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Library Portal 2.0: The Social Research Management System

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Library Portal 2.0: The Social Research Management System

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ABSTRACT

Library 2.0 (L2) has been discussed in depth in library circles in recent years. This article looks at L2 initiatives and technology implementation with regard to L2 and proposes a reboot, repositioning the library portal as a Social Research Management System (SRMS). This SRMS adheres to the L2 principles of purposeful, user-driven, library services. The SRMS is envisioned as the center of academic research and activity at universities, not as a peripheral tool. Creating a new generation library portal (the SRMS) is a group endeavor, thus by utilizing both on-campus and peer resources, the realization of the faceted, modularized, SRMS can come to fruition.
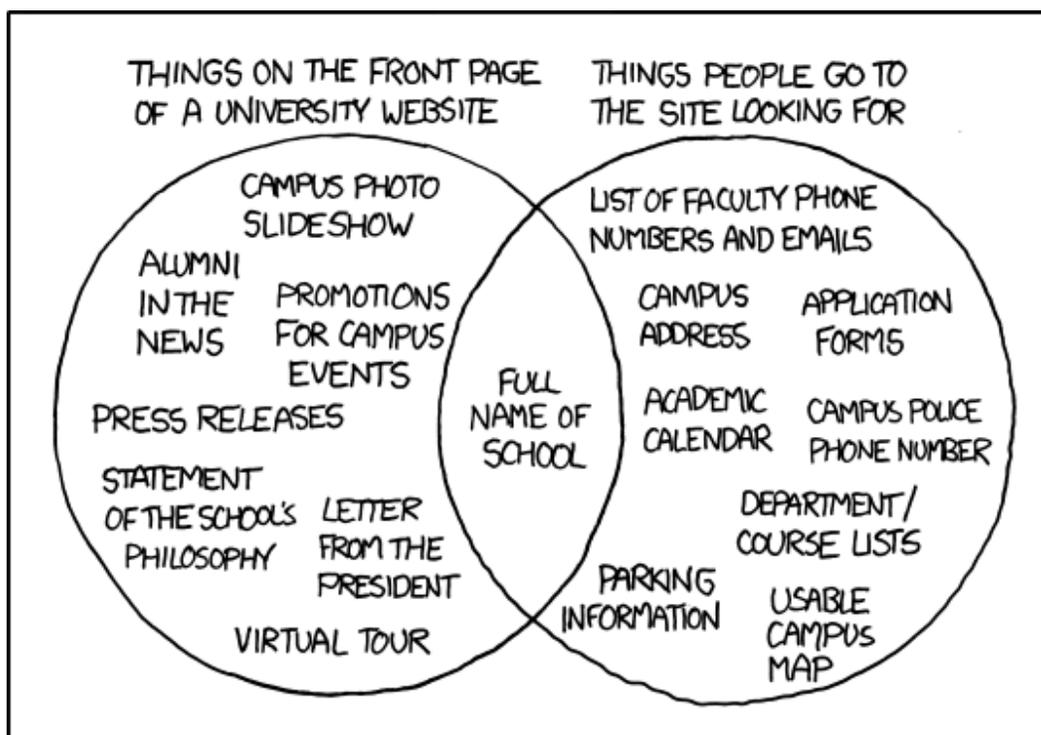
"University Website" - by Randall Munroe - http://xkcd.com/773/

INTRODUCTION

Libraries, both academic and public, are truly a wealth of information, and any college student who doesn't use the library and its resources is really missing out on a lot of useful information, both for work and play. That being said, we, as professionals in the information fields, are not making it that easy to engage our potential customers in part because we provide information in a "push" manner. Even though the comic strip at the beginning of this article pokes fun at University websites, the critique holds true for University Library portals as well: What we have on our library portal is different from what our patrons[1] expect, and there is, sometimes, only a small overlap between what's offered and what's expected. This is one reason that patrons inexperienced with research take refuge at a Google search when it comes to research.

Current library portals expect information to be *pulled* by our patrons, for patrons to initiate the conversation with the library. However, with the vast amount of information that we have available, and the learning curve required to get the most out of library resources, our inexperienced patrons may be inundated. Thus they turn, instead, to a quicker, easier, and cleaner solution: Google. If the comic at the beginning of this article were more geared toward current library portals, in the left circle we would have information such as a link to the library catalog, a link to interlibrary loan, a link to a listing of all databases and resources that the library has access to, and a link with a staff directory and event calendar. While this isn't an exhaustive listing, in short, the circle would contain links to each and every resource. The circle on the right, however, what patrons expect, would be a singular question: "where, and how, can I get a hold of a specific resource?" So what's the common ground between what the library portal offers and what patrons are looking for? That would probably be the library's name, and possibly hours of operation.

Since the advent of Web 2.0 more than a decade ago, we've also seen Business 2.0, Education 2.0 and Library 2.0, among many other 2.0 monikers. The problem is that advances in technology are only one part of the equation; we also need a paradigm shift in order to make best of use of the technology available to us; otherwise we are just replicating existing structures in a new medium (McLuhan, 1967) and this isn't necessarily the best use of our technological resources. A good example of this is the Online Public Access Catalog (OPAC). Libraries did a good job bringing the card catalog to the electronic era, making it keyword and subject searchable, thus adding more functionality to the card catalog, however we have not yet realized the full potential of the catalog, as far as its interaction with new technologies is concerned. There are still *many* different silos of information in a library that do not speak to one another and don't work with one other, and enhancements to the OPAC, both from a technological and a metadata perspective, have yet to materialize.

It's inconceivable that the same group of professionals that gave us classification systems such as Dewey and Library of Congress - ways of collocating similar and related information - cannot take the next logical leap and assist patrons with *smart* discovery of resources (collocation in the digital age) by utilizing technology that is now well over 10 years old. In this article we'll be looking at what has been done in the world of Library 2.0 and I'll be proposing a new model for a library portal that moves from a

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[1] "Patron" is a library term for a user of library services.

"Yahoo paradigm," that of a web directory, to a "Google paradigm," that of the smart web search.

LIBRARY 2.0: CURRENT STATE

The concept of Library 2.0 has been on librarians' radars for better than half a decade. While no unifying definition of Library 2.0 has been distilled, the accepted definition has been constant and purposeful change that empowers library users through participatory user-driven services (Casey and Savastinuk, 2007). This definition is not techno-centric, however a lot of Library 2.0 initiatives have adopted technology for the realization of Library 2.0 projects. In keeping with the *going-to-the-where-the-patrons-are* theme of some Library 2.0 implementations, many libraries have created profiles on social networking sites (SNS) like Facebook and Twitter (Widdows, 2009; Xu, Ouyang and Chu, 2009), as well as starting library blogs (Cohen, 2007; Xu, Ouyang and Chu, 2009; Stephens and Collins, 2007). The advice given by some is reminiscent of Nike's motto: *just do it*, go ahead and implement a presence on these Social Networking Sites; go where your patrons are. Do not focus exclusively on the library website and catalog functionality and expect patrons to come to you (Widdows, 2009). However, this *me too* approach really dilutes the library's message as an organization. Just because a patron has an SNS profile, it doesn't mean that patron will connect to you or see your message.

Just because patrons blog, it doesn't mean that they will read and comment on *your library's* blog. What's happening here is that we are using new media to replicate old-media functionality. Instead of using the SNS medium to replicate functionality from our existing library portal, we ought to do something transformative with the medium. Another example of old-media translated to new-media is the use of blogs for reader's advisory. This isn't a bad idea per se, but just because you blog it doesn't mean that you will get patrons to read it and participate, especially if that blog is not on your library portal.

Other uses of Web 2.0 technologies that are considered to fall under Library 2.0 include wikis which are used as a library intranet, for staff only (Courtney, 2007; Sodt and Summey, 2009). While this use *does* have its benefits, it doesn't really help the patron to find information in the library and through the library. A better use of a wiki would be to enable patrons to provide user-sourced reader's advisory and reference, thus working with information-savvy and tech-savvy patrons, not against them (Jacso, 2002). Casey and Savastinuk's (2007) recommendation to plan your projects and get buy in from coworkers and current patrons alike is more sage than the *just do it* mantra.

There are other projects however which have looked beyond the *me too* approach to implementation and have gone a step further. The University of Virginia at Arlington for example worked on a newer concept of an OPAC that is faceted and contains relevancy ranking (Cohen, 2007). While this is great, efforts like this are hampered by old metadata schemes such as Machine Readable Cataloging (MARC), created in the days of punch-card computing, even though improved metadata schemes have been around for a decade now. Simply developing a new OPACs won't be much help because OPAC architecture is only one element in the equation. It is the metadata that reside in the OPAC are the most valuable resource not the OPACs themselves. If these resources and standards differ from library to library it will be difficult to create Library 2.0 services that work across many different types of libraries.

Another great project is the effort to bring library resources into the Learning Management System (LMS). An example of such a project is realized at the University of North Carolina at Greensboro where library provided up-to-date, customized links to databases and e-journals at the course level (Cohen, 2007). This is a great first step because this system allows librarians to target appropriate resources to specific groups of users in specific courses. We ought to continue along this path, to borough deeper and present patrons with individualized library services, library services on a per-patron basis, not just customized library services on a course level basis.

As an example of an open source library effort we've got the *LibX* Firefox plug-in which allows patrons to search their library's holdings through their browser (Cohen, 2007). While this is certainly a good start, there are two underlying issues. First, the architecture of this plugin assumes that patrons will be using Firefox as their browser. The second issue is that it's just a conduit to the OPAC search at your library, so it is limited by the searching capabilities of your own OPAC. The key here is that we don't *just* need a library search box in our browsers; instead we need a *better* library search box.

Finally, a great example of OPAC improvement comes from the Jönköping University Library in Sweden. The work done here is much more focused on the back-end of the OPAC providing spelling suggestions for searches, finding book images from Amazon, providing forward linking to catalog content, and providing contextual help for patrons (Cohen, 2007).

ENTER THE PORTAL (2.0)
INTRODUCTION

Despite of all of the great work done on Library 2.0 thus far, three things are clear. What's clear from all of the examples above is that the talent, and the will, exists to bring forth the next generation library services, we're just doing it separately and not cooperatively. In the end, if we want to put all of these contributions together we might be creating a franken-service because each individual cog has been created separately and doesn't necessarily fit together with other parts. What we ought to be working toward is a nicely polished and functional library platform, a Social Research Management System if you will. The parts and the talent to put them together are here, but in order to realize this goal we ought to *work together* to create that user-centered library.

First, OPACs need to change so that they both can accommodate additional and different data types regarding their bibliographic entries, and can interface with networks where this information is available. Libraries need to stop fighting the users (Jacso, 2002) and embrace what patrons bring to the table to improve services. Second, we ought to realize that the library portal, the OPAC and our database offerings are not islands, as Daniel Forsman comments (Cohen, 2007), therefore these technologies ought to connect and interface in a meaningful way to the services that our patrons already use.

Finally, the library portal needs to change; to move away from the static database-directory model (the old "Yahoo" model) to a more integrated-search and recommendation model (the "Google" model). In addition, library websites ought to be modular so that new innovations can be tested independently and released without

affecting existing users. Modular library websites would make possible the offering of new features that library patrons could opt-into using. The modus operandi of Library 2.0 up to now seems (mostly) to have been "the library where you are" (Cohen, 2007; Chad and Miller, 2005; Widdows, 2009; Courtney, 2007), however the medium does limit the message, thus offering library services in Facebook, or in the LMS, may not be the best place to setup shop; a better library portal is a better proposition. This doesn't mean that you abandon outreach efforts, you just can't neglect the library portal altogether.

MODULARIZATION

Change is difficult. One of the difficult things about changing an organizational website is that there are so many constituencies to please. Typically what you end up with is a library website looks something like what the figure at the beginning of this article mocks; in an attempt to please everyone you please no one. The new library portal ought to be simple and widgetized.[2] At its most basic option you will have a page that operates like a Google search page which consists of a search box and the library's contact information and hours of operation. Patrons could customize their library profile and preferences. Beyond that everything should be controlled by a widget whose placement on the page is customized by the patron.

This model offers multiple advantages. First, it keeps with Library 2.0 philosophy of empowering library users. Library users can figure out which modules are relevant to them, and they can activate them and place these modules where they are most personally useful. Second, again in keeping with Library 2.0 philosophy, this modular model allows for constant, *non-disruptive*, change. By rolling out new features as modules libraries avoid disrupting existing library users' practices, and allow for an opt-in action from the user. Also, by having a modularized architecture, libraries are able to push out some modules as fully tested products, while allowing some beta modules to go out to users who want to try them and provide feedback. Again, this won't affect users who don't want to be impacted by additional functionality. Multiple stakeholders can get their information on the website as a (user-removable) module so all stakeholders can be satisfied without producing a website that inspires parody.

Finally, deploying a modular model compensates for the fact that one library can't do it all. For modularized portals, modules can be developed, or co-developed, by fellow librarians in other libraries, by library professionals working for library vendors, by other campus subject-matter-experts such as the computer science department, and by open source enthusiasts alike. This means that, through collective action, everyone benefits. There is precedent for this in other parts of the academic world, such as in LMS including Moodle, Sakai, and Canvas all of which accommodate development through crowd sourcing.

A BETTER OPAC

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[2] A *widgetized* portal includes *widgets*, defined by NetLingo The Internet Dictionary as "an application that sits on top of a Web site and offers users additional interactive features (widget, n.d.)

While the OPAC isn't the heart of the library, it is certainly one vital component. The library's OPAC system contains the records of that library's holdings, such as books and journals, and can tell you if a library owns a specific resource, if it's available for loan, and some basic information about that resource. In essence the OPAC is just one giant read-only database for the patron. Sure there are other redeeming features of integrated library systems (ILS), of which OPACs are a part, features that help librarians manage the back-end of acquisitions and circulation; however the OPAC shouldn't be designed for the librarian, but rather for the patron. We don't write books with authors of the book in mind, but rather with potential readers in mind. Yet what's happening to our OPACs equates to the authorship of a text for the author alone. Our OPACs seem to be designed for librarians, with a one-way information flow and poor searching options. This is part of the reason patrons don't necessarily go to the OPAC but go to sites like Amazon when they are looking for books. Amazon has a better interface and a better search system, which means that clients can find what they are looking for.

How does one create a better OPAC? First you need more space for more information, information that comes to you from your patrons. Patrons ought to be able to tag resources available in the OPAC to provide more in-depth descriptions of the resources. Patrons ought to be able to have some way of rating a resource and providing additional metadata. The cataloguing practices of professional librarians ought to be improved through the use of newer, more expansive cataloguing schemas. Combined, these two approaches would result in quality metadata coming from both sides; the professional librarians and the library patrons.

This aspect of cataloguing data brings me to a second point: why the duplication? Often cataloguing of resources is not original cataloguing[3], but rather copy-cataloguing[4]. Why the duplication of data? Why not focus on creating one central authoritative source of information for all books on WorldCat and then OPACs can link to these authoritative records and create meaningful mashups[5] between the library record, the patron record and data from Web 2.0 services. This would change the current practice to one that relies upon object-oriented information linking among compatible cloud services.

ONE SEARCH TO RULE THEM ALL

How many search boxes does a library have? There is a search box for each database that the library subscribes to, there is a search box in the OPAC, there is a search box for each online audiobook and ebook provider to which a library subscribes, one for the library portal, another for the *LibGuides* installation; and of course, let's not forget Google and Google Scholar as well! The point here is that *there are just way too many search boxes* on a present-day library portal and this makes it easy for the patron to just give it all up and go to Google in the first place.

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[3] Creating a descriptive record of the resource from scratch.

[4] Creating a copy of a record from a service, like WorldCat, and storing it in your local database, perhaps with some modifications that are relevant to local contexts.

[5] A mashup is defined by NetLingo The Internet Dictionary as "a Web page or application that integrates complementary elements from two or more sources" (Mashup, n.d.)

Instead of doing what librarians are supposed to do best, finding and organizing knowledge, we're instead asking our users to define what sort of information they want from the onset and *then* we point them to the right resource. This is the wrong tactic because what library patrons want is one search to examine *all possible library holdings*. One search for all books, ebooks, audiobooks, journals, articles, FAQs, and so on. Library users don't care if a book is held by your local library branch or if it's something that can be received through interlibrary-loan. If it exists, regardless of whether the library has local access to it, there should be one search to find it, and a single click to order it (if possible), or find it in the library's stacks.

Luckily, we're not that far away from this being a reality. WorldCat already allows us to see which libraries have what books. Google Scholar is similar for academic articles, and it also searches Google Books. What needs to happen is for librarians to bring these disparate searches together into one bigger search. We need one query that searches WorldCat, Google Scholar, the local library subscription databases, as well as all local FAQs and LibGuides to provide the patron with one list of results. The patron should then have the granularity to hide results of specific document types, such as articles or books. WorldCat does this already; it just needs the capacity to search additional data sources. Once a patron discovers a source of, that patron should be a single click away from information regarding the physical or electronic location (if this is a local resource) or with a way of requesting this resource, if available through an off-site source.

The library search engine needs to be forgiving, like a good reference librarian, and offer the patron suggestions. If a patron has misspelled a search query, the search tool should provide some spelling suggestions. If a patron is looking for a specific subject, the search engine should recommend additional related subjects and resources that are collocated with materials for which the patron is actively searching. If a patron has found a book of interest, the search could provide the patron with an image of a virtual bookshelf so the patron can see which books are collocated with the book he's examining. In short, a library search box should be designed to conduct a mini reference interview in order to massage search results to the point that those results are most useful to the patron.

Finally, I will note that if you spend enough time at a reference desk, you will learn that a lot of local campus questions come up, for example, "how does one sign up for the math placement exam." Reference desks are a prime location for collecting questions of campus significance, organizing them, finding out answers to those questions, and then making those questions and answers easy to retrieve. This sort of campus knowledge should also be retrievable through the unified search mechanism provided by the library.

LOCALIZED AND PERSONALIZED INFORMATION

The idea of personalized and localized information is nothing new; however it seems to be escaping libraries. This wasn't always the case. Libraries created, and still create, reader's advisories. These reader advisories are a traditional library service of referring fiction and non-fiction resources to library patrons (Readers Advisory, n.d.). The problem is that reader's advisories are somewhat stuck in a pre-electronic, pre-connected world, even though we use electronic means to create and distribute them. They are still static lists of books and articles to read based on a favorite author or subject, and it need not be that way. Companies like Amazon and Netflix use recommender systems, systems

which leverage a user's personal preferences, as well as preferences of users similar to the user, to recommend books, movies and other media. Recommendations are based on what you've ordered, what you've looked at and what you've rated (Resnick and Varian, 1997; O'Donnavan and Smyth, 2005; Adomavicius and Tuzhilin, 2005). The age of the personalized reader's advisory is here, it's just not implemented! What I'm describing is a specific instance of learner analytics, "the use of intelligent data, learner-produced data, and analysis models to discover information and social connections, and to predict and advise on learning" (Siemens, 2010, para. 2). Leveraging both public and private sources, libraries should be able to provide recommendations to their patrons automatically through their portal.

The first level of learner analytics that a library should be able to tap into is public data, this is data that the library can get from a user's Facebook, Netflix, Amazon, LibraryThing, CiteULike, and GoodReads accounts, to name just a few. Patrons could opt-in to let the library sample their tastes in academic articles, books, movies, and other media. The library system should be able to recommend books, newspaper stories, periodicals and academic articles based on those preferences. The patron can then rate the recommendations to improve the recommender system's efficiency and accuracy.

In the case of college students, a second level of data, private data, would come from the student information system (SIS) that keeps track of which courses the student is registered in and what major(s) and minor(s) the student has declared. Based on a student's major and current course-load, the library system should be able to indicate to the patron whether the textbooks are available in the library, and, if not available, where the student can find them. Such a system could tie into course reserves and make these available to the student based on the students course registrations, and could create a just-in-time reader's advisory for the student, based on declared major, course-load or research topic. Books, articles, and resources could be conveniently earmarked by the patron and automatically entered into a bibliographic system such as RefWorks or Zotero for future use. This functionality should also be built into the search results provided by the unified search engine mentioned previously. Finally, students should be able to fine-tune their preferences to add areas of interest to their profiles, so the recommender system can take into account SIS data, social profile data (if a patron opts into this service), and additional patron data the individual elects to include. This way reader's advisories become localized and personalized to the individual patron thus providing greater value.

SOCIAL FEEDBACK

For at least the past ten years companies like Amazon have encouraged the consumer to tell them about the products they are peddling. Consumers can give rate and provide in-depth reviews of the wares that they've purchased. Other subscription companies like Netflix allow consumers to rate movies and television shows. In the world of the book, GoodReads and LibraryThing let you rate and review books you've read, while services like CiteULike and Mendeley allow you to add tags, notes and rate *individual* research articles that you've read. Even on Facebook, a decidedly non-academic platform, academics can share their "likes" of articles and books!

These ratings and reviews, in addition to the people we've "friended" on these various services provide the data points for recommender systems to recommend books,

movies and research articles for researchers both experienced and in-experienced (the apprentice researcher). It would be very useful for libraries to work with their users, not fight them, by incorporating, and encouraging, the use of these services. By allowing patrons to "like" books and articles, librarians not only can improve their recommender systems, they can also collect valuable metrics of usage that can be used to justify collection development and collection maintenance. By linking to bookstore and in-print reviews of a given book the librarian can help the patron by providing additional information and context for this book. By allowing patrons to tag and review books, the librarian can enable the patron to contribute to this system. These ideas are not new, after all, in the days of the printed card catalogue patrons used to pencil in notes about the books. One person's note became another person's recommendation for (or against) that particular book.

In the previous section, I alluded to another useful link between the library service and the outside world. The next generation library portal must allow patrons to seamlessly export (or sync) their notes and collections to outside systems. The patron's friends and colleagues will not all be users of their library, so locking up the patron's data in a closed system isn't useful to the patron. Allowing the patron to export into systems like CiteULike, Mendeley, Zotero, and RefWorks allows patrons to extend their collaborative actions with friends and colleagues from around the world, even though they are not all using the same library system.

HELLO, WORLD!

One of the main reasons that librarians have been building Facebook pages and blogs and building services on other Web 2.0 platforms is that they are going where the user goes. This isn't a bad thing per-se, but as mentioned earlier the host Web 2.0 platform can be constraining, thus limiting the information that you can provide for your patrons and restricting how you provide it for them. What is important here is that o*ther places matter*. This doesn't mean that we ought to necessarily merge with them, but we ought to bring them into the sphere of the library portal, if goal is to make the university library portal the center of academic activity. Two on-campus examples are campus email and the LMS. Both of these systems do generate data that students need in their day-to-day academic life; and in order to access email and the LMS, students need to log-into these separate systems. The next generation library portal ought to offer plug-ins to campus email systems and to the campus LMS; in this way students will be able to make the library portal their campus homepage but still be able to see new incoming mail, compose and respond to email requests, see what assignments are due and when, and perhaps submit assignments via the new library portal, while seeing the campus calendar, as well as their own school calendar, and reviewing who has responded to online course discussion threads. If students only come to the library portal when they need to do research, which is the norm now, we've lost the eyeballs of a large user base.

The same holds true for off-campus services that students may be using such as Facebook and Twitter. These services do provide APIs to tie your services with theirs, so the next generation library portal can have widgets which access patrons' social media streams, allowing patrons to see what's happening in Facebook and Twitter without needing to go to those sites. Posting a new status update should be just as easy on the library portal as it is on the main site of the host service, supporting patrons continued use

of their favorite social media tools while at the same time growing the patrons' use of the library portal as their main academic homepage. The benefit here is that you are not subtracting functionality by asking the users to give up Facebook to do their research, and you are not limiting functionality by trying to accomplish your goals within Facebook.

POTENTIAL ISSUES

There is an old adage that nothing worthwhile is ever easy to accomplish. The same is true with this proposal for a renewed, user-centric library portal. The main hurdles around implementation of this project are concerns over patron privacy, staffing to make this vision happen, and angst over loss of control over library records such as library holdings records. Even though, as described earlier, these technologies and processes have been around for a while in areas outside of libraries, they have yet to be implemented by libraries. They have however been discussed both in print and online.

The first, and perhaps the foremost, concern among librarian is the patron's privacy. The sanctity of patron privacy has been so important to the American Library Association (ALA) that safeguarding patrons' privacy in the professional code of ethics (American Library Association, n.d.). In the past decade, legislation such as the USA PATRIOT Act has posed a threat to patron privacy in libraries (American Library Association, n.d.; Martin, 2003; Klinefelter, 2004; Lichtblau, 2005; Ramasatry, 2005; Drabinski, 2006; Matz, 2008), so much so that some libraries have done the unthinkable and have destroyed patron lending histories once items have been returned (Nicholson, 2003; Matz, 2008). I regard this as an unthinkable action on the part of librarians, and quite reactionary, considering that it is this rich patron data that can help patrons discover new information sources that are relevant to them! In addition to advantages that could accrue to the individual patron through judicious use of activity data, we must consider how aggregate activity data can be used as a base for a patron-driven rating of sources upon which to build recommender systems, both human and non-human, to assist in finding additional data sources relevant to the patron population at large. Knowing, for example, that a particular patron "likes" various kinds of Japanese animation on Facebook, and that this patron is an Art student, and currently enrolled in a specific sociology course, could help the library provide helpful suggestions for academic articles on the influence of this particular art form on Japanese culture and daily life. These recommendations would be provided *without* having to have the patron search for this specific set of keywords in some library database. This type of reader's advisory isn't achievable without the use of aggregate data from the patron.

How can one overcome these issues around patron privacy? First, it's important to realize that issues brought forth by legislation like the USA PATRIOT Act are not new and have been with us for a while (Corrado, 2009; Matz, 2008), so hiding behind the PATRIOT Act isn't a good excuse. Furthermore, patrons who are already using external services, such as Facebook, have little to no privacy, and the amount and type of data that library patrons willingly place in these external services is much more valuable than the books they checked out from the library.

In system I'm proposing, patron data that is imported from the SIS would the only data that is not opt-in. This patron data exist in the ILS already, so adding some additional fields of information such as majors, minors, and current courses isn't information that is private and inaccessible, it is simply data that we underutilize. Having

this base of patron information overcomes the *new user problem*, the problem faced by librarians who lack adequate information about users to recommend something useful to them (Adomavicius and Tuzhilin, 2005). Mining this data can thus help the recommender system to allow the librarian to give the patron at least some basic recommendations.

The second concern is staffing and access to the knowledge to make this happen. How does one find qualified employees to undertake these projects considering that budgets are always becoming smaller, and library science students don't always come to the table with the necessary skills to make this happen? This seems like an insurmountable object! In a public library this may undoable, but in higher education it is not! The good news about academia is twofold. First, there is a giant knowledgebase already on campus. Various schools and colleges can participate in the project to offer management, information systems, user interface and computer science expertise to make such projects happen. Both faculty and students looking for independent studies can participate in this project. Since the components are really designed to be modular, once APIs are created, teams can break apart to work on separate, sandboxed components to the system.

The second piece of good news is that academia is basically collaborative, and by tapping into the open source movement, one can develop a next-generation library portal by collaborating with the open source community and with other like-minded higher education institutions. Open Source ILSs, like Koha[6] and Evergreen[7], have certainly proven that this is possible! The library portal elements created at the university level can then trickle down to the public library and the special library which may not have the resources to start projects like these.

Finally, the last major hurdle may be the perennial fear of having services in the cloud; the fear of losing control of data. The fear of not owning data such as book cataloguing records and patrons' ratings of books is quite valid. The key thing here is that we don't need to warehouse all of the data that we create. If another service naturally hooks into that niche, why not use it? GoodReads offers star ratings and reviews for books. Why duplicate that function? Just tie your ILS into GoodReads and enable patrons to see GoodReads reviews on the book-record page, and allow patrons to write reviews using GoodReads, LibraryThing, or their service of preference. The truth is that some Web 2.0 services will fold and close their doors, but other services exist and will take their place to keep providing patrons with the ability to review books and to view reviews (just to name one of the many SRMS functions).

The only real records that a library ought to retain control of are patron records: who are they (majors, minors, fields of interest, etc.), what they have checked out, and the history of their loans and their research preferences and of any fines that they might owe.

CONCLUSION

Within the past five years, through the push of Library 2.0 as a concept, libraries have been working their way into the collaborative space where they meet their patrons to

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[6] For more information on Koha please see: http://www.koha.org/

[7] For more information on Evergreen please see: http://evergreen-ils.org/

perform information based transactions. The underlying principle has been to go where the patrons are. Some ideas in this space, such as searching library holdings through a learning management system, have been good; others, such as creating Facebook pages have been potentially ill-conceived. The paradigm needs to shift. Instead of libraries going to patrons' spaces, spaces which do limit the library's ability to offer services, better that we create a space online where patrons want to come because they can satisfy their research needs through library services that connect to other facets of their digital lives. Instead of fighting patrons and creating an isolated island of library services on the web, we ought to work with our patrons to transform our library portals into collaborative work spaces.

Some of this work has been done already; we just need to put the pieces together. We have the talent, the expertise, and the interest to work with others to make it happen! It is no longer an option to use legislation as a red herring, the justification for leaving our online library services in the past; it never should have been in the first place. Comics like the *xkcd comic* which opens this article makes us chuckle; they do so because they represent a reality. It's time to move beyond chuckling and rectify this situation, time to move beyond the quick-fix of the library Facebook page and time to get back to the library's roots: *making it possible to connect information with patrons who need it!*

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