the reproduction of copyrighted materials by libraries and archives (§108 U.S. 17), that allows librarians to create and deliver a single copy, based on the request of a user at another institution, provided that the copy becomes the property of that user and is accompanied by a copyright notice stating that it is for educational, personal use (U.S. Copyright Office, 2011). This exception was later elaborated on in great detail by the National Commission on New Technological Uses of Copyrighted Works (CONTU), and their guidelines are what interlibrary loan specialists know of as the “rule of five”. Under CONTU, interlibrary loan departments are given the safe harbor of requesting up to five articles from the most recent five years of any one journal title before having to pay any copyright fees (U.S. Copyright Office, 2014). It is important to remember that this is a guideline, not a law, and it attempts to strike a compromise between access for readers and compensation for publishers (although not necessarily authors).

Access to e-serials, in contrast, is governed by license agreements that determine what can be done with the content in terms of sharing. Licenses and access contracts, by agreement of both parties, can allow the licensee to do more with the content than copyright law otherwise allows or, as is more often the case, place more restrictions on the access and use of content than

what would be guaranteed by library protections within copyright law. Some e-resource licenses do not allow ILL at all. Others limit sharing internationally or require print copies to be made, even though direct electronic transmission is much more efficient. Such vendor restrictions on interlibrary loan may be tied to a misunderstanding concerning the effects of library information sharing activities (Croft, 2001). Recent studies, including one in Italy, reveal that resource sharing from e-journal content did not replace a title subscription, and instead often encourages the acquisition of titles in borrowing libraries because local users request them (Bernardini & Mangiaracaina, 2011). Also, when compared to the revenue generated by licensing journal packages to institutions of higher education, any fees for single articles that may be lost because of ILL are negligible (Kluzek, 2014).

Furthermore, even with licenses that do allow the sharing of electronic journal articles, librarians face another major hurdle: the complicated licensing landscape among multiple vendors offering thousands of commonly overlapping titles. Since these complexities make monitoring and applying license language nearly impossible, they can cause uncertain ILL staff members to reject lending requests unnecessarily. While cases about ILL sharing have not been taken to court, publishers have sued institutions using digital content for e-reserves, as recently seen in the *Cambridge Press v. Georgia State University* case. This can lead librarians to become wary and less willing to share information, when their job should be to advocate for more information sharing.

The resource sharing community has responded to such challenges with creative solutions that help librarians know what they can share and encourage them to do so. A leading example is ALIAS (Article Lending Information Availability Service), a tool created by the IDS Project, a library cooperative originating in New York State that has now expanded to 87

libraries in multiple states (Rogers, 2009; Sullivan et al., 2013). ALIAS is an add-on, used in conjunction with ILLiad, a popular ILL management software, to provide community-gathered information on terms regarding ILL taken from generic publisher licenses or from communication with publisher representatives (Information Delivery Services Project [IDS Project], 2016; Sullivan et al., 2013, p.282).

OCLC's Knowledge Base is another tool designed to help libraries navigate their own licenses and electronic subscriptions. Originally tested as an extension to OCLC's Direct Request function, it provides similar information as the ALIAS tool but all OCLC member libraries have access to it. Participants in the Knowledge Base upload reports from their in-house electronic resource management systems that include links to journal volume, issue or article level, as well as licensing information for that journal collection. A URL to the library's own content and a note about how it can be shared will then show in the lending request form of either OCLC WorldShare or ILLiad (Melvyn, 2010).

Embargoes

A second obstacle to library resource sharing comes from publisher embargoes on new content. A prevalent model of acquiring electronic journal content in libraries is by subscription to aggregated databases, which often impose embargo periods (12-18 months) on the full text of articles from the most recent issues of journals (Sturr & Parry, 2010, p.121). This measure prevents access to the latest articles, which people understandably need, affecting both a subscribing library's own patrons and that library's ability to supply those articles via interlibrary loan. Moreover, embargo data is often not well represented in interlibrary loan location tools, such as OCLC's WorldCat, which presents an additional challenge to resource sharing librarians.

For these reasons, argue Sturr & Parry, “it is critical that the issue of embargo be raised with both vendors and publishers. Consequently, library administrators should actively seek ways to join forces to create a large, vocal demand for minimal embargoes” (2010, p. 121). Another potential model that could help publishers, authors, librarians and information seekers, alike, is the adoption of lower single article fees, and quick requesting mechanisms integrated with OCLC, so that librarians could more easily and cost effectively access newer articles.

Holdings Information

The third unresolved issue impacting the sharing of e-journals involves determining the locations of materials. For successful library resource sharing, it is important not just to find out what materials exist, but to determine at which library they are held, and in what format or collection. OCLC’s WorldCat continues to be, as it was in the print era, the premier database for enabling librarians to discover the location of materials in the U.S., and increasingly around the world (although it certainly does not contain all library materials). The serial record for print journals in WorldCat includes library holdings information, including the date range of issues for any given title, at any particular library. Resource sharing professionals rely on this level of information to discover precisely at which lending libraries a requested article can be found. Holdings need to be updated by cataloging staff as material is weeded or purchased and some libraries do not have the staff to do this regularly. By contrast, perhaps because of constant changes and the limitations of automatic updating, electronic journal records more commonly do not include this holdings information, making it impossible for a borrowing library’s staff to precisely locate needed material at other libraries. Sending out an ILL request without knowing which libraries have the needed issue creates excess work for supplying libraries and delays for

requesting librarians and their users. Logically, then, many borrowing professionals simply avoid using records coded as electronic resources, even though this greatly reduces the pool of sources for filling requests. The general lack of detailed holdings information for e-serials, then, can lead to inefficiency-- lower fill rates and longer turnaround times. It also means, from the lending library perspective, that resources that librarians subscribe to, and pay for, and that information seekers want to access, all too often, go unused (Sturr & Parry, 2010, p. 118).

This issue appears to be a technical one that could be fixable, but there is no product available that currently that solves this problem. In the current cooperative cataloging model employed by WorldCat, each library creates and uploads Local Holdings Records (LHR) for material they own. Local Holdings Records (LHR) can be categorized into four levels of specificity. Of these, levels one and two provide information only on whether a given journal title is held, or is not held, by a given library; levels three and four are the tiers that provide information about detailed holdings—the date range of issues held, which is the information that is useful to resource sharing professionals (Sturr & Parry, 2010, pp. 118– 119). “Many libraries maintain LHRs for their print journals, but only a few maintain or even have LHRs for journal titles in their online products and subscriptions” (Sturr & Parry, 2010, p.119).

RapidILL, a system created by the library staff at Colorado State University Libraries, overcomes this problem by requiring its members to periodically upload journal holdings updates for both print and electronic journals. The holdings updates reports are sent by each participating library and must include holdings information to the year so that requests can be routed more quickly and accurately (RAPIDILL, nd). Compared to OCLC holdings database and their membership, RapidILL is small, so perhaps the higher level of commitment to upload detailed holdings information is easier to sustain than it is in the greater resource sharing community.

(There is also a fee to belong to RapidILL, so many libraries with smaller budgets and fewer staff probably also do not have the time or money to participate.)

OCLC's eSerial Holdings service, the portal through which leading library serial management services like Serials Solutions send information to OCLC, provides only level one holdings information (e.g. no dates) (ProQuest Press Release, 2006; Sturr & Parry, 2010, p.120). OCLC's eSerial Holdings service is intended to allow libraries to "increase the visibility of their collections to interlibrary loan librarians everywhere in the OCLC cooperative", and yet falls short of its goals by not providing complete holdings information and stopping at the title-level ("eSerials Holdings Service," 2006, p. 27).

In order to provide better access through interlibrary loan to electronic journal content held at libraries by subscription, sustained efforts are needed on several fronts. A tool for, or more staff time devoted to, providing more detailed holdings information is necessary. The existing tools that provide information about licensing terms on interlibrary loan should also be more widely adopted or generic license terms that enable libraries to share information should be agreed upon. Journals and articles are also ripe for open access (OA) publication, and as libraries and university presses and scholarly societies and publishers and academic authors weigh the challenges of OA publishing, it is clear that greater and quicker access to information, without librarian/ILL mediation, is one of the biggest benefits.

E-books and Resource Sharing

The possibilities for resource sharing are even more complicated with respect to e-books. Even though e-books have existed since Project Gutenberg started digitizing texts in the early 1970s, today there are both licensing and technical issues that librarians who want to share e-

books must overcome (Duncan, 2010). In the 1980s, when widespread access to electronic books was just a possibility, Frederick G. Kilgour, one of the founders of OCLC, imagined a future where the electronic format would expand library information sharing. He predicted that electronic book deliveries would close the gap, in distance and time, between library resources and their users (see, e.g., his EIDOS project, Jordan, 2009, p.730). Today, when e-books occupy an increasing percentage of library holdings, digital publishing has turned out to have the opposite effect of Kilgour's vision: it is now much more difficult for librarians, and for individual consumers, to share e-books, than it is to share a print book.

Issues regarding the sharing of e-books by librarians are unique, but also echo the issues librarians face with e-serials: (1) e-book collections often come with access limitations dictated by license agreement, which are enforced, or over-enforced, by digital rights management (DRM) technologies, (2) access can be made even more difficult by widely varying patron interfaces and technological requirements, and (3) the content of e-book collections from aggregators can be unreliable, with libraries lacking control over the title lists and changes to what is available. Below, we consider each of these issues, followed by a discussion of their impact, particularly on public libraries and the sharing of popular titles, and on interlibrary loan practices. We conclude the section by reiterating the important role that ILL librarians can play in advocating for access and sharing rights.

E-Book Licenses and DRM Sharing Restrictions

As with e-serials, the difficulty with sharing e-books stems, fundamentally, from a disputable, but all too often accepted, shift in the legal framework for sharing digital information—from a framework of copyright law exemptions and limitations, to one of licensing

contracts with more restrictive terms of use. Whereas interlibrary loan of print works was enabled by the exceptions to copyright law including fair use and the first sale doctrines, e-books are now commonly *licensed* to libraries, and, as licensees, rather than owners, libraries become subject to the terms of a licensing agreement (Walters, 2014). Lack of e-book ownership causes substantial challenges for resource sharing (Lippencott, et al., 2012; Carrico & Smalldon, 2004) as well as for collection building and preservation and access for future users. Negotiated licenses often specify exactly “how the library and its users may access and use the content purchased”, and the terms of access, use, and sharing of e-books in e-book licensing agreements turn out to be, on the whole, more restrictive than the Fair Use, Exceptions for Libraries and Archives, and First Sale provisions within U.S. Copyright law allow (Xu & Moreno, 2014, p. 54). “While online access has expedited the delivery of article and book chapter interlibrary loan (ILL) requests, current e-book formats and licensing restrictions hinder resource sharing” (Radnor & Shrauger, 2012 p155). Licensing issues can prevent interlibrary lending and direct access to e-books both within and across national boundaries (Walters, 2013). Many licenses specifically prohibit interlibrary loan (Klinefelter, 2001; Walters, 2014). These restrictions are suspected of being rooted in publisher fears about the effect of unauthorized access to copyrighted and license restricted materials on their bottom line (Garrod, 2004). The argument that publishers have still been able to sell books even though librarians have long shared print copies, is countered by the argument that with print, a book can only be used by one person at time and not so easily copied and further distributed,

The electronic or digital format, which can allow for greater and quicker sharing, also allows publishers to build technological barriers to content—such as Digital Rights Management (DRM) platforms designed to enforce license restrictions that place limitations on access, use

and the sharing of licensed e-books; this often places “major restrictions on the viewing, printing, saving, transferring, and copying of files by individual library patrons” (Walters, 2014, p. 92).

While on its face, technology that enforces agreed upon terms of use may not seem overly problematic, Walters observes that it creates an additional significant change in legal footing:

...in the print environment, publishers carry the burden of demonstrating that their rights have been infringed. In the digital environment, users carry the burden of demonstrating that publisher’s restrictions on use are contrary to the license terms...Even widespread DRM restrictions are sometimes contrary to the law. For instance, the *Copyright, Designs and Patents Act* allows for preservation-related copying as well as the reformatting of texts for use by individuals with disabilities (Clay, 2011). However, both of these tasks are nearly always prevented by DRM restrictions. (Walters, 2014, p.89, citing Clay 2011)

Librarians who want to provide access to e-books, because people are requesting them and because the costs are manageable and because they do save library space and physical maintenance concerns, also need to consider the limitations they present in terms of sharing, as well as long term access.

User Interfaces and Technologies

Whether by design, or by accident, the platform and format variations of e-books also contribute to the inability to lend them via resource sharing networks (Frederiksen, et al., 2011; Bailey, Scott & Best, 2015). Although many library users may not immediately see the barriers that electronic resource publishers place on access to their content, the digital environment of abundance and immediacy for library users comes with drawbacks. Of course, information that is easy to find may not necessarily be the best information. Though librarians pride themselves on collecting and maintaining reliable sources, the current landscape of electronic resource collections can result in untamed and questionable search results, similar to searches on the wild

World Wide Web. For instance, Big Deal journal packages and library e-book collections may include titles that a library does not want, leading to searches riddled with poor quality results that can lead readers astray (Walters, 2013). Even when the quality is excellent, the convenience of e-books over print may lead readers to miss out on reading valuable and relevant information that is not available instantaneously.

Possible patron frustration does not end with poor quality search results. Patrons also have to contend with a variety of delivery platforms, especially for e-books, each with their own text viewer, bookmarking, printing and saving options. The lack of interoperability and standard interfaces is frustrating to both librarians and library users. Patrons often prefer to borrow a print copy via interlibrary loan, rather than contend with their library's electronic copy, "citing concerns about not being able to make photocopies . . . , the lack of an approved citation style for e-books, and a preference for accessing the content on their own personal e-readers" (Percy, 2013, p. 43). Furthermore, many e-books may have mysterious and confusing user limits that require a patron to be on premises in order to access the full text (Garrod, 2004) or limit the number of users that can access a title at one time, or in total, before another 'copy' must be purchased by the library (Hales, 2012). Moreover, errors in the connection and access to titles within a large collection of e-books are often discovered one at a time by users and library staff assisting users (Mann, 2015).

All of this can propel users away from libraries, in search of other options beyond their libraries' collections. Readers may be encouraged to purchase access to books that they cannot afford; unreliable library searches may encourage library users towards easier to use, albeit inferior, sources. It has long been clear to librarians that our biggest competitor is the Internet; a survey to consumers in 2005 cemented this suspicion with numbers (OCLC, 2010).

"Competition can be bad if users bypass libraries in their information gathering and rely on inferior sources, which can have a negative impact on library funding" (Massie, 2012, p. 128).

E-book collections in libraries can cause further patron confusion by including new editions of older material, the originals of which have fallen into the public domain. Such works may come with license restrictions that keep users from making full use of this publicly owned trove of intellectual property (Klinefelter, 2001). Newer material, on the other hand, is often restricted by publishing practices similar to embargoes for e-serials. "Many academic e-books are released three to eighteen months after the corresponding print editions" (Walters, 2013, p. 191). Other e-resources may be released in electronic form first, but in formats and on platforms geared to the individual user, not libraries. Even library patrons who enjoy using e-books do not understand why some titles, in some formats, are available at any given time, but others are not. The average patron's experience with e-books is usually an interaction with a single user e-books on a personal reader device. The license terms and environment of e-books geared towards libraries and other multi-user environments is very different (Walters, 2014).

Contrary to expectations, and because of platform variation, unreliable access, user limits, and embargoes, e-resources are not necessarily any more accessible to library patrons than their print counterparts. Nor do they uphold a library's goal of privacy and confidentiality when e-resource use is tracked and users are often forced to register and login before making use of bookmarking and downloading tools (Rubel & Mei, 2015). If e-book packages require user accounts, then librarians need to demand control over how this user data, collected by vendors, is collected, secured, used, and shared to mitigate the potential risk of online data breaches like the one experienced by Adobe Digital Editions in 2014 (Anthony, 2015).

All of these issues with e-resource use are compounded because librarians do not have full control and oversight over what titles are included in e-book packages; it is a common occurrence for a library patron to successfully find a title through a library search one day but then not be able to find or open it again the next day. Libraries involved in patron and demand driven acquisition programs (PDA and DDA), where they buy e-books requested by users, may find that e-book titles come and go in their catalog without warning. A study at Bradley University found that one of most common reasons for link failure to e-books was missing content (Mann, 2015). Even libraries not participating in patron driven acquisitions (PDA) or demand driven acquisitions (DDA) could run into access problems caused by vanishing e-resource collections as older content may not be efficiently preserved or able to move to updated platforms when needed. “Librarians have expressed a desire to be able to move content from one aggregator to another if a change of vendors is made” (Anthony, 2015, p. 5). The e-resource license environment has also put preservation of access to electronic content, a long and honored tradition of libraries in the print world, in the hands of the publishers and distributors. Libraries wanting to ensure access to historical content should argue for perpetual access clauses in their licenses, however, “perpetual access is guaranteed only when the title remains with the original publisher; the publisher who purchases the title is under no obligation to provide continuing access” (Beh & Smith, 2012, p. 242).

E-books at Public Libraries

Some of these challenges are most keenly felt at public libraries, which, due to dramatically changed user expectations created by the commercial e-book environment, want to incorporate e-books to their offerings. Already, in 2011, Miller had noted that the e-book driven

transformation of library collections was notable in all types of libraries, but “most dramatic in public libraries” (Miller, 2011, p. 32). The following year, OCLC’s Snapshot of Priorities & Perspectives survey showed that “Most public library staff are focusing on e-books as one of the three top priorities” (Kelley, Schwartz, & Lee, 2012, p. 12; OCLC 2012, p.3). This focus is necessary because public librarians, like all librarians, face a stiff challenge in managing the circulation of e-books, DRMs, single-user limitations and all, for a consumer base that has come to expect instant access to digital information.

While e-book circulation is crucial to public libraries, it seems that they do not enjoy a tremendous amount of leverage with e-book suppliers (Anthony, 2014, p. 7). Unlike the academic e-book market, where vendors of academic e-books rely significantly on academic libraries as their primary customers, U.S. public libraries accounted for just over 5 percent of domestic trade in printed books and a little over 1 percent of the commercial e-book market as of 2014 (Civic Agenda European Unit, 2014, p. 70). Nonetheless, the American Library Association (ALA), through its Digital Content Working Group (DCWG) has succeeded in engaging the powerful “Big Six” publishers who “account for just over 50 percent of the U.S. publishing industry”, and who all now offer their full catalog of e-books to libraries (OCLC, 2013, p. 2; Anthony, 2014, p. 4).

There is also another major player in the e-book market for whom public and school libraries are key customers: OverDrive. Overdrive is the largest e-book distributor to libraries, with approximately “92 percent of public libraries that lend e-books [reporting] that they’re using OverDrive” in 2012 (International Federation of Library Associations and Institutions [IFLA], 2012, p. 3; IFLA, 2014, p. 10; Library Journal & School Library Journal 2012, p. 8). In 2014, public and school libraries had circulated 137 million e-books and other digital media

through OverDrive, representing “a 33 percent increase compared with 2013” (Enis, 2015, p. 22). Although libraries are key customers, it seems that OverDrive “imposes license terms and conditions...which establish the policy parameters for how libraries make e-books available, including loan regulations and borrower eligibility” (IFLA, 2012, p.3).

While contending with these challenges, public librarians are also trying to meet the high consumer expectations created by the established e-book consumer experience model, which can be very different than the e-book experience for library loans. User expectations of seamless, instant access to digital content can be in conflict with publisher interests: “...a certain amount of friction is deemed desirable by publishers. Improvements to discovery and an integrated search of content from multiple sources are two aspects of the user experience most often cited for improvement” (Anthony, 2015, p. 5). Moreover, single-user models, as discussed in an earlier section, remain very prevalent despite providing library users with a less than satisfactory experience, introducing what “for some patrons...can often seem like artificially imposed restrictions in contrast to their experiences of accessing other forms of digital media” (Civic Agenda European Unit, 2014, p. 95). Although these problems result from vendor technology and restrictions, it is librarians who receive the complaints and the blame.

The Effect of E-books on ILL

These issues with e-books, and similar lingering issues with e-journals and other e-resources, have lead many resource sharing units to employ automatic deflection to their WorldShare lender profiles. This means that incoming requests for an e-resource are turned away automatically, without any staff review. Vendor priorities and fears are creating a culture of non-sharing in resource sharing networks. As a result, the ILL professional on the borrowing

side logically avoids selecting an electronic book record when sending a borrowing request and tends to select a print record instead. Technology, such as the WorldCat API and other APIs/addons, aid in efficiently discriminating between electronic resource records and the print records, thus further excluding e-books from resource sharing activity.

Interlibrary loan is often called upon connect users to alternative resources and access options when a library's e-resource full text is not available. This can involve triaging the issue of access to a library's own licensed content, and deciding whether to wait for it to be fixed or to reach out to other libraries for a copy in an alternate format. Interlibrary loan professionals are finding that "electronic resources tend to complement printed materials rather than replace them, and they satisfy a different set of needs, e.g. browsing, quick reference, short-term loan requirements, or where currency and convenience are paramount" (Garrod, 2004, p. 229).

There are initiatives to address and improve this situation. One notable library community-led effort is Occam's Reader. This is an e-book lending platform developed by Texas Tech University and the University of Hawai'i at Manoa, in collaboration with the Greater Western Library Alliance (GWLA), with content collaboration in the pilot stage from Springer, one of the major e-book vendors (Xu & Moreno, 2014; Litsey & Ketner, 2015, p. 13). Occam's Reader works as another ILLiad addon for ILL processing staff, and provides online viewing of entire e-books to the end user through their software (Litsey & Ketner, 2015; Arizona State University Libraries [ASU Libraries, 2015]). It attempts to alleviate publisher concerns by providing the end user with "a very basic eBook viewer accessed by a unique URL and a random password that is e-mailed to the patron by the borrowing institution" (Litsey & Ketner, 2014, p. 61). The e-book is available for a limited period, with the "associated URL automatically [expiring] and the file...automatically deleted when the loan period expires". The end user is

also not able to print, download or copy the pages (Plummer, n.d.). The limitations of the viewer, and the inability to print, download or copy the pages, clearly diminish the usefulness of the loaned e-book to the end-user, a consideration that must be balanced with the need to alleviate publishers' concerns about participating. Still, there is no doubt that Occam's Reader is a pioneering, important project, and an example of the library community creating their own solutions. There is a fee to join, but as an ILLiad addon, supplemented by open source software, it is designed to be very accessible for libraries that wish to adopt it.

Advocacy: The way forward.

While technical solutions are necessary, the ability to construct a viable e-book sharing scheme ultimately depends on a shift towards more liberal ILL provisions in e-book licenses. Licenses are agreed upon by both parties (vendors and librarians), and it is up to resource sharing librarians, collection management professionals and library administrators to take on an active role in advocating and educating publishers and negotiating better terms for access, use and sharing of licensed materials. Walters emphasizes that librarians cannot become complacent and simply accept the restrictive terms given to them, and reminds librarians that, as customers, they also have power, which can be used to negotiate better terms on behalf of the end users: "We should remember that customers—not suppliers—determine the success or failure of any business model, and that larger libraries and consortia may have the economic influence to negotiate favorable license terms. As a group, librarians can decide whether barriers to e-book use and sharing remain in place, but only if we spend our money in ways that are consistent with our expectations and requirements" (Walters, 2014, p. 93).

Specifically, librarians need to ask that licenses to be reviewed carefully, and to include terms that protect the rights of interlibrary loan services to share electronic information (Sturr & Parry, 2010, p. 121; Ashmore & Grogg, 2009). In the end, librarians should try to “acquire e-books from vendors that place the fewest restrictions on use...work with other libraries and consortia to negotiate favorable license provisions...avoid acquiring e-books altogether if no vendor can supply them on acceptable terms...[and] educate faculty and students about the use of e-books in the academic environment” (Walters, 2014, p. 93).

Vendors and publishers are likely to resist much of what librarians and readers want out of fear of losing profitability. However, the precedent of electronic serials suggests that publishers can do away with restrictions on use and sharing and remain profitable. Much like with e-books, electronic serial licenses were restrictive at first, but the library community came together to advocate for liberalization, developing standard wording to be incorporated into negotiations--ultimately earning expanded access, including for resource sharing, to electronic journal content (Xu & Moreno, 2014, p. 51). As a result of the active choices of librarians, a predominance of large journal publishers currently distribute articles in PDF format, without DRM restrictions—and those publishers remain very profitable (Walters, 2014, p. 93). In fact, Walters seems to suggest, it may be the ease of access, use and sharing of electronic journal content that has encouraged the widespread adoption of the electronic format over print in serials, whereas the many restrictions placed on e-books that may be preventing them from becoming more widely accepted and adopted by librarians and users, alike (p. 93).

This point, and librarian successes with e-journal publishers, are worth emphasizing when negotiating agreements with e-book publishers, which can be complicated, slow, and even contentious. Tensions between e-book publishers, resellers, and librarians have caused some

tumult previously, when “some publishers withdrew their material from e-book platforms or did not make their materials available to libraries at all” (Xu & Moreno, 2014, p. 54-55).

Although individual libraries may not have much influence, libraries often acquire e-content through larger consortia that have more buying and negotiating power. Library professional organizations are also attempting to help by providing guidelines and papers to help librarians involved in e-book license negotiations. In 2013, the International Federation of Library Associations (IFLA) launched the “IFLA Principles for Library e-Lending”, which states that e-books should be available to license, without embargo or copyright limitations, and with recognitions of library exceptions, along with demands for other library concerns, such as a fair price, accessibility standards, preservation, and user privacy (Xu & Moreno, 2014, p. 54-55; International Federation of Library Associations and Institutions [IFLA], 2013).

All of this work is important because librarians are advocating on behalf of their end users and in service to their commitment to facilitate access to knowledge, which is one of the core values of librarianship (American Library Association, n.d.). Librarians simply cannot allow the positive advent of digital information to also be the end of information sharing through libraries.

Digitization of Print Information

In addition to buying and licensing e-content from publishers and vendors, librarians are also increasingly embracing and facilitating the larger movement toward building free, open and legitimate access to public domain and other online, open access, content. Library archives and special collections work together with resource sharing departments to scan public domain material based on interlibrary loan and direct patron request. Libraries are also participating in

digitization projects that place whole collections of information online, and they are hosting and managing content in institutional repositories.

With the increased visibility of finding aids and library catalogs online, librarians are observing a demand for enhanced access to special collections and archival materials (Shrauger, 2010; Gee & Legge, 2012; Olivieri & Mehaffey, 2015). Many libraries are taking the opportunity to turn requests for those materials into on-demand evaluation for inclusion in digital collections. By creating an archival quality scan of an item once, and making it openly accessible online, the item itself can be saved the stress of being handled again and again to fill requests for access through interlibrary loan or in reading rooms. "Digitization is an alternative method of sharing resources that alleviates institutional concerns about potential loss of the physical item or damage during transit" (Olivieri & Mehaffey, 2015, p. 115). Offering digitization services thus opens up new avenues for resource sharing staff to supply hard to find materials. Resource sharing departments should be ready and able to absorb reasonable fees for archival digitization services in the same way that many already charge and process reasonable fees for traditional interlibrary loan request processing. Interlibrary loan can also instigate digitization services, working together with special collections and archive units to turn lending requests for rare items into rush digitization requests. Instituting such a system requires interdepartmental cooperation and an understanding of the differences between library archival and public service departments (Shrauger, 2010).

Larger digitization efforts like those of the Hathi Trust, Google Books and the Internet Archive are vastly increasing the amount of openly accessible online material through partnerships with libraries. These content collections can help resource sharing departments to fill requests for public domain material faster and cheaper than requesting a traditional

interlibrary loan (Baich, 2012). And, although the collections are openly accessible to everyone, interlibrary loan departments are being called on to help library patrons navigate the myriad of, perhaps less easily discoverable, online content. Citations and keywords within online content increase the visibility of non-digitized materials, as well, and are predicted to increase the demand on interlibrary loan departments as patrons are teased with more resources than they ever thought possible (Morris, 2006). Library partnerships with commercial agencies can provide the funding and drive to make mass digitization efforts possible, but librarians should also make sure that they fully understand how materials will be delivered to users before committing their collections. Online collections that require a user to log-in before accessing what should be freely available content create the same privacy concerns seen in other e-book platforms marketed to libraries.

Librarians are also educating authors about open access publishing and facilitating the implementation of institutional repositories and open access policies. By taking a more active role in the dissemination, preservation and creation of scholarship, academic librarians are demonstrating additional value to faculty and laying the groundwork for new partnerships. Libraries are moving “from being an access point and archive of information to a place to increase engagement in the scholarly communication life cycle” (Sterman, 2014, p. 361). Faculty, with the help of librarians, are uploading versions of their published papers to freely accessible repositories. This presents an added benefit to resource sharing staff who can more quickly locate and deliver the material. Additionally, the mission and dependability of IR’s to preserve content can help mitigate link rot: loss of citation information by the unavailability of materials due to out of date hyperlinks.

With increasing amounts of openly available electronic content, comes the expectation that demand for traditional interlibrary loan services may wane. However, library patrons often do not have the skills or time necessary to find the exact item that they are looking for. The lack of standardized indexing in online sources is frustrating to users who are seeking convenience (Baich, 2015). Those users are turning to the same service, interlibrary loan, that they have always relied on to get them any content they cannot find on their own. Increased user expectations may result in “a decrease in routine interlibrary loan requests, combined with an increase in more complex requests requiring more expert knowledge and/or more advanced research skills” (Baich, 2012 quoting Morrison, 2006, p. 106). Until more reliable and standardized indexing is a reality, resource sharing practitioners will be relied on to help guide library users through the many available avenues to online content. “We are in the process of reformulating how we connect users with what they seek” (Buchanan, 2009, p. 168). Interlibrary loan professionals, as well as reference and information literacy librarians, are seeing their processes and their user demands change in relation to the proliferation of online content, but they are not seeing the need for their skills lessen. It is this transformation of ILL services, from traditional library-to-library loans and copies, to more innovative ways to access all sorts of information, calls for new language, like ‘resource sharing,’ to describe library services that are continuing to evolve.

Discussion

On the surface, e-resource collections greatly expand the world of information that library users can enjoy. They are in-text searchable: a capability that is lacking in print collections. They can be obtained quickly, anytime and anywhere a reader may need the

material, which is also an advantage over print (Lippincott, et al., 2012). Their ability to be indexed and searched across keyword, title and text combined with online access has created an environment where “researchers now have access to many more citations and with that, the expectations that the material can be obtained quickly—and in electronic format” (Wicht, 2011 p. 205).

Librarians, in the 21st century, who want to maintain and strengthen their role of facilitating access to information need to share both digital and print resources. Beyond facilitating access to the library collection for distant users of other libraries, a library’s interlibrary loan department can be thought of as a library’s largest ‘super user’. Any access problem experienced by an individual patron will also be experienced by interlibrary loan. “Persistent problems with electronic resources undermine staff confidence in the reliability of their own systems” (Mann, 2015). Added frustration and lack of confidence make tasks more difficult and time consuming. Staff productivity wanes and, with it, morale falls until interlibrary loan staff can get trapped in a cycle of trying but not being able to provide the best service possible. As Katharine Hales mentioned in her analysis of the impact of electronic resources on resource sharing: "service and access are two of the main values of librarianship. For well over a century, interlibrary loan (ILL) has fulfilled those values with regard to resources outside of a single library’s collection" (2012, p. 123). What will this mean in a collective library environment that is dropping print subscriptions and collection building in favor of electronic content (Watson, 2005)? What will happen in the future when library electronic collections are lost due to corporate merger, folding, or because no real archival access was ever established?

Library e-resources are subject to the same storage format evolution and obsolescence as are any other digital media. Hundreds of formats have come and gone since the 1960s (Moghaddam, 2007). This multitude of formats and access platforms have made it difficult for librarians to establish set procedures for managing these resources (Beisler & Kurt, 2012). Additionally, in most e-resource licensing schemas, a library is not allowed to create back-ups or keep the material locally in any format (Beh & Smith, 2012; Jackson, 2000; Stemper & Barribeau, 2006). These restrictions only emphasize the point that libraries and vendors mean something very different when they talk of ownership of e-resources (Lippincott, et al., 2012). Some consortia are moving to mitigate the potential disaster of vanishing electronic access in a world with no back-ups, by pursuing print retention projects to make sure at least one library in the area still has a full run of a print journal or a print copy of a book (Stemper & Barribeau, 2006).

Publishers are attempting to adapt to many changes as electronic publishing becomes dominant. They are trying to figure out a way to offset new costs and revenue uncertainties, and to exploit new opportunities. They are increasingly licensing content to aggregators. Some publisher- and aggregator-initiated models of offering electronic content to users and libraries include purchases or pay-per-view of entire and partial works (such as articles, book chapters or reference work entries), short-term leasing, and demand-driven acquisition plans (Janke, 2010, p. 158; Hales, 2012).

Publishers that provide on demand access to individual articles not held in a library collection may begin to question the exceptions in copyright law for libraries to provide single article access through resource sharing. Karen Hunter points out that several parties feel these exceptions were created for a time when there were no other options for single article point of

need. Libraries filled a gap where the market failed to deliver to the researching public. “The ‘market failure’ rationale for a fair use defense of ILL may no longer be sustainable. The market mechanisms now exist to get document delivery (i.e., paid-for, copyright-cleared copies) rapidly and efficiently” (Hunter, 2003, p. 190).

The Fair Use principle, which in the print environment had struck a balance, and had “provided a legal recognition that learning is as significant an endeavor as entrepreneurship”. This has been challenged by the digital revolution, with the interested parties (i.e., publishers, authors, readers, librarians) becoming newly polarized (Carter, 2007, pp. 1-2). Carter observes that “librarians may find themselves as the center point pulled in both directions by consumers demanding more access and publishers fearful of losing control of their works” (p. 6).

Ultimately, however, for academic works, the future of information sharing may rely on the growing open access scholarly communication movement. As Jill Cirasella observes, scholarly authors benefit from greater exposure in the open access publication model, while “students can better master their fields; scholars can better perform their research; and teachers, doctors, policy-makers and journalists can better perform their jobs” (2015, p. 14). Hence, all librarians have a role to play, as educators and advocates, to help engage their users with the open access paradigm, which, as Cirasella says, is “far preferable to paywalls. And [it is] happening” (p.14). Already, resource sharing and interlibrary loan librarians have written about the concrete steps they take to connect users to open access materials, and it is hoped that more will follow (Baich, 2012).

Conclusion

While many readers and authors believe in libraries and in information sharing, traditional publishers will also continue to defend their contributions, interests, and profit margins. The role of librarians, then, must be to advocate for readers and authors and information sharing through robust interpretations of the Fair Use principle, one of the pillars that allow resource sharing among libraries, as well as other exceptions in copyright law that allow libraries to support the growth and health of culture. As Brandon Butler observes, the courts have been supportive of strong Fair Use interpretations (2015) but if the First Sale doctrine is not applied to digital works, as it is to print, then questions about the future of library resource sharing will remain (American Association of Law Libraries, 2016).

Another role for librarians is to exercise their power as customers and work with publishers to negotiate license terms that favor access and use, to the fullest meaning, of the materials they subscribe to--including the right to continue sharing resources with other libraries for specific needs. Ideally, the interlibrary lending of electronic journal content should at least be equivalent to the library exceptions to copyright law that have long existed with print resources. It is essential that librarians embrace their roles as negotiators, and learn the skills to be able to represent user interests effectively (Ashmore & Grogg, 2009). Others may do the negotiating but they should at least consult ILL specialists or insist on standard terms that protect ILL. They must also communicate these terms to ILL staff, who may never see the licenses and might continue to assume that terms are not favorable to sharing when they may be, or may assume that they are when they are not.

Even if scholarly information becomes available through open access initiatives, cultural and popular material will still be regularly requested via ILL. As more articles and journals, and perhaps, in the future, even books, become available through open access or institutional

repositories, the need for academic librarians to facilitate access through traditional ILL processes may indeed diminish. However, as long as there are print collections of materials that cannot yet be digitized, demand for traditional interlibrary loan will remain and librarians must remain committed to providing such access. Librarians have always helped their patrons find and connect with the information they need, no matter the way that information was recorded or stored. Though the shift from print information to an electronic resources environment has radically changed how materials are accessed by library users and shared by librarians, the goals of connecting patrons with information have not shifted. Resource sharing and interlibrary loan librarians must be able to share digital information, as they have always shared print information. This is because ILL is more than a privilege, as Carrico and Smalldon argue:

One may ask: is ILL a privilege or a right? As budgets remain flat or decline, ILL is no longer only a privilege, but a vital means of providing access to materials that cannot be added to a collection. Since the pace of scholarly publishing far outstrips today's libraries' resources for acquiring all the material that might be desirable, ILL becomes a right for users (Carrico & Smalldon, 2004, p. 51).

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