
Library Catalogues of the Future: A Social Space and Collaborative Tool?

LAUREL TARULLI AND LOUISE F. SPITERI

ABSTRACT

Next-generation catalogues are providing opportunities for library professionals and users to interact, collaborate, and enhance core library functions. Technology, innovation, and creativity are all components that are merging to create a localized, online social space that brings our physical library services and experiences into an online environment. While patrons are comfortable creating user-generated information on commercial Web sites and social media Web sites, library professionals should be exploring alternative methods of use for these tools within the library setting. Can the library catalogue promote remote readers' advisory services and act as a localized "Google"? Will patrons or library professionals be the driving force behind user-generated content within our catalogues? How can cataloguers be sure that the integrity of their bibliographic records is protected while inviting additional data sources to display in our catalogues? As library catalogues bring our physical library services into the online environment, catalogues also begin to encroach or "mash-up" with other areas of librarianship that have not been part of a cataloguer's expertise. Using library catalogues beyond their traditional role as tools for discovery and access raises issues surrounding the expertise of library professionals and the benefits of collaboration between frontline and backroom staff.

INTRODUCTION

Library catalogues are a social and collaborative space. Right? Library catalogues are nothing more than a static inventory. Wrong! While we can argue that library catalogues, once automated, have always been more than a static inventory because they are constantly evolving and additional content continues to be created, they have really only served one purpose:

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to organize library collections. But is that really all that they were meant for or the only purpose they can serve?

Without an understanding of the concepts and structure behind next-generation catalogues and their features, it might be difficult imagining any library catalogue becoming a collaborative, interactive tool extending beyond our physical branch into users' homes or wherever they are. Up until now, this type of interaction with our patrons has been possible only through integrating stand-alone Web 2.0 tools into our Web sites or using outside social networking tools as a way to reach our users.

Next-generation catalogues are a vision for the future of public libraries that extends beyond that of our physical branches. These new catalogues promote patron interaction with staff while allowing users to more intuitively use the catalogue and to feel as though their interaction with the catalogue and, as a result, the library has been easy, enjoyable, and successful. As they continue to develop, next-generation catalogues may even provide users with a way to manipulate the data to fit their needs and to do this through whatever electronic device they wish to use. As a result, the development and future of next-generation catalogues focus on the experience of users' information and social needs outside of the library, providing them with the same, if not better, experience than they would have in the physical library.

This article will explore next-generation catalogues as more than just a tool that houses our libraries' collections but rather as an extension of our physical library's space. In particular, we will examine why next-generation catalogues are an obvious choice as the main gateway into the social library and as the first entry point as an online presence. As well, these catalogues will be examined not just as an access point into the library from a Web site but as a catalogue available across a variety of platforms, integrating with new technology and extracting the key characteristics of their fundamental elements.

In addition to exploring the concept that a library catalogue is an untapped social space and community platform, this article also explores the existing and future potential of the library catalogue and possibilities for how it can be used to enhance core library services, such as readers' services, collection development, youth services, and reference.

As will be discussed throughout this article, next-generation catalogues are not just about asking users to generate information but also about providing them with a personalized, local experience by taking advantage of the innovative technologies available to us.

The library catalogue as a social space, or online community, draws together elements of trust, interaction and contribution, discoverability, personalization and customization, intuitiveness, belonging, and immediate access to information. In all, they create a level of experience that has been, up until now, found only in the physical library.

While many of the ideas within this article are theoretical and, in some cases, have yet to happen, the content presented is meant to provide all of us with a vision of what library catalogues can become and the powerful tool they are in enhancing all of our library services. As a result, you may feel that there are more questions than answers contained herein. The purpose of this article is not to provide a set course or instructional guide as to what future library catalogues will be but to start new discussions on what they can be and what this means for future collaborative opportunities, skill sets, and the future face of the library.

NEXT-GENERATION CATALOGUES IN PUBLIC LIBRARIES

What is a next-generation catalogue? Even if we ask only a handful of library professionals that question, we will likely receive half a dozen varied responses. In this article, a *next-generation catalogue* is a generic term for library catalogues that have moved beyond the technology of our existing legacy catalogues and are meant to serve a greater function within the library. However, next-generation catalogues describe not one iteration or generation of a catalogue but rather a new type of catalogue that incorporates features and possibilities that were not possible in the past. In fact, it is important to view these catalogues as platforms found in iterations beyond that of a database that uses the Internet as its only connection to users. The medium by which these catalogues are used should be varied. For example, next-generation catalogues may be found on a variety of mobile devices, from iPhone and iPads to Blackberry Tablets as well as on the Internet. In essence, next-generation catalogues are about ideas, function, and possibilities rather than a specific format by which it is accessed.

An advantage of next-generation catalogues is that they provide a platform for developing and extending relationships of trust and community between our staff and patrons—patrons who may never walk through the doors of the physical library. They can also bring like-minded patrons together, encourage the sharing of information, invite community-created information, and act not only as a place of discovery for the local library collection but also as a gateway to information far beyond the walls of the library. Once again, it must be emphasized that these catalogues should not have technological restrictions but should be available on multiple devices and in multiple formats. Only then can we provide unlimited access and social interaction to our collection and the community.

Before continuing on with this article, however, it needs to be noted that many of the possibilities and ideas attributed to next-generation catalogues are just that—possibilities. Throughout this article, ideas are presented and questions are posed to encourage the rethinking of our traditional definition and role of library catalogues.

In 2011, an Online Computer Library Center (OCLC) research project was undertaken to examine the use of social catalogues in public libraries.

Using transaction-log analysis, this specific study focused on daily transaction logs of the social discovery systems used by two Canadian public libraries. The general conclusion was that both libraries in this study appear to be making limited use of the social features, and as a result client interaction is minimal at best (Spiteri & Tarulli, 2011). Why is this? At the time this project was undertaken, one of the libraries' catalogues was still in beta launch, while the other had been launched and marketed for over a year. It can be assumed that with marketing, staff awareness, and the "newness" factor, usage might have been higher during these stages, rather than at a later date. However, one might also come to the conclusion that because of their newness, staff and patrons were still unsure as to how to use the tools and how to market them to their best advantage. It is interesting to note, in fact, that very little research has been conducted in this area of librarianship. What is clear from the study and professional literature is that more research needs to be undertaken to better understand how social catalogues are being used and why. Or, perhaps our questions should focus on the purposes for which we should be using these new catalogues.

It is assumed in this article that next-generation catalogues can offer tools and provide features that are beneficial to staff and users. In fact, it might only be how we are going about using these features that we are falling short. Tagging or reviewing may never become a popular user-contributing feature, but staff may find this function extremely useful for promoting reading lists, books clubs, or events. As a result, our users may benefit greatly from these features and enjoy them but never actually generate the information themselves. It is with this in mind that the article continues, providing a vision for next-generation catalogues that allows for an extension of the physical library branch to reach remote users and enhance our services and collaborative opportunities.

Rather than enhancing our services by soliciting user feedback, librarians are often accused of using expertise to decide what is best for our users. Our cataloguing practices and legacy catalogues are a good example of this. According to Gretchen Hoffman, "Although cataloguing claims to focus on users, the cataloguing field has generally not taken a user-centered approach in research and cataloguing standards have not been developed based on an understanding of users' needs" (2009, p. 632). However, we cannot necessarily take all of the blame for creating cataloguing practices from theory rather than user feedback. In fact, a simpler explanation is the shortcomings of our traditional, or legacy, library catalogues. Many of our shortcomings are the result of limited ability to customize bibliographic records, shortcomings with cataloguing software, and an emphasis on productivity and efficiency over customization of records (Hoffman, 2009, p. 632). They have also resulted because of a limited understanding of who our users are and what expectations they have

(Hoffman, 2009, p. 633). Next-generation catalogues address these issues, as do the current models of evidence-based librarianship and research. Public libraries with in-house cataloguing staff are taking a greater interest in customizing bibliographic records and putting increasingly stronger pressures on vendors of cataloguing software to provide greater flexibility in function. And, of course, next-generation catalogues invite user contribution and content creation by all users of the library, both community members and staff members.

Despite offering a variety of services such as a social space for community activities and book clubs, author readings, and other activity-related events, the library is still viewed as a place that houses a collection that can be borrowed and shared. It is the local destination spot to find out-of-print books, access old newspaper articles, or check resources that either require subscriptions or cannot be obtained by individuals. In essence, our libraries are still focused and centered on our collections—electronic, downloadable, or physical. If a public library's collection continues to be central to the existence of public libraries, then doesn't it mean that the library catalogue must be considered an integral tool? As a result, next-generation catalogues are poised to be the public library's central tool and face of the library.

However, our physical libraries, although still centered around their collections, have grown and adapted to the changing needs of the community. This includes turning libraries into gathering places and social spaces where groups and individuals can socialize, enjoy similar interests, have discussions, or just relax in a comfortable and safe setting. While acknowledging that libraries exist because of their collections, that does not mean that is their only purpose. Library catalogues, as the library's online space, must also recognize that while their primary function is to organize and provide access to collections, they, too, must provide social elements that patrons have come to expect. With these expectations, serious consideration needs to be given to the idea that next-generation library catalogues are collaborative and interactive spaces. They provide not only the social features sought by many of our community members but also access to all of our collections, many of which are now online. In fact, next-generation catalogues provide the branch library experience virtually. They can link to recorded author readings or programs and provide pathways to program announcements, special events within the library, and links into the greater community.

As with our physical libraries, our online users are primarily local, location-specific users with identified information needs and cultural identities. Unlike the Internet as a whole, the library catalogue seeks to serve a select group of individuals, attempting to target their needs and wants while reflecting their cultural differences and languages. If we view the library catalogue as a localized Google, it has an advantage over other

online information resources; it is an extension of a physical environment where relationships and a level of trust with the community already exist. It is also created, maintained, and continues to exist to serve an identified population and user group.

If we accept that next-generation catalogues are social, collaborative spaces, we are redefining the meaning of the traditional library catalogue. And accordingly, all aspects of core library services may be impacted by the new role of the library catalogue. When discussing this idea within the profession, there is a significant amount of skepticism that accompanies the enhancement of a tool that has the potential to impact every aspect of library service. What happens to the physical branch and the roles by which we have traditionally defined ourselves? Frontline staff are used to operating and carrying out their services without thought as to how the library catalogue can assist in enhancing their programs, book clubs, projects, and responsibilities. Next-generation catalogues may demand that frontline staff view the catalogue as an outreach tool and a central platform by which to reach out to the community, work with them, and provide a level of service that is expected but has not yet been reached. Unfortunately, at this time, most frontline staff view next-generation catalogues as another facelift to our existing legacy catalogues, without thought to how these new catalogues and their features can benefit their services as well as improve access to the collection.

Cataloguers are, perhaps, more divided in their opinions on next-generation library catalogues and their role in libraries than other library professionals. These new social catalogues may impact cataloguing practices, require new responsibilities and skills, and shed light on the backroom mystique surrounding the library catalogue and cataloguing. Of considerable concern is the impact on the integrity of the metadata found in the catalogue, redefining the catalogue out of existence, or adding so much content that it will be impossible to manage. Also, the cause of much debate is the concern cataloguers have regarding the invitation to users to generate information. Will this breed a lack of uniformity within bibliographic records or influence the catalogue's use of controlled vocabulary? This is all compounded by concerns over the additional role that cataloguers will now have to play, as next-generation catalogues provide a platform that increases the interaction and collaborative duties between backroom staff and frontline staff.

Fostering a stronger collaborative relationship between all areas of public service, these new catalogues will strengthen core library services and encourage innovative projects and a level of respect among peers not always found in libraries. No longer will frontline staff only interact with cataloguers when there are misspellings in the catalogue, errors in call numbers, or missing genre stickers. Cataloguers will become frontline staff and vice versa. While the hands-on responsibilities will remain largely

the same, next-generation catalogues will allow both sides of the profession a greater glimpse into how our roles impact and complement each other and, with luck, diminishing some of the frustration we often feel with each other and various practices within the library due to misunderstandings.

IMPACT ON READERS' ADVISORY SERVICES

In most public libraries, our current readers' advisory models are heavily based on our traditional reference-interview structure. The conversations start with a roving readers' advisor (RA) approaching a reader within the library or a patron who approaches an RA staff member. Striking up a conversation about books, it is an interaction that leads to reading suggestions and recommended titles. Similar to a reference interview, the RA generally has a list of predetermined questions that assist in deciding which books to suggest, and when the reader leaves, the conversation is documented by a statistic, with little or no feedback or follow-up with that patron.

In his 2006 article "Improving the Model for Interactive Readers' Advisory Services," Neil Hollands examines the assumptions that many of us make about the traditional RA model we have come to rely on as the foundation of RA services. In an attempt to rethink how readers' services are offered in libraries, Hollands explores six assumptions that we make about our traditional model:

- Readers initiate or approach an RA with reading questions.
- The staff member approached will have the knowledge to answer the RA questions.
- Through our RA interviews, we gather enough information to provide good RA services.
- Time constraints do not interfere with the quality of RA services that we provide.
- The use of databases and other RA sources are easy to use while conducting face-to-face RA interviews.
- We sufficiently document our RA discussions so that they lead to successful follow-up.

With that type of traditional interaction in mind, it is important to critically examine how our services are meeting the needs of our users and if an online social environment can enhance the experience of readers and improve on the traditional readers' advisory service model. We should be asking questions such as, Are we meeting our readers' needs? How have our readers' needs changed from the start of our services? What are our strengths and weaknesses?

In his recent essay "RA as a Transformative Act," Duncan Smith (2012) begins with the lines "Sometimes there is a magical quality to readers' advisory. Like when you are talking with a reader and their reading interests

and yours overlap” (p. 48). When most of us read Duncan’s words, we think about the in-house RA conversations we have with readers. But, what about readers who do not like to visit the physical library or who do not feel comfortable talking to librarians? What about those readers who feel disenfranchised or feel a disconnect with our readers’ advisors because of differences in age, gender, education, or reading preferences? Simply put, what about all of those readers we never talk to or see? What if we can take our in-house expertise and provide our RA services remotely? Can we connect with other readers in their homes and encourage readers to share with each other?

How can we reach the readers we never see and give them that “magical” encounter that is so exciting and fulfilling? Is it possible that the answer lies within the library catalogue and among fostering a closer relationship between readers’ advisors and cataloguers? In an age where the majority of the population use social media to interact and prefer online services rather than face-to-face contact, these are important issues that need to be considered.

Why should we explore the library catalogue rather than the Web site or some other software to enhance RA services? At the end of the day, readers’ advisors and patrons come back to the catalogue to find the book for the reader. If the collection is vital to libraries, whether it is in electronic or paper format, than we need to focus on the fact that, in the end, our services revolve around what is found in the catalogue.

Next-generation catalogues are library catalogues that encourage interaction and contribution by users. They allow for user-generated ratings, tags, and reading lists as well as reviews written by readers. Given that patrons have been trying to add content to our catalogues for years (think of the penciled-in notes made by readers even in our card catalogues), we are finally inviting them to contribute and assist us in enhancing their library. As a result, the idea of a “social” library catalogue should be as exciting to RAs as it is to cataloguers. Rather than providing content generated exclusively by library professionals, we are asking our readers to add content. This mirrors the shift in frontline public service from that of “telling” readers what is good for them to listening to their reading interests and needs. What are their reading preferences? What type of material is a certain branch reading?

Wouldn’t it be exciting if, rather than just having author readings recorded and available on our Web sites, we provided recorded patron book discussions as well? Perhaps recordings of book club discussions linking them to the books in the catalogue? What if these discussions were led by a trained readers’ advisor? Would that spark a great conversation within the catalogue around books and lead to further recommendations and suggestions by other avid readers? Would it make our readers stop and think about what attracted them to their last great read?

We really do ourselves, the profession, and our users a disservice when we isolate RA work into one department or set of librarians or staff. We should aim for an organization-wide culture of RA, and the folks in cataloguing, circulation, etc. need to be part of that. (Trott 2010)

To view cataloguing and cataloguers as separate and apart from “public service” is, in Trott’s words, a disservice and can result in missed opportunities for collaboration between readers’ advisors and cataloguers.

A cataloguer’s expertise in their area of a library’s collection is a strong asset to a readers’ advisory team. For example, while a readers’ advisor participates in daily interaction with readers, uses RA tools, and attempts to stay current on the collection to provide reading suggestions, the cataloguer of the fiction collection touches every fiction book that enters the collection. Often, this includes analyzing and drawing parallels between similar books by different authors, recognizing reading trends, and familiarizing themselves with less popular titles that hold the same elements as those high demand items on bestseller lists. In addition, while readers’ advisors are holding in-house conversations with readers, the library catalogue reaches all of those readers we never see or who do not wish to visit the physical library.

While there will be, for the foreseeable future, individuals who have bookmarked our catalogue, blog, or Web site on their browser, an increasing number of users find us through RSS feeds, smart phones, friend recommendations, or a social-networking presence (such as Facebook). Of interest is how we are addressing this new form of access to our services, in an environment of immediacy, brevity, and short attention spans. Also of interest is what we are going to offer in our online presence that will make readers come to us, rather than another alternative. Next-generation catalogues are a strong candidate for fulfilling this online and interactive role.

When considering these arguments, it seems natural to consider expanding cataloguers’ expertise to areas beyond that of traditional cataloguing and encouraging them to become readers’ advisors. It appears that training them in readers’ advisory and encouraging them to join our team can only strengthen our services. In fact, they should become more involved in readers’ services because, whether or not we have been taking advantage of it, they are already integral to the development and promotion of RA work. Once cataloguers are welcomed into this new role, they can begin to understand and, consequently, address what elements need to be included in catalogues to enhance this service. In the end, with the growing popularity of online use over physical visits, we need to explore how those users can benefit from our readers’ advisory services if entering the library through the catalogue.

Because cataloguers are the primary creators of our catalogue content, it is important to teach them what readers’ services is and the difference

between how readers describe and experience books and how we catalogue our collections. If cataloguers begin to understand the difference between their access points and how readers want to access the collection, they may be able to assist in creating readers' advisory terms and content to bibliographic records. Through the use of next-generation catalogues, this may be as simple as adding tags and creating booklists or as challenging as asking readers to assist in describing books in reviews and analyzing the terminology readers are using for access-point creation.

How do patrons browse in our libraries? Do they browse? What collections do they browse? Cataloguers spend their careers considering how patrons search the library. Readers' advisors have the expertise to understand readers and how they describe and look for books that are appealing. Collaborating can potentially provide us with new ways to utilize the skills of both disciplines and help not only those patrons who browse within our physical libraries but also those who never step within our walls. In fig. 1, we can see how the virtual experience of walking through the stacks is experienced as seen in an iPhone application created for Dallas Public Library by the e-commerce and Web development company Hybrid Forge (Edmonton, Alberta, Canada). Hybrid Forge applications combine user expectations of today's remote experience with the needs of the library. This is evidenced by a strong readers' services theme, interactive nature, and ease of use—all characteristics of future next-generation catalogues.

Once a relationship between cataloguers and readers' advisors has been established, next-generation catalogues can support and promote a strong RA presence in the catalogue. Reading and readers' reading preferences can be a very personal experience. Some readers may prefer accessing a readers' advisor remotely rather than face-to-face, or to only have a book conversation with other community members, rather than library staff. Our new catalogues should seek ways to foster these types of conversations and interactions. Indeed, where better to hold a conversation about books than in a bibliographic record. Some users may find they have a strong opinion to share, while others will simply read through the discussions or tags, deciding if the additional book suggestions or even the descriptions in user reviews appeal to them. This is similar to our own interaction within the walls of the physical library. Some patrons never approach staff, while others are more than happy to not only approach an RA but also have an in-depth discussion with them on a recent book they just read.

With next-generation catalogues, it should be possible to connect readers with each other and with readers' advisors who help introduce readers to each other. Rather than walking through our physical library doors, we should be using our library catalogues as online gateways that introduce a world of reading and books wherever our readers are located. With the current and future interactive and social features of next-generation



Figure 1. Browsing the stacks. Next-generation catalogues can mirror the feel of walking through the stacks virtually. This is an example of an iPhone application created for the Dallas Public Library by Hybrid Forge, which seeks to provide readers with a virtual experience.

catalogues, it would be foolhardy not to consider library catalogues as strong candidates for providing the platform for remote readers' advisory services.

IMPACT ON TRADITIONAL LIBRARY SERVICES

Many of our colleagues who work in reference, children's services, or collection development are not aware of the impact next-generation catalogues can have on their own areas of service. Most consider next-generation catalogues as a simple and more innovative interface but not a tool that they will be able to use to enhance their own services. Instead, they still tend to see next-generation catalogues as only an improved tool that accesses the collection. Many take the position that while the enhanced features are something that may or may not be used, they should be included so that they reflect current expectations and trends found on commercial Web sites. Frontline staff are not aware that these features also offer opportunities for their own services. Unfortunately, this lack of awareness may hinder the popularity and future success of next-generation catalogues. While frontline staff may not be aware of the strength this tool offers to their own unique service area, these catalogues nonetheless offer possibilities and enhancements that should not be ignored. In fact, there are persuasive arguments to be made in favor of using next-generation catalogues for promoting core library services rather than the library Web site.

Why the catalogue? With the changing nature of what "personal" service means and the community's expectation that they should be able to access all services remotely, we are and should be examining how next-generation catalogues can be used as the tool by which to offer our services to remote users. Wherever our users are, they are accessing our libraries through the Internet. In fact, when you look at the statistics regarding where holds are placed on items, the average percentage for most libraries indicates that well over 75 percent of holds are placed remotely (Smith, 2010).

We know that patrons want more than just what we offer within our branches. It is important to examine why patrons continue to use the library despite having a wealth of information sources at their fingertips. What is unique about the library, and why do patrons continue to use our services? Determining our strongest and most valuable assets may lead to unexpected surprises as to what the community truly enjoys about their libraries. We do know that they expect to access our services remotely while the quality of those services remains the same. This ease of access can be blamed on Google, Facebook, or a variety of other social and information tools, but the reality is that our users expect the same online or "remote" service from libraries as they do from any other information or social outlet.

Youth Services

As youth-services librarians, how do we interact with our younger patrons? They are a demographic heavily involved in social networking, texting, and sharing. In fact, even parents of teen readers have expressed their teens' interest in sharing favorite books through Facebook or seeing what their friends are reading. As a result, we can conclude that what friends are reading is a strong influence on their own reading choices.

How do next-generation catalogues impact or enhance youth services? With a catalogue that can be broken apart to exist on a number of platforms such as computers, iPads, and smart phones, next-generation catalogues are or can be available to teens wherever they are and however they want to use them. That is essential. With a generation of young adults who want information quickly and easily, customizable next-generation catalogues that exist on a variety of platforms represent the first step in reaching a user group that may play a vital role in the social and interactive environments of these catalogues. But, what about today? What existing features of next-generation catalogues can teens and tweens enjoy and reap the benefits of?

Let's consider the tagging feature in these catalogues. What if we asked our teens and tweens to create tags for their favorite books? Perhaps it is a joint effort where we ask them to jointly create a reading list for a specific topic. For example, what are teens reading on the topic of sex or abuse? How do we do this and have our young patrons stay anonymous?

The use of social features within next-generation catalogues is a great resource for staff to engage youth in creating reading lists that are relevant to them but perhaps uncomfortable to speak about with staff or each other. Generic user accounts that are created by youth-services librarians can act as security blanket to share resources and information on controversial topics among teens. By using a generic account and inviting teens to log in to this account, they can feel safe and stay anonymous while sharing these resources without embarrassment or judgment.

User-generated features in next-generation catalogues provide a level of collaboration and sharing not just in a social media sense but also in a community sense where the creators of resources can be made by peers within the community with the guidance from staff. Youth services can take advantage of this by creating a sense of community among teens to talk about events, timely topics, and even uncomfortable subjects. As a result, we are tuning in to what teens say but respecting their privacy and letting them interact with us as much or as little as they desire, wherever they are.

Book Clubs and Adult Services

Adult services may be one of most highly impacted by the implementation of next-generation catalogues if frontline staff take advantage of their

features. In addition to book recommendations, which users of all ages will benefit from, adults can take advantage of the strong remote services advantages. On the go, whether at work, commuting on the bus, traveling, or waiting to pick up their kids from soccer practice, adults never seem to have enough time. By extending the physical library and providing interactive and social services remotely, adults can use the library when they have time, in their own time. This is especially helpful if they want to access the library quickly to find the latest bestsellers or recommendations and place a hold. If they can do this with an intuitive interface, whether on their laptop or phone, they can swing by the library later to pick up their holds. Or, if they have a few more minutes, maybe they want to participate in a book discussion or online chat about a recent book they read. With this in mind, we can turn our attention to the benefits next-generation catalogues can bring to book clubs.

Members of book clubs love to discuss books and share opinions. Generally, they tend to be active within the library and, given the right incentive or motivation, make excellent contributors to the social and collaborative side of next-generation catalogues. With motivated individuals, community content is created and allows other members to take advantage of this content, even if they are not inclined to participate themselves. This may be as simple as reviewing books in the catalogue to hosting book discussions through the catalogue.

If we are able to view (and to convince other colleagues to view) the library catalogue as more than just an inventory that lists the items within a library collection, we can start to understand how next-generation catalogues invite users to collaborate and create information within the catalogue for each other—or to take advantage of localized information that we generate just for them.

Collection Development

Public libraries typically rely on three types of models for their collection development practices: a decentralized selection policy, a central selector, or vendor referrals and selection.

A decentralized collection development structure relies on a group of selectors throughout the library system to select for specific collections. With this structure, librarians throughout the library system are responsible for selecting for specific areas of the collection. For example, while one librarian selects for all of the adult fiction material, another will specialize in music.

A central selector is located at one branch within the library system. Removed from the frontline perspective and therefore the personal contact with patrons, they often base their purchases on recommendations. These recommendations are typically sent in from other branches, gleaned

through book reviews and journals as well as suggestions for purchase made by patrons.

Gaining popularity among libraries is also a structure whereby the selection is left to vendors. A vendor supplies items based on a larger popularity scale, determined through mass purchasing and distributing practices by publishers and libraries.

While these three types of models are common and have been successful, next-generation catalogues may be able to add an additional element of personalization and tailoring to suit the needs of their local community, community groups, or current cultural trends.

In Spiteri's 2006 article "The Use of Collaborative Tagging in Public Library Catalogues," she discusses the idea of desire lines with respect to folksonomies; the user-generated content in social catalogues is what is often referred to as folksonomies. Folksonomies reflect the users' vocabulary and accommodate new concepts and trends that may or may not be found within our existing catalogues' content. Indeed, they may provide significant insight into community reading trends. In the end, what results is an indication of our community's desire lines—which are the expressions of the direct needs of our users (Spiteri, 2006, pp. 1–2).

These desire lines are important to consider in collection development for several reasons.

- They reflect the needs and interests of the community and, in particular, their reading desires and needs.
- They create an online community of users with the same interests based on tagging patterns, similar reviews, and reading lists.
- They allow library staff to build collections on what users want and are using, including indicating what books are popular within a community and why (Spiteri, 2006, pp. 1–2).

If we have the ability to mine user-generated information, new collection development practices may emerge. It is with certainty that this information can certainly improve our collection practices. By taking advantage of the statistics and data that patrons are providing through their interaction with the catalogue, we can examine data that identify items that are being rated highly by their community, items recommended from one reader to another, and items that are added to reading lists as favorites or actively disliked by patrons.

As next-generation catalogues continue to develop and additional data are identified for use, we can hope that vendors continue to focus their efforts on how to manipulate the data for extraction to use in reports and comparisons and inclusion for a variety of usages. This type of function includes isolating borrowing practices for one specific branch in a community as well as determining the items shared with friends through social

networking sites. Perhaps we can also view and track “click-throughs” from one item in the collection to another and by what source. Did they enter a record through a book review? Through a specific reading list, friend, or popular community event?

Our strengths lie in the personal, local information and resources we provide. Taking advantage of the opportunities these data provide to our collection, development practices will strengthen a key position many libraries are beginning to take when faced with so many information alternatives. Next-generation catalogues enhance our current collection development practices beyond our existing models to a level of catering to the needs of our local and diverse community.

Reference

Reference, often considered our most traditional and threatened service, may be able to take advantage of the ability of next-generation catalogues to search multiple indexes, or databases, with one search—one search found in a single search box in our catalogue. Many new catalogues allow content from a variety of data sources to be searched, retrieved, and displayed within the catalogue’s results page. For example, a catalogue may be able to search the library Web site, a local museum’s collection, a community database, and the town’s historical society Web site. If a library identifies the data sources, most next-generation catalogues can search them. This provides an advantage over the traditional searching methods used by reference librarians and staff.

There are two types of search functions found in next-generation catalogues that are advantageous to reference services: federated and faceted searching. While federated searching is a feature that can be purchased and implemented into our legacy, or classic, catalogues, next-generation catalogues that are able to offer this as a built-in function (or offer it in the future) can provide more intuitive layouts, faster searching, and an overall ease of use not found in “add-on” features through third-party vendors. With the ability to integrate federated searching into catalogues—which is the searching of subscription databases—reference staff can decrease the required amount of toggling between data sources needed to perform a successful reference interview. When helping patrons, they will also be able to demonstrate a single search in one location rather than navigating the patron first through the library Web site and subscription database pages and then back to the catalogue.

Faceted navigation is a way of refining search results by pulling out key concepts from the items that were retrieved in the search and presenting them in a tool bar as options for narrowing down results. This assists users in understanding and refining search results to fit their needs or interests rather than forcing them to create a complicated search string to draw out

relevant information. In other words, it is a way of filtering results, based on an original search term or terms.

While it is easy to look on the implementation of a new catalogue as simply a cosmetic overhaul of our existing legacy catalogues, it soon becomes apparent that next-generation catalogues use powerful features that are waiting to be explored and put to use in a variety of innovative ways. From readers' services to programming, catalogues are a natural companion and partner to assist in carrying out the mandates of our library and core library services.

NEW TECHNOLOGY

Alluded to throughout this article is the idea that next-generation catalogues will reach a level of customization and flexibility so that they become deliverable via any number of devices on a variety of platforms. While our community members continue to access our libraries on their laptops, a number of users, especially younger generations, are gravitating toward the use of smart phones and iPads or tablets exclusively. We must consider the very real possibility that in the not too distant future, we will see a significant decline in the use of desktop computers and a continuing rise in smart phone or other alternate device usage. We may also begin to see individuals who continue to use both smart phones and desktop computers approach each technology differently. For example, smart phones will be used for quick searches or brief interactions with technology (information consumption) for the sake of convenience while in-depth work, searches, or blogging (content creation) are considered tasks to be performed on desktop computers.

With that in mind, we must start considering how we will provide access to our next-generation catalogues outside of a simple Internet platform. In addition, we must recognize that the features and function of next-generation catalogues are a very good "fit" with new technology, such as integration with smart phones.

When examining the future of our library catalogue, and even our Web sites, it must be considered that they are becoming less like destination spots and more like gateways. In fact, our Web sites and catalogues are often found through gateways, being pointed out to an individual by a friend, colleague, application, or some type of outside source. This is different from the concept of what we are used to. Rather than a "build-it-and-they-will-come" approach, we now have to rely on users finding us through social media and links generated by users. Online user traffic is directing patrons to the library through these gateways.

Although we can assume the patrons will continue to access the library throughout the internet, at least for the foreseeable future, it is important to consider the idea that an increasing number of users will be led to the

library through a variety of gateways. These gateways include RSS feeds, smart phone applications, friend recommendations, or a social networking presence (such as Facebook and Twitter). What will be of interest is how we are addressing this new form of access in an environment of immediacy, brevity, and short attention spans. Connaway, Dickey, and Radford (2011) recently explored the idea of convenience as a major factor in information-seeking behavior in a recent study. The study focuses on convenience as a “situational criterion in peoples’ choices and actions during all stages of the information-seeking process. The concept of convenience can include their choice of an information source, their satisfaction with the source and its ease of use, and their time horizon in information seeking” (pp. 179–190).

Mobile Technology and Handheld Devices

Developers of next-generation catalogues are unable to ignore the increasing growth and popularity of handheld devices, and, in particular, smart phones. In fact, many of us have seen evidence of the profession’s acknowledgment that smart phones are an increasingly important platform through which to deliver services. Vendors and software developers race to develop platforms that users will download or use on their devices. One of the challenging yet fascinating aspects of this growing platform is the difference in how users want their information on a mobile application versus a desktop computer. This poses a challenge for developers of mobile technologies for library catalogues. Or does it? When seeking to design our next-generation catalogues, many of us stress the need for interfaces to be intuitive, for the layout to be clean and simple. In addition, we ask for social interaction, an ability to share information and break apart data to be used in a variety of ways. In fact, the designs we ask for in next-generation catalogues are perfectly suited to the design of smart phone applications.

It is theorized that users of smart phones only average about 45 seconds on any given mobile application. Being generous with the time, even if we consider the average use to be 2 to 3 minutes, essential questions need to be addressed. What are the key elements that a user needs to derive the best experiences and the most use out of the application for the library catalogue? How can this be done in the shortest amount of time possible? What do users want when they visit library catalogues on their phone? Heavy text? Big buttons? Limited options with the most popular features highlighted?

Many of the vendors in the profession are, unfortunately, creating mobile applications with an eye to simplicity over function. In fact, while some of these vendors are creating innovative next-generation catalogues, their mobile platforms are reminiscent of our traditional legacy catalogues. Indeed, some of them are so simplified and text reliant that to use the mo-

mobile version requires users to enlarge the screen or demands a significant amount of scrolling. Rather than learning from what social media have to offer and the reason behind why users are turning to their smart phones, vendors are turning toward what they know and what has worked in the past to provide a mobile platform in an attempt to stay competitive with outside software developers. However, these text-based mobile platforms reflect our legacy catalogues, with small text, drop-down menus, and too many advanced options for mobile use purposes. However, the success of an application that requires users to “work” for what they are looking for is low. When we visit commercial Web sites, we now expect that they have a mobile site that provides big, clear buttons highlighting the most common functions. Amazon, for example, provides a simplified mobile version that provides a user with the most basic information with clear, linkable buttons to explore their item further. However, if a user feels it necessary to move beyond the simplified and clear interface of the mobile version, there is a link to the regular Amazon site. However, most users understand that by navigating to the standard Amazon site, the page loading function may take more time and the ability to read or search through the site may be more user intensive (requiring the user to scroll or enlarge portions of the page). A user does not expect to do this on a so-called mobile site. As a result, if the loading time for the application is slow—if there are too many words, needless scrolling, or enlarging—then your chances for a successful mobile application are low. We always want to consider the principle of convenience and the motivation behind why users have chosen to use their mobile application over a computer.

However, outside software developers have started to create mobile application for libraries too. What’s noteworthy about software developers’ products is that they design their applications based on their expertise in social media. As a result, they understand the user’s purpose for choosing to search the catalogue on the smart phone rather than the desktop, while many library vendors only consider the smaller screen of a phone or, worse yet, tend to resort back to a “bare-bones” text-based catalogue with small fonts and lots of text. Developers outside of the library who are taking an interest in developing platforms for catalogues have based their creation philosophies on ideas similar to those that led to the creation of next-generation catalogues. These developers, used to the mobile application market, are creating simple, clear, and big-button mobile applications that highlight the most popular features (or, at least, identified target features) used in our catalogues: reading lists, best-sellers, read-alikes, and placing holds. For example, many of these applications include a *where is it?* function, book recommendations, ISBN scanning, and additional keys for searching title, author, and subject (fig. 2).

What will the future bring for next-generation catalogues and mobile applications? Given that mobile technology is the fastest-adopted technol-

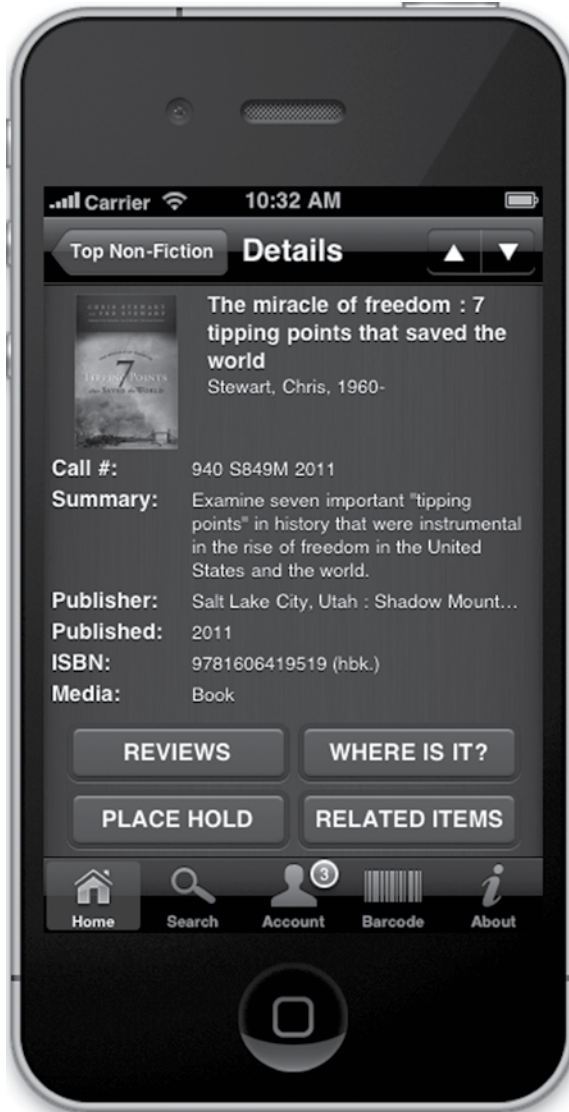


Figure 2. Screenshot of iPhone library. With a quick glance at the data mined from the library catalogue, users can find what they need at a glance. Next-generation catalogues and their applications for mobile devices need to implement these functions and enhance them. (Courtesy of Hybrid Forge.)

ogy in history, we can surmise that these applications will continue to grow in popularity and, as a result, so will our reliability on these applications. In fact, we might want to consider that smart phones, tablets, or iPads are the next platform for delivery of information, rather than desktop computers. With this in mind, it is easy to predict an increasing amount of attention on the development and integration of mobile applications with our library catalogues—both from vendors within the library environment and externally. The future development of these applications will incorporate key features from our new catalogues. What I envision are mobile applications that are able to extract data from several library sources to seamlessly offer users what they want. This may mean pulling data from the library's blog as well as highlighting the latest patron reviews so that a user who views the best-seller list on his or her smart phone will also see the latest blog post on the item and perhaps even related library events, the latest user reviews, and content from a readers' advisory source, such as Nove List or even LibraryThing, that also provides a list of similar titles. Not only will this information be available in simple clicks and intuitive buttons, but it will be presented in a way that reflects that the interface was designed for a smart phone rather than modified from an existing Internet-focused online interface (fig. 3).

Understanding social media and the use of smart phones can provide insight into why mobile applications and next-generation catalogues are a natural fit. As an extension of our physical library branches, next-generation catalogues provide users with the same level of service they receive in-house but with the same features and functions already implemented by commercial-based Web sites and social networking sites. They are intuitive and "easy," reaching the users where they are, demanding only as much interaction as the user wants while still benefiting from a larger community. The delivery of information is at their fingertips. When we consider these catalogues in that regard, we see their similarity to smart phone applications and why these applications are becoming "essential" to everyday life.

However, while we can make a strong argument for the need to implement next-generation catalogues and their venture into the mobile application world, many professionals continue to hesitate to commit the resources into acquiring these mobile applications until they can provide service to all smartphones, including Blackberry, Android, and Apple products. Like the naysayers of the catalogue itself, librarians and management point to a lack of tech-savvy users or a need to focus on the disenfranchised or existing user base. The growth rate and the adoption of smart phone usage are increasing quarterly. This technology is becoming the most highly adopted technology in history and represents a large portion of our taxpayers who are not necessarily using our libraries—that is,



Figure 3. Screenshot of an iPad application. Intuitive, clear, and simple, a user interacts with this interface and its functions at a glance. (Courtesy of Hybrid Forge.)

the majority of working professionals and the generation X and Y populations.

The ability to create one mobile application across smart phone platforms will increase and develop over time. But to not serve any smart phone customers or to provide mobile sites that reflect our legacy catalogues while we wait to acquire true mobile applications may be more of an issue. Is it better to provide what appears to be outdated interface for display on new technology tools? Or is it better to adopt new technology, knowing that at this time you are serving only a portion of your customers but will eventually support all of your customers?

Mobile applications for next-generation catalogues will continue to grow in the forthcoming years. Research into these catalogues will provide meaningful data into what features are essential in library catalogues and provide guidance into which of those features should be reflected in their mobile counterparts. In the meantime, software developers both within and outside the library will take advantage of the growth in popularity of smart phones and continue to explore how, why, and when users will use the applications and when they will choose to sit down at their desktops to visit our library catalogues.

CONCLUSION

Throughout this article, a variety of ideas have been presented regarding next-generation catalogues and their potential as collaborative and community tools. In particular, regardless of the platform or format used to deliver the features of a next-generation catalogue, they are meant to reach users where they are and on whatever device they choose to use. As stated in the introduction and apparent throughout this article, much of what has been discussed is theoretical and in some cases has yet to happen. The content presented is meant to provide all of us with an understanding of what library catalogues can become and the powerful tool they are in enhancing all of our library services.

The library catalogue is underutilized social space but next-generation catalogues can remedy that. If they can be considered an extension of our physical library branches where social interactions occur and where we provide traditional library services, we will be able to offer a unique and personal experience to users, no matter where they are. While we are used to seeing tagging, reviews, and sharing on social media sites that invite individuals to cooperate in either a personal or a competitive sense, few collaborative spaces invite community groups or professionals to share their knowledge and expertise to create resource lists, provide leisure reading recommendations, or encourage learning, exploring, and discovering by interaction between professionals and community members. And, all the while, this space is a gathering space that promotes the role of our library in the com-

munity while giving the patrons a safe and welcoming place to interact to any degree that they wish—from “lurking” to contributing information that will shape the collections and programming within the library.

If we consider this idea further, that a library catalogue is a social space, the definition of an e-branch and the focus of the library Web page as the central hub of that electronic branch is also challenged. While library Web sites are currently viewed as the main gateway into a library’s online presence, next-generation catalogues are positioned to take on that role with their increasingly available customization options and ability to search multiple data sources and social tools.

The ideas and materials presented throughout this article are meant to inspire professionals and to encourage them to think critically about how technology is impacting our core library services and to turn to the catalogue as an option for growing our presence outside the physical walls of our libraries. Rather than thinking of next-generation catalogues as a cosmetic facelift of a traditional tool, we should consider our future catalogues as a powerful and interactive tool that will assist in guiding and shaping our libraries in the years ahead. It also acknowledges the very real need to foster collaboration and respect between frontline and backroom staff. This is especially important in an age where our roles are not so defined and “traditional” but are, in many cases, now overlapping. Rather than promoting an environment of suspicion or concern over one professional’s projects overlapping with another, next-generation catalogues and their ability to enhance core library services should foster an environment of collaboration, sharing, and innovation among staff. While we may be concerned that cataloguers are walking too close to the readers’ advisors job or a reference librarian is becoming too critical of our cataloguing practices, next-generation catalogues and social technology in general are just that: social. Unfortunately, while we are busy trying to implement these sharing tools for our patrons, we are not sharing our knowledge, skills, and expertise with each other. If we start looking for ways to collaborate, the library services we offer will benefit from it, as will our patrons.

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Laurel Tarulli received her MLIS from the University of Alberta's School of Information Science. She is the 2009 recipient of ALA's Esther J. Piercy Award, and in 2010, she received the Distinguished Alumni Award from her alma mater. Ms. Tarulli and her research partner, Louise Spiteri, recently received an OCLC research grant to examine next-generation catalogues. Of particular interest to Ms. Tarulli is the use of these catalogues as social space and collaborative opportunities. A consultant for NoveList and a column editor for *Reference & User Services Quarterly*, she is also a sessional instructor at the School of Information Management at Dalhousie University, the author of the Cataloguing Librarian Blog and frequent speaker at conferences on the topic of readers' advisory services and the library catalogue. Widely published, Ms. Tarulli has also contributed chapters and content to several books, including the ASIST publication *Introduction to Information Science and Technology* and *Graphic Novels and Comics in Libraries and Archives*. Laurel's first book, *The Library Catalogue as Social Space: Promoting Patron Drive Collections, Online Communities, and Enhanced Reference and Readers' Services* was published in early 2012.

Louise Spiteri is associate professor and director, School of Information Management, Dalhousie University, Halifax Nova Scotia, where she teaches in the areas of metadata, thesaurus construction, records management, cataloguing, and classification. Dr. Spiteri's primary research focus over the past six years has been in the areas of folksonomies and social tagging systems. Dr. Spiteri is interested in how user-generated metadata in the form of tags, ratings, and reviews, can enhance the ease-of-use of library catalogues, as well as complement existing controlled-vocabulary systems. Dr. Spiteri's recent research has also included an examination of methodologies to incorporate facets into social tagging systems as well as how these systems can contribute to the cultural warrant of library catalogues. Dr. Spiteri's work has been published in a variety of scholarly publications, including the *Journal of Documentation*, *Cataloguing & Classification Quarterly*, *Libri*, and *Serials Librarian*.