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Consortial Shared Print Archiving: Perspectives from Canada

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Context

It has been well documented that the emergence of a stable body of electronic text is transforming the utility of legacy print collections in academic libraries (Schonfeld, 2009 ; Kieft, 2012 ; ARL, 2012). This is certainly true for journals and increasingly appears to be affecting the management of monograph collections as well (Lavoie and Schonfeld, 2006; Demas, 2012). Combined with pressure for the repurposing of space in university libraries, and the acceptance of online reading by researchers, this shift is pushing collection managers toward consideration of historical print collections on an entirely new scale (Lavoie *et al.*, 2012; Malpas, 2011). As the authors of the ARL statement on 21st Century collections put it, “Twenty-first-century collection management will therefore require increased collaboration within and among institutions...A multi-institutional approach is the only one that now makes sense” (Association of Research Libraries, 2012, p. 1).

The Council of Prairie and Pacific University Libraries (COPPUL) is a consortium of 23 university libraries in the four western provinces of Canada. Spanning 1.1 million square miles yet with only 10 million residents, the region’s vast geography has been a driver for cooperation. In 2011, after several years of planning and study, 19 member libraries responded by forming the Shared Print Archive Network (SPAN) in our region. The origins of this program have been documented elsewhere (Bird and Ashoughian, 2012; Wong, 2012). This paper focuses on how SPAN fits into larger national and global frameworks of related activity. Looking at current developments in Canada and the US, as well as the UK, Australia, New Zealand and Hong Kong, we explore the possibility of increased international exchange among such programs in various jurisdictions.

Environmental Scan – Canada & North America

There are now many shared print programs in the US that illustrate a variety of approaches. The Western Regional Storage Trust (WEST) is among the most mature of these, and encompasses 109 libraries in 18 US states, many participating through regional consortia. Supported by both member funding and a Mellon Grant, WEST uses a risk analysis framework to select material for inclusion in the shared collection, and has documented their project well at <http://www.cdlib.org/west/>. The Association of Southeast Research Library (ASERL) has a mature project for joint journal retention, and in early 2013 announced a formal partnership with the Washington Regional Library Consortium (WRLC) under a single retention and access

agreement, <http://www.aserl.org/programs/i-retain/>. The Committee on Institutional Cooperation in the US Midwest uses a central storage facility to create a physical repository of print journal backruns focusing on publisher collections, and aiming to have 250,000 volumes in shared storage by 2016, <http://www.cic.net/projects/library/shared-printrepository/introduction>. There are numerous other such programs around the US, including PALCI (Wiles-Young, 2012), the Michigan Shared Print Initiative, which is doing detailed data-driven work on monograph analysis, http://www.mlcnet.org/cms/sitem.cfm/library_tools/mi-spi/, and Orbis Cascade which facilitates WEST participation by its members through their Distributed Print Repository (Watson, 2010), <http://www.orbiscascade.org/index/west>. In 2005, Murray-Rust usefully examined other federal infrastructure programs (beyond the library environment) to consider some examples that might be used as models for building a national shared print network in the US.

In Canada, there is activity at the regional level, where COPPUL has three peer consortia covering the remaining regions of the country. The Ontario Council of University Libraries adopted the Thunder Bay Agreement on last copy retention in 2009, and has since been exploring avenues for more proactive implementation of this accord (<http://www.ocul.on.ca/node/100>). In Quebec, the library arm of the Conférence des recteurs et des principaux des universités du Québec (CREPUQ), have been archiving publisher-based collections since 2003 through their Projet TRAP. While their efforts have focussed internally on releasing shelf space within participating libraries, rather than outwardly focused on communicating their retention commitments beyond Quebec, they are perhaps the furthest along of any Canadian shared print project in terms of volumes archived (<http://www.crepuq.qc.ca/spip.php?rubrique469&lang=en>). And in eastern Canada, libraries in Nova Scotia are working together to fund and build a shared storage facility that would allow deselection of duplicated items throughout the province (Willick, 2012).

There is also the beginning of coordination nationally under the aegis of Library and Archives Canada. Their “Last Copy Initiative,” one aspect of the Pan-Canadian Documentary Heritage Network, begins by releasing a last copy policy for Library and Archives Canada, declaring over one million items in their Canadiana preservation collection as governed by this policy, and seeking partners across the country to sign on to an expanded network. Early efforts are underway to coordinate between all these initiatives to achieve national collaboration on shared print collections, including both preservation and access services.

It was within this context that COPPUL formally embarked on its shared print program. Some details of SPAN implementation, including the challenges faced by the initiative, follow below. Following that, we conclude with a brief look at some of the planned and well established projects outside of North America that take on similar work, and ask how shared print projects across the globe can work together to address the challenges and reap the rewards of shared print activities.

COPPUL SPAN Phase 1

Following a period of self-study by committees within COPPUL, SPAN formally began in 2011

with the commission of a consultation and report by the University of California's Manager of Shared Print, Emily Stambaugh. Stambaugh's report outlined a business and operational model for the development of a shared print archive among member libraries and identified three goals to act as a guide for SPAN's decisions:

- Preserve the scholarly print record at the lowest possible cost in the region
- Provide access, when needed, to shared archives
- Create significant opportunities to reallocate library space

(Stambaugh, 2011, p.5)

Although these goals focus on tangible results, COPPUL staff realized that this program would accomplish more than space savings. An additional key goal of phase 1 of SPAN was to build trust and establish open communication among its members. Rather than a prescriptive approach, cooperative problem solving was encouraged through the involvement of advisory committees made up of staff from various member libraries. Members of the Technical Advisory Committee, experts in serials cataloguing and the variety of integrated library systems used in member libraries, provided support in vetting technical documentation and determining capabilities for recording retention commitments. The SPAN Management Committee was formed with the idea that each committee member brought complementary strengths to the table. Since consortial collection management was new to COPPUL, creativity and innovation would be required to advance the program successfully. The bringing together of these specialists gave SPAN a holistic approach to shared print.

Stambaugh recommended that the archiving process be tackled in phases, beginning with decentralized archiving for titles that are widely available, and adapting a risk management framework used by the Western Regional Storage Trust (WEST) to sort titles into low, moderate and high risk categories. Phase 1 of SPAN therefore focused efforts on a low-risk category - widely held journals with stable electronic access and post-cancellation rights. Participating libraries contributed to the overall effort as Archive Holders and Archive Supporters. Archive Holders were tasked with the stewardship of the print volumes they committed to retain for a set length of time (ten years for this low-risk group). Archive Supporters were not required to retain physical holdings on behalf of the group. These categories are not exclusive: a library may be an Archive Holder for one title but act as an Archive Supporter for other titles. Libraries were classified based on their number of holdings in OCLC WorldCat. For phase 1, retention commitments were assigned to the larger libraries as Archive Holders since they tended to own longer runs of titles.

Technical hurdles

The major technical hurdle was to establish processes that could handle the massive amount of data required for this program. To ensure that informed decisions were made, data was gathered on member libraries' serials collections and holdings, access to digital copies, post-cancellation access rights, and control numbers, and then analyzed using knowledge of each library's collection management policies and the goals of SPAN.

In preparation for SPAN's initial phase, COPPUL engaged OCLC to generate a custom collection analysis report that provided data on holdings overlaps between member libraries, including a list of print serial titles held by ten or more COPPUL libraries. Although preliminary analysis revealed flaws in the serials list, the report nevertheless provided a starting point for collection analysis work. Serial holdings input was requested from the eight largest libraries and then compared to the OCLC-generated list to manually create a master list of serials titles for consideration. It was reasoned that the titles held by these libraries would cover most of the titles in the collections of the smaller libraries. The list of titles generated would provide a sufficient number of journals to be considered for withdrawal in the first phase. After initial searching, 4,842 titles were found to be held at nine or more SPAN libraries. This initial list, however, did not contain detailed holdings information—instead it simply recorded the libraries that appeared to have holdings of each title. This list also required some filtering since the input data included holdings of government documents, monographic serials, newspapers and Canadian titles, all of which were excluded from phase 1 (as higher risk categories). Various means, from filtering the bibliographic record fields for particular characters, to using Ulrichsweb Global Serials Directory, were used to remove these titles from the master list before the data was run through a holdings collection tool developed in-house for the project.

Information about the libraries' participation in CLOCKSS and Portico was gathered to determine which member libraries had access to e-journal archives, and to prioritize those titles for phase 1. In addition to these digital archives, COPPUL staff also considered post-cancellation access through licensing agreements. The Canadian Research Knowledge Network is a national consortium of 75 libraries that plays a major role in the provision of digital content to Canadian universities, so their license list was examined for post-cancellation access. COPPUL also licenses some e-content for member libraries, and these titles were also factored into the decision making.

To gather data on holdings details, an in-house tool for gathering holdings information through Z39.50 queries was developed. We faced technical issues both specific to our region and others common to similar cooperative ventures. Due to the geographical distribution of higher education institutions in western Canada, a few members have shared catalogues, where one institution's holdings are displayed with holdings from nearby partner institutions. Sorting out the holdings that belong to one institution was initially a challenge that was eventually partially resolved by setting a location parameter using the names of the institution's libraries. In some instances serial holdings records were not accessible for Z39.50 querying through the catalogue; for these we developed a simple screen-scraping tool to capture information displayed on the title record page and then filtered the data by identified keywords. Even when Z39.50 queries were possible, holdings statements were found in a number of different fields in the bibliographic record, serial records, and other attached records. Many libraries use a single holdings statement for their print and microform holdings to facilitate discovery of holdings for their users; however, this practise complicated our project, which involved only print format journals. Some libraries differentiate the print run and the microfilm run in the Notes section of the record, while others only offer format information in the call number or location field.

These technical difficulties were compounded by cataloguing inconsistencies across and within libraries. Some holdings statements recorded the start and end dates or volumes, but did not note missing or damaged mid-run volumes. The formats of various holding statements made automating the analysis process impossible, so the majority of analysis was completed manually using spreadsheets, and attempting to normalize the data for future uses. COPPUL is currently working with the Center for Research Libraries PAPER project to explore ways of making this process more efficient (<http://www.crl.edu/archiving-preservation/print-archives/papr>).

When assigning retention commitment requests to Archive Holders, care was taken to identify some candidate titles that had few or no holdings at the two largest libraries in the group and assign some of these to other participating sites, to ensure that a greater number of libraries were involved as Archive Holders and not to overburden staff at the two very large libraries. In considering gaps in journal runs, a guideline was created to help with collections decisions: a gap of 10% (of total volumes) or less was considered acceptable in this low-risk category, and volumes should be retained. If the library's holdings constituted three volumes or less, or included a gap of more than 10% of the run, the retention commitment should be refused, to move along to another holding library. These guidelines are an example of the pragmatic approach of SPAN toward shared print activities.

In future phases involving higher risk volumes, procedures will need to be more absolute, but for phase 1, COPPUL attempted to create opportunities for local learning to increase interest and involvement in SPAN. For COPPUL, this governance arrangement works due to longstanding working relationships between COPPUL and the staff at member libraries, and the relatively low number of titles. If this program expands to a larger cohort, an alternate process will need to be designed so there is less manual assignment of retention commitments and a more efficient method for recording these commitments. When designing future processes, it will be important to keep an eye on the established practices at each site so as to create procedures have minimal impact on current workflows.

Although every effort was made to ensure that decisions were made using correct data, a decision was made to analyze the data that was present and allow libraries to confirm the accuracy of the records when retention commitment requests were sent. No completeness or condition checks were required for these low-risk titles, although they will be essential in later phases involving higher risk titles. In the first round of phase 1, 1,721 titles were nominated for archiving at ten libraries, and 1,556 were accepted. In the second round, approximately 74 titles were accepted by the alternate choice library, with a small number of titles rescinded due to lack of holdings. Due to inaccurate records, the assignment of retention commitments resulted in some overlap among libraries, and COPPUL staff respected the authority of local collections staff to make decisions about their holdings.

Assessment of shared print programs

Assessment of a shared print program is one of the questions now facing SPAN. Traditional library metrics that focus on quantitative measurement do not address all the goals set forth for the initial phase of SPAN. For assessment to be effective and truly reflect the nature of the program, the collection of data and the analysis of the data must be incorporated into operational practices. At the start of development, the most obvious measure was to count the number of volumes that members have committed to retain. However, as the program progressed, it became clear that the largest libraries would be retaining the largest numbers, and this measure would ignore the contributions of the smaller libraries. Another quantitative measure is to count the number of volumes that are weeded by participating libraries. However, since the two libraries with the greatest volume of holdings currently have the capacity to retain all of their holdings, they would not be weeding any holdings. If the quantity of weeded volumes were the only measure, this would neglect the impact of the program at these two important sites. During this initial phase, while trust in the program is still building, it is also unlikely that many institutions will be ready to discard many volumes. Together, these quantifiable measures provide only a limited picture of the impact of the program on participating libraries.

It was therefore essential that qualitative measures be applied to address the social and environmental impacts of SPAN. On the consortial level, one of the key goals identified is to build trust and a community of practice among our member institutions. It is impossible to determine whether this goal was achieved without the input of member institutions, so some informal feedback was sought from librarians at participating sites. Although it was assumed that institutions would be primarily motivated by the desire to reclaim space in the library for other needs, we learned that some participating libraries consider participation in the SPAN program as a mark of institutional prestige, allowing libraries to demonstrate collaborative goals outlined in their parent institution's strategic plan. Considered from this angle, participation in SPAN shows a commitment to the academic community beyond the institution's four walls and an opportunity for innovation at the forefront of shared print activities. This new understanding will help set the tone for future phases.

Shaping this understanding into a means of measuring success requires borrowing concepts first developed in project management. Carpenter (2011) suggests that libraries utilize the Social Return on Investment (SROI) evaluation approach whereby the social and environmental impact of a program is valued as much as the quantifiable gains. This approach was developed in the UK by the New Economics Foundation to provide a means for community and non-governmental organizations to show how they benefit their stakeholders (Carpenter, 2011). It provides a more holistic and realistic view of outcomes, and focuses on how activities contribute towards the achievement of a goal rather than implying direct causation (Carpenter, 2011). Using the SROI framework, participation in SPAN is one of many activities that a library can engage in to demonstrate its contribution to the overall institutional plan. Within the library itself, participation in SPAN crosses a number of departments, from collections to cataloguing, and circulation to facilities.

In order to ensure that libraries maintain the relationship that they have established with their stakeholders, COPPUL staff created a FAQ so that libraries would be able to provide consistent messaging to these groups, in anticipation of information requests by faculty and students. Addressing the concerns of these important stakeholders is one strategy for easing the transition to a new way of thinking about resource access and collections management. At every phase SPAN will require strong advocates to conceptualize and articulate a shared management framework that facilitates access to preserved resources and recognizes the local capacities for this provision.

Next Steps

With one phase underway, over 60,000 volumes archived, and the second phase in development, SPAN is only at the start of a long road. Building capacity at member institutions is one of the long-term goals. Planning for Phase 2 is now well underway. After consultation with the participating institutions, the Management Committee has recommended pursuing a second round of journal archiving for:

- Journals with the same characteristics as those treated in Phase 1, but less widely held (i.e. held at 3-8 libraries in the region)
- Journals widely held in print & electronically, but without post-cancellation access rights
- Canadian serials with post-cancellation access rights (a small number of titles)
- Canadian serials without post-cancellation access rights
- Title variations of journals archived in Phase 1 (earlier and later titles)

Materials in some of these categories are higher risk than Phase 1 titles, and will be treated as such. Procedures will be developed for “built archives” as per the SPAN membership agreement <http://www.coppul.ca/projects/SPAN%20AgreementApril2012revWEB.pdf>.

Looking further ahead to future phases, we eventually intend to consider:

- Titles unique to an institution in COPPUL or unique in WorldCat
- Commonly held monographs, which will require more detailed analysis, including of circulation data from multiple sites
- Signature collections, e.g., Canadian press publications, government publications

In planning our future steps, we are naturally interested in the experiences of groups elsewhere that have gone before us in this work. These groups provide us with a view of the global landscape and the different iterations that shared print has taken in different academic environments. Their experiences provide us with valuable data which we can adapt to fit our specific context. By working with each other, shared print initiatives can transform the traditional silo model of containing resources and expertise within a single organization into an open, shared field of knowledge. These programs, while still managed at the regional or national level, can participate in a community of practice that spans the globe and allows us to connect our regional practices to a global trend.

Global Cooperation

While it is not possible to comprehensively document related activity around the globe, some cursory knowledge of similar programs allows us to draw a few conclusions. To date, much of the formal publishing on shared print initiatives has focussed on activity in the United States. The informative special issue of *Collection Management* published in 2012 (37:3-4), was a case in point, providing a wealth of information and theorizing about shared print initiatives, but with a predominantly US focus. The excellent review article by Clement included in this issue mentions programs outside the US but only in passing, noting that they are driven by policy at the national level, unlike programs in the US and Canada.

Since 2009, the Chicago-based Centre for Research Libraries has coordinated an active Print Archives Network with participation from around the US, and more recently, some Canadian groups (<http://www.crl.edu/archiving-preservation/print-archives>). In bringing our experience in western Canada to a broader audience, we have sought out information about a variety of related projects in jurisdictions beyond North America.

The Joint Universities Research Archive (JURA) is a project of the Joint University Librarians Advisory Committee (JULAC) in Hong Kong. This initiative proposes to pool and store research materials in a shared off-site facility, to provide a long term solution to the storage problems faced by participating libraries. JURA will use robotic ARS (automatic retrieval system) technology to store and retrieve 7.4 million volumes, and has an expected completion date in 2014. (http://www.julac.org/?page_id=258).

In Australia, the CARM Centre (CAVAL Archival and Research Materials Centre) has a long and successful history. The first Centre was opened in 1996 and now holds close to 1 million volumes contributed by CAVAL libraries for long-term shared ownership and preservation. The expansion phase, CARM2, accepted its first materials for deposit in November 2010 and rented some space in the expanded facility to commercial tenants for storage (e.g. museums) until contributed library materials will fill the building to capacity. Wright identifies three factors in ownership difficulties of shared storage arrangements, which likely apply equally to similar projects in any jurisdiction: balance sheet implications for participating libraries; university rankings considerations related to library volume counts; and objections of faculty members over perceived loss of access (Wright, 2012). We note that CARM provides access to stored materials via established interlibrary loan channels. For projects like COPPUL's arriving so much later to the shared print landscape, it is interesting to consider possible alternative models of access. What will drive demand for print materials when digital surrogates are so widely available and accepted by our readers? In the age of Amazon and Netflix, are we ready to consider delivery direct to patrons, bypassing traditional ILL with its library interventions and concomitant delays?

In New Zealand, where university libraries have cooperated on the CONZUL Store, the approach has been to outsource the storage of a single copy of print journals for the country. Their approach has been for participating libraries to contribute material sequentially, with the deselection decisions made by each library in turn as it divests itself of the print journals no

longer required on-site. Renwick notes that books will be treated separately, and we will watch with interest to see how this group manages their collective collection of low-use monographs (Renwick, 2012).

And of course the UK Research Reserve (UKRR) provides yet another model. The British Library cooperates with university libraries nationwide to preserve and provide access to a shared collection of low-use materials. It is an ambitious program that aims to release 100km of shelf space in libraries across the UK during Phase 2 (2009-2014). Yang notes that while the UKRR

was set up to deal with specific issues (i.e. de-duplicating print journals)...it has become a platform where collection management professionals share experience and best practices. For example, key issues regarding digital resources have been identified – the quality and completeness of digital backfiles, gaps in digital resources, permanent access to electronic journals, to name a few. (Yang, 2012, p.2)

Yang also notes that while the goals of the program involve preservation and repurposing of library space, “deep down, it’s about culture change” (Yang, 2012, p.1). This sentiment has certainly been felt already in COPPUL’s own Network, and echoed elsewhere in the literature on shared print.

Conclusion

As a relative latecomer to the world of shared print, COPPUL has nonetheless encountered many of the challenges and issues identified by pioneers of this field. We have also benefitted enormously from the experience of both the collective, and several generous individuals who have helped to shape and guide our program.

In Canada we face our own challenges nationally, coordinating with groups across the vast Canadian landscape, multiple political jurisdictions, and two official languages. Certainly the obstacles across national borders will be even greater; and yet we feel the urged to do so, in order to participate in an important dialogue about optimal copies for both preservation and access. We are sharing our experience in the hope of joining the conversation about shared print with colleagues beyond North America.

As the authors of ARL’s 21st-Century Collections paper clearly state, “Research libraries have much to gain through increasing reliance on shared print shelving facilities and collaborative preservation programs for both print and digital content” (Association of Research Libraries, 2012, p.2). The challenges for all of us will be to understand and overcome the significant obstacles of tradition, territoriality, legal and political jurisdiction, in order to reap these gains on behalf of the global community of readers and scholars, both now and long into the future.

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