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INFO VIEW
3  Different Countries, Common Challenges
   KATE ARNOLD

INSIDE INFO
7  SLA Announces Candidates for 2015 Board of Directors · Tracy Maleeff to Receive New Innovation Award

INFO NEWS
9  SLA Files Comments on Orphan Works and Mass Digitization · Colleges Facing Budget Cuts Over LGBT-Themed Books · European States Urged to Discuss Copyright Exceptions

SLA MEMBER INTERVIEW
26  10 Questions: Lora Bray
    STUART HALES

FELLOWS AND RISING STARS
31  One Is the Loneliest Number
    ALYSON AVERY, JAN CHINDLUND, AND MARTHA FOOTE

INFO RIGHTS
35  Canadian Versus U.S. Copyright Law
    LESLEY ELLEN HARRIS

10  The Meaning and Impact of Big Data
    STUART HALES

12  Big Data, Deep Data, Smart Data
    PAMELA PAVLISCAK

15  Big Data: A Brief SWOT Analysis
    ELAINE M. LASDA BERGMAN

18  Big Data's Role in Information-Centric Organizations
    ELAINE TEAGUE AND JULIE LEGEROS

21  Teaching Librarians to be Data Scientists
    CHRISTOPHER ERDMANN
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Different Countries, Common Challenges

My travels to visit SLA members and units have revealed the strength that lies in our diversity and the concerns that we all share.

BY KATE ARNOLD, SLA PRESIDENT

Yes, it really is a small world.

For six weeks, from late March to the end of April, I was “beyond borders” speaking at four international conferences (on three continents), attending two chapter events, and participating in two Twitter talks. It was fascinating to experience these different occasions, each of which made me realize the value of SLA in promoting and strengthening learning and networking among our members. Next on the list is our own annual conference in Vancouver, Canada, and by the time you read this we’ll probably all be in the final throes of preparing to head to Vancouver or be there already.

My recent travels have given me several wonderful opportunities to meet with SLA members to understand their concerns and challenges as well as hear about their successes. I’ve also been privileged to tour some very fine special libraries, which is always a treat. Giving keynote presentations has afforded me the chance to promote SLA’s international credentials and to highlight some of our recent achievements, in particular the report co-produced with the Financial Times (FT) on the evolving value of information management. There is considerable interest in, and enthusiasm for, this report and its findings across the information profession.

In this column, I want to share with you some of what I learned and experienced on my recent trips. Each event had its own identity and culture, but there were some common themes and challenges. Learning from one another how best to deal with these is the hallmark of a good professional association.

Travels and Topics
In late March, I was lucky enough to attend the SLA Arabian Gulf Chapter’s 20th annual conference in Doha, Qatar. The programming was excellent, with speakers from across the world sharing best practices on open access and information literacy. More than 500 delegates and 50 exhibitors attended the conference.

Attending a conference in another part of the world always offers the opportunity to experience new ideas. I particularly liked the networking breaks between program sessions, which allowed attendees to meet with one another and reflect on the program discussions, all with excellent refreshments on hand. I also liked the way questions at the end of sessions were handled. In addition to raising your hand and asking a question, you could write questions on cards that were circulated at the start of the session. The question cards found favor with the presenters—it was a lot easier to read a question than to listen to it being posed—and with those of an introverted nature, who found it easier to write a question than ask it.

After visiting Qatar, I traveled to Baltimore, Maryland, to attend the Pharmaceutical and Health Technology Division’s spring meeting. My keynote presentation for this conference gave me an opportunity to speak about patient information developments in the United Kingdom, and it was refreshing to talk about my day-to-day work. This was a well-attended conference, with 100-plus delegates and 43 exhibitors, and big data and changes to the U.S. health care system were the key program topics. My next stop was Kentucky, where
Active Engagement Needed

All information professionals, regardless of the sector in which they work, are grappling with big data, open access, embedded information services and information literacy. All of these topics were featured in the conferences I attended, and they will also play an important role in the programming at SLA 2014. Being able to share and discuss these issues is a key benefit of membership in our association.

At the conference, the SLA Board of Directors will be meeting to discuss our strategic priorities for the next few years. We want to hear your thoughts and views on what our key priorities should be going forward, so please contact me or any other board member with your ideas. SLA is your association, and we need active engagement from the membership in our drive to develop new opportunities.

Speaking of engagement, I attended two chapter board meetings, in Qatar and Kentucky, in addition to the conferences. Interestingly, both chapters were facing common challenges: engaging members in unit activities and enticing them to fill volunteer positions, dealing with succession planning, collaborating and partnering with other associations and vendors, and identifying ways in which “mother SLA” (headquarters) can assist and support them. These are challenges all units face, and by working together as one SLA, members and staff will be able to find solutions.
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SLA Announces Candidates for 2015 Board of Directors

Information professionals from Australia and Oman are among 10 candidates vying for 5 slots that will become vacant on SLA’s Board of Directors at the end of 2014. The election to fill these vacancies will be held electronically in mid-September, and the winning candidates will serve three-year terms beginning 1 January 2015.

The 10 candidates running for election are as follows:

President-Elect:
- Jim DelRosso, Cornell University, Ithaca, New York
- Tom Rink, Northeastern State University, Broken Arrow, Oklahoma

Chapter Cabinet Chair-Elect
- David Cappoli, University of California, Los Angeles
- Kim Silk, University of Toronto

Division Cabinet Chair-Elect
- Ruth Kneale, National Solar Observatory, Tucson, Arizona
- Valerie Perry, University of Kentucky

Director (2 positions)
- Kevin Adams, Institute of Environmental Science & Research, Christchurch, New Zealand
- Saif Al-Jabri, Sultan Qaboos University, Muscat, Oman
- Elaine Lasda Bergman, State University of New York at Albany
- Catherine Lavallée-Welch, University of Wisconsin-La Crosse

The candidates were put forward by the SLA Nominating Committee, which is responsible for compiling a slate that has compelling talent supported by tangible accomplishments, is professionally diverse, and provides regionally balanced representation.

SLA members will have the opportunity to meet the candidates at the upcoming SLA 2014 Annual Conference & INFO-EXPO. Members can also follow the candidates as they answer questions that will be posted on the SLA Blog during the coming months.

Tracy Maleeff to Receive New Innovation Award

Tracy Maleeff, who as chair of the SLA Online Content Advisory Council has led the popular #SLAtalk Twitter chat series, has been named the inaugural recipient of a new award that recognizes innovation and creativity.

The Dow Jones Innovation Award will be presented to Tracy at the SLA 2014 Annual Conference & INFO-EXPO in Vancouver. In future years, the award will be given annually to one SLA member who has consistently shown innovation, leadership, and creativity in both the information profession and SLA.

Tracy has been an active member of SLA since joining the association in 2003. She was awarded the Legal Division’s New Member Professional Grant at the SLA 2007 Annual Conference in Denver and later served as the division’s chair. She served on the SLA Nominating Committee in 2013 and is currently the ethics ambassador for the Kentucky Chapter and the U.S. regional representative on the SLA Europe Chapter’s Board of Directors.

Tracy served on SLA’s Conference Re-Envisioning Task Force in 2013 as chair of the International Sub-Group and a member of the Online Sub-Group. The task force examined opportunities to rejuvenate the SLA Annual Conference in different areas, both this year and beyond.

Together with fellow SLA member Jill Hurst-Wahl, Tracy started the @SLA2013Tips and @SLA2014Tips Twitter accounts (and has garnered a strong following already by tweeting helpful information and travel tips about the 2014 conference). She is the chair of the 2015 Annual Conference Advisory Council, which requires overseeing all chapter and division planners, ensuring that session content is relevant, unique, and fresh, and using SLA member feedback to improve the conference.

“Dow Jones is pleased to partner with SLA to establish this critical platform for recognition within—and beyond—the information industry,” said William Lewis, CEO of Dow Jones. “Tracy truly conveys what it is to be an innovative information professional, and we are honored to award her the first Dow Jones Innovate Award for her leadership of SLA as well as of her professional peers and colleagues.”
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SLA Files Comments on Orphan Works and Mass Digitization

On May 21, SLA joined with three other library associations in providing comments to the U.S. Register of Copyrights concerning orphan works and mass digitization. The comments illustrated the myriad reasons that libraries digitize and the benefits that digitization provides, including increasing collective knowledge, enhancing access by providing metadata and integrating disparate collections, and preserving rare materials.

An orphan work is an original work for which a good-faith prospective user needs permission from, but cannot readily identify and/or locate, the copyright owner(s). In such a situation, use of the work may be inhibited merely because the user cannot identify and/or locate the owner and therefore cannot determine whether, or under what conditions, he or she may make use of the work.

Under current U.S. law, anyone who uses an orphan work without permission runs the risk that the copyright owner(s) may bring an infringement lawsuit for damages, attorneys’ fees, and/or injunctive relief unless a specific exception or limitation to copyright applies. Such an outcome would conflict with the objectives of the copyright system and unduly restrict access to millions of works that might otherwise be available to the public for use in research, education, or documentary films.

Finding a fair solution to the orphan works problem remains a leading priority for the Copyright Office. The comments submitted by SLA (in conjunction with the American Association of Law Libraries, the Association of Academic Health Sciences Libraries, and the Medical Library Association) detail the efforts of several special libraries to determine the copyright status and identify rights holders of works in such areas as the civil rights movement, historical medical research, the Tokyo War Crimes Tribunal, and the self-government of American Indian tribes.

Colleges Facing Budget Cuts Over LGBT-Themed Books

Two colleges in South Carolina that selected books with lesbian, gay, bisexual and/or transgender (LGBT) themes for campus-wide reading programs will suffer funding cuts if a budget approved by the state’s House of Representatives becomes law.

Several organizations that oppose the cuts, including the Association of American Publishers, the National Coalition Against Censorship, and the American Civil Liberties Union, recently sent a letter to South Carolina state senators warning that the bill could elicit First Amendment lawsuits if enacted. The letter was prompted by House passage of a budget cutting $52,000 in funding from the College of Charleston and $17,142 from the University of South Carolina Upstate. The funding cuts are intended to offset the costs of the reading programs.

“‘The proposed budget cuts undermine the fundamental mission of higher educational institutions, which is critical analysis and free and unfettered debate,’” the letter said. “‘Legislative efforts to control discussion and debate in a university setting are ill-advised, both legally and educationally.’”

The College of Charleston selected Fun Home, an award-winning graphic memoir detailing the relationship of the lesbian author, Alison Bechdel, with her father, who she learned was gay. The University of South Carolina Upstate chose Out Loud: The Best of Rainbow Radio, a collection of stories from South Carolina’s first gay and lesbian radio show.

South Carolina’s governor, Nikki Haley, has not indicated whether she will sign or veto the legislation if it passes the Senate.

European States Urged to Discuss Copyright Exceptions

More than 60 library, archive and research institutions, including SLA, recently joined together to petition the European Union to engage in discussions at the World Intellectual Property Organization (WIPO) on copyright exceptions for libraries and archives.

The organizations are urging the European Union to ensure that discussion of an international instrument on copyright exceptions and limitations for libraries and archives continues to be reflected in the mandate of the WIPO Standing Committee on Copyright & Related Rights (SCCR), and that the EU’s member states engage constructively in these discussions. At the last meeting of the SCCR, the European Union tried to reverse conclusions that had been previously agreed to by all of the countries at WIPO.

SLA and the other signatories to the letter believe that the discussions at WIPO are important to foster an open international research culture, ensure that future researchers have access to Europe’s digitized and born-digital heritage, and make European cultural heritage globally accessible. Under the existing international copyright framework, copyright protections are mandatory while copyright exceptions are optional, and national copyright exceptions increasingly do not apply to libraries and archives. License terms set by publishers, often from other countries, override many exceptions in domestic copyright laws, and these terms can vary widely from license to license.

“This patchwork of national exceptions and the complexity of the licensing environment are frustrating international research collaboration and placing libraries and archives in an ambiguous position as they try to lawfully fulfill their mission,” the letter states. SLA
THE MEANING AND IMPACT OF BIG DATA

Big Data, Deep Data, Smart Data

TEASING OUT INSIGHTS FROM DATA, BIG AND SMALL, IS INCREASINGLY IMPORTANT TO IMPROVING THE USER EXPERIENCE. INTELLIGENCE WILL MAKE IT EASIER TO USE ALL THE DATA IN A MEANINGFUL WAY.

BY PAMELA PAVLISCAK, MA, MS

More and more, organizations want to be data-driven, but it’s not clear what that means for the user experience. The idea of incorporating big data is compelling: it promises to uncover hidden patterns of customer behavior and predict what people will do next. But in the user experience (UX) world, like other fields where complex behaviors of people are studied, smaller data is the norm.

Rarely do big and small data come together to create a coherent picture of the user experience. The key to creating a better user experience is likely to be found in bringing together all data, big and small, and applying a layer of intelligence.

Big Data and User Experience

For all the hype around big data, there is no real agreement about its definition. Volume, velocity, and variety are its defining characteristics (Sicular 2013). The most practical definition is probably Hilary Mason’s (Strom 2011), which reads as follows: “Big data usually refers to a data set that is too big to fit into your available memory, or too big to store on your own hard drive, or too big to fit into an Excel spreadsheet.” A simple definition we can use here is that big data is data generated by machines tallying up what people do and say.

For purposes of the user experience, big data covers a lot of ground. It is how many people clicked on a link, how many pages were viewed on the first day of a new campaign, and how many people registered for an event. It is Web server logs, clickstream data, heat maps, social media activity, mobile phone call details, e-banking transactions, and information captured by sensors in a mobile app.

Because big data documents what actually occurred, it feels objective. Even so, there can be bias in big data sets. Signal bias, which occurs when a data set represents a certain subset of people, is a common problem. For example, a well-known study combining Hurricane Sandy-related Twitter and Foursquare data produced interesting insights, but also the illusion that Manhattan was the hub of the disaster (Crawford 2013). In the user experience realm, a simple case of signal bias might result in more extensive analytics for desktop users than mobile users.

Big data is multi-structured, like Web log data that includes text and images alongside structured transactional information. It is also unstructured, text-heavy data from metadata and social media posts. It lends itself to exploration, but also to correlations...
that can prove false. The recent experience of Google Flu Trends, which failed because Google engineers didn’t know what linked certain search terms with the spread of the flu, illustrates the correlation-causation gap (Harford 2014). A UX example of this phenomenon would be to draw a correlation between people who search for a certain keyword and then “bounce” (leave the site), and use it to make inferences about user interface problems.

Big data can be a good starting point for learning about user experience, but it often generates as many questions as answers. If big data is the archeology of user experience, or the study of the traces that people leave behind, then small data is more like anthropology, exploring lives as they are being lived online.

Deep Data and User Experience
Anyone doing UX work has data from studies of various kinds, but no one is clear about what to call it, or whether it should even be called data at all. Small data is sometimes used to refer to qualitative data, or data that is just not big. Since it has lately come to mean “the last mile” of big data (Bonde 2013), it may not be the best way to characterize small study data. Deep data is used to reference the qualitative data that ethnographies produce (Garrison 2013) and is closer to what we mean when we talk about the results of user experience studies. Whatever we call it, it is the kind of data that teams intentionally collect in remote or lab usability tests, ethnographies, online studies, and even surveys.

Deep data often answers questions based on signals from big data, like why people are not converting or how people use an app as part of a customer journey. It is about understanding behaviors or feelings, and taking a closer look at how a site or app is being used. This data is tightly focused, descriptive, and forward-looking.

Analyses of deep data tend to be less systematic and more intuitive. While traditional market research transcribes and then codes responses, UX research tends to bypass that step because of tight turnarounds and multiple iterations. Because deep data generally emerges from studies that are customized or reported as one-offs, it tends not to be measured, tracked, and benchmarked. The life span and scope of deep data are limited, which can make it difficult to see the big picture.

Data-Driven User Experience
Currently, there really isn’t a shared language for talking about data, especially when it comes to the user experience. “If your user researchers have HCI [human-computer interaction] backgrounds and your analytics team is mostly engineers, their languages and frames of reference may be so different that they crush any hope of productive conversation,” writes Louis Rosenfeld (2013).

This language gap may stem from the way many organizations work. The UX team is most engaged during pre-launch and relies primarily on small, tightly focused qualitative studies to deliver insights and reduce friction. Marketing, business, and data analytics teams are looking at quantitative data post-launch to monitor key performance indicators and maximize revenue.

A data-driven approach to user experience implies big data, or at least data big enough to be statistically significant, like that from analytics and A/B tests. This type of approach works well as a way to weed out bad ideas, but it can become too easy to focus on things that are easy to measure and test rather than on big ideas that are going to break through. Part of the resistance to data-driven UX stems from its narrow, big-data focus on eliminating problems rather than generating solutions. A more meaningful approach will have to combine the high-level, big-data view with the ground-level, deep-data insights.

Smart Data is the Next Phase
We know that data insights can be found at multiple levels of granularity by combining methods such as ethnography with analytics or conducting usability tests paired with social media sentiment analysis. The problem is that there is no easy way to bring it all together.

The future of data-driven user experience will likely be smart data, or data with a layer of intelligence. Currently, there are a few ways that organizations are using machine and human intelligence to connect, interpret, and visualize all the data.

Algorithms. Big data analysis starts with counts and moves to correlations, but big data in combination with new algorithms can create smart data. This is the stuff of the new data science. It is a combination of data mining, or looking for patterns in historical data, and predictive analysis, or creating a model of probabilities. We are very familiar with this kind of algorithm from our Amazon recommendations or Google search results.

Frameworks. Analysis can be baked into data by structuring, or superimposing a structure on, the data. At its simplest, this involves mapping several data points to a category, like scrolling at a certain rate and active time on a page to a metric for reading (Davies 2014) or clicks plus time and page interaction for engagement (Haile 2014). Mapping data points to a larger framework, like Avinash Kaushik’s See-Think-Do (2013) or Forrester’s Descriptive/Perception/Outcomes (2013), can solve for orga-
nizational silos and synthesize all the data in a way that can inform the user experience.

**Storytelling.** Obviously, human intelligence continues to be a crucial component of making meaning out of data. Creating a visual or textual narrative adds a layer of intelligence that can be compelling and actionable. Data visualization tools can help tell a story for big data or quantified deep data. User experience teams tell stories by combining big and small data and using personas and customer journey maps (Risdon 2011).

**Steps to Making Data Smarter**

Getting on the path to smarter data is going to be an evolution, not a revolution. Here are a few steps to move us in that direction.

1. **Use data for more than evaluation.**

   In most organizations, data is being used to establish the contours of success. But we can also use data to find out what people love. Netflix famously did this when they queried their massive database to determine that their customers would likely enjoy a political revenge drama starring Kevin Spacey (Carr 2013). New ideas often start with a pattern or correlation in big data that requires further exploration in a small study.

2. **Strive to connect the dots between data and design.**

   This is the missing link for most data related to user experience. To track the visibility of a landing page call to action, an A/B test may be just fine. To track how well the new landing page encourages further exploration, more than one signal in the site’s analytics will have to be tapped, and this may need to be combined with a study to look at the journey.

3. **Treat the results of small studies like data.**

   The results of small studies are not treated like data sets because they typically are not collected consistently, aggregated, quantified, and tracked. Start by bringing together the results from all UX studies in one place. Many organizations start in Evernote because it’s widely used, accommodates many formats, and supports searching and tagging. Better still would be to categorize and put small-study data into a format that is easy to use with tools to explore sentiment, track frequencies, visualize, or just get counts.

4. **Question everything.**

   Taking a cue from the social sciences, we should think about whom the data represents and ask which methods were used to collect and analyze it and which cognitive biases we might bring to its interpretation. Data is always embedded in a context. Without accounting for that context, we can get off track.

5. **Leave room for creativity.**

   Data can’t replace creativity. Think of the uproar over Google’s 41 shades of blue testing (Shankland 2009). A/B testing and analytics are much better at identifying problems than solutions. This doesn’t mean going without data—it means using the signals the data picks up as a starting point rather than an end point.

Big data doesn’t have all, or even some, of the answers. Right now, deep data is often the shortest path to meaningful insights, because it is collected with just that in mind. Smart data—all data brought together with a layer of intelligence—is the next phase in the evolution of a truly data-driven user experience. **SLA**

**RESOURCES**


Sicular, Svetlana. 2013 Gartner’s Big Data Definition Consists of Three Parts, Not to Be Confused with the Three ‘V’s. *Forbes*, March 27.


Big Data: A Brief SWOT Analysis

REVIEWING OUR STRENGTHS AND WEAKNESSES AND THE EXTERNAL OPPORTUNITIES AND THREATS WE FACE WILL HELP LIBRARIANS AND INFORMATION PROFESSIONALS ADDRESS THE CHALLENGES OF BIG DATA.

BY ELAINE M. LASDA BERGMAN, MLS

Big data. The term may sound to us like the latest hollow buzzword, and that might be true. But while big data may or may not be the term of art in 5 or 10 years, data that rapidly increases in size, speed, and type will stick with us for the foreseeable future.

Why is big data a game changer? In their 2013 book Big Data: a Revolution That Will Transform How We Live, Work, and Think, Viktor Mayer-Schönberger and Kenneth Cukier assert that big data turns the scientific method on its head. Traditionally, an inquiry or decision starts with a hypothesis and then identifies data that supports or contradicts this hypothesis. In big data analytics, we start with the data and look for patterns that lead us to insights, with no preconceived outcome in mind. Also, an inquiry or decision traditionally seeks to answer why the hypothesis is confirmed or rejected. Here, we simply identify patterns without necessarily seeking to understand why they exist.

Note also that big data is not a panacea. Former Obama campaign staffer Harper Reed has repeatedly asserted that a simple Excel spreadsheet often provides sufficient data analysis to facilitate decision making (Perry 2013). Big data hype has nonetheless led to an important focus on data in general across industries, whether it is truly “big” or not.

So where do we, as librarians and information professionals, fit into the data discussion? Many of us are familiar with the SWOT analysis. Largely credited to Albert Humphrey and his team at Stanford University in the 1960s, the SWOT analysis is an examination of internal strengths and weaknesses and external opportunities and threats. Meant as a rubric for corporations to engage in strategic planning, the SWOT model can be applied to our own needs and strategies with regard to big data.

Internal Strengths

As we move into more data-driven activities, our strengths grow out of our existing skill sets. We already handle information in many ways that are transferrable to data resources, such as the following:

Cataloging. Traditional cataloging skills such as metadata extraction, creation, and classification, and tools such as taxonomies and ontologies, are critical to managing and analyzing data.

Collection development. Resource selection and curation, the identification of reliable and authoritative data sources, and analysis will be assets to
data management.

Archiving. Those of us familiar with digitization, archives, records management, repositories, and open access can capitalize on these skills with regard to data storage, access, and retrieval.

Policy. Harvesting an increasing amount of personal data has significant ethical and policy implications. We can be out front in advising organizations to develop sound, ethical information management policies. We can become the “point people” on practice and policy, even if others are performing the analysis, visualization, collection, and manipulation duties.

Information retrieval and discovery. We can act as access facilitators and gatekeepers for both internal and external datasets.

Synthesis. We have expertise in knowledge management and facilitating the transformation of data into information. Competitive intelligence is a hallmark of our competencies as librarians in specialized settings.

Collaboration. We can pull together stakeholders, understand and communicate their data needs, and make recommendations that lead to more effective data as well as internal policies for data capture, storage, analysis and visualization.

Information literacy. While most of us have strong skill sets in several of the preceding areas, the increasing focus on big data presents an opportunity for us to be data literacy proponents. A 2011 report by the McKinsey Global Institute (Manyika et al. 2011) projected that the United States will need 140,000 to 190,000 more workers with “deep analytical” expertise and 1.5 million more data-literate managers, whether retrained or hired. All disciplines are becoming increasingly data intensive, whether in the social sciences, hard sciences, medicine, or the humanities.

The explosion of “data driven” decision making gives us an opportunity to flex our information literacy muscles and extend them to data literacy. In higher education, we can add data literacy to our instructional and consultation activities, while info pros elsewhere can bring patrons and stakeholders up to speed on key concepts such as how to collect, store, gather, evaluate and interpret data.

Internal Weaknesses

The other side of the internal analysis is an inventory of our weaknesses. Following are some general issues faced by many library and information professionals that affect our ability to move into the big data realm.

Silos. A pervasive problem in many organizations is the presence of “silos.” When stuck in our silio, we aren’t aware of challenges or opportunities in other organizational domains where we can make a difference or contribute to the conversation. Oftentimes, responsibilities related to data (whether collected by our organization or acquired from elsewhere) fall outside our library or information center. Efforts to reach out beyond the silo and engage our administrators, C-level staff, IT departments and other stakeholders are imperative to the future of our profession.

Promotion/marketing. This continues to be an issue for librarians and information professionals in many organizations. Our specialized knowledge and skills will get us nowhere if our users are unaware of our abilities.

Resources/staffing. Many of us have to go to extensive lengths to justify our unit’s existence, and we often face cutbacks in staff, funding, and other resources.

Keeping current. The tools and techniques we use are changing at an ever-more-rapid pace. It is essential for us to strategically and continually expand our skill sets. As with staffing, many employers are cutting funding for staff development, which means we must invest in our own professional development.

Entrenchment. Change is often an incremental process, and resistance can be significant. We need to view our roles as dynamic and in flux. “Think outside the box” may be a cliché, but we must always look beyond the status quo and be open, resilient, and fluid.

Mission creep. As we succeed in broadening our contributions to the data life cycles in our enterprise, we need to be strategic about tasks that no longer serve our users/clients and eliminate services that are no longer aligned with organizational priorities.

External Opportunities

Opportunities are the external factors on which we can capitalize to enhance our roles as information leaders.

New datasets (and lots of them!). Myriad organizations are making datasets available for public use. There are corporate sites, such as Google, Amazon, and IBM’s Many Eyes, and government sources (both in the United States and internationally), such as the U.S. Census Bureau and the World Bank. These are just a few of the amazing, large scale, open resources available to anyone with an Internet connection.

New tools (and lots of them!). There are fantastic tools out there for capturing, cleaning, analyzing, and visualizing data. By now you may have heard of Apache Hadoop, which, along with MapReduce and Hive, works to manage, process, and query very large datasets. All Apache software is open source. Tools for analysis and visualization abound: check out Esri for maps, Piktochart for infographics, and Google Fusion Tables for analysis.

Reinvention. Success in our advocacy and skill set-building efforts creates an opportunity to change external perceptions of our libraries and information centers in a positive, forward-moving manner.

Professional development. There are many opportunities to learn about big data and data services in libraries today. Within SLA, the Transportation Division, Social Science Division, and Upstate New York Chapter partnered to offer four “Data 101” Webinars to members. In addition, the new Data Caucus will hold its first meeting at SLA 2014 in Vancouver. There are also many blogs you can follow: Hilary Mason’s blog (hilarymason.com), Mathbabe (mathbabe.org), and What’s the Big Data
Our typically “generalist” focus allows us to provide a holistic perspective to all data use, management and analysis within and outside our organizations. We can take time to explore the context and implications of data use, management and analysis within our organizations to assist stakeholders in effective data usage.

**Enterprise improvements.** Applying our understanding of information management issues to datasets will lead to greater competitiveness. We can leverage our expertise to aid decision-making processes, strategic planning, workflow processes, and other efficiency initiatives.

**Leadership.** New opportunities are already arising for us to step up and take the lead in data services, both within and outside our organizations. Our typically “generalist” focus allows us to provide a holistic perspective to all facets of the data life cycle.

**External Threats**

Threats are externally generated concerns that we must overcome to demonstrate our strengths and capitalize on our opportunities. The threats could be external to the library or information center or to the enterprise as a whole. Both have ramifications that are critical to our success.

**External perceptions.** In his article on the Data Science Central Website, Vincent Granville (2014) identified nine types of data science expertise. As you may imagine, these specialties are primarily mathematics- and computer science-oriented. Library and information science professionals will have to overcome the labels and boxes assigned to us and show that we can work on big data initiatives.

**Data-driven tunnel vision.** In some circles, there is a mindset that big data precludes the need for other (presumably old-fashioned) types of information. Much like the mentality that everything useful to our users. New service opportunities.

**Scarcity and competition.** Resources are scarce. As firms devote more resources to data initiatives, library and information centers may suffer; on a grander scale, firms that are unable to leverage data initiatives may find themselves left behind. Let’s not fall into the trap of protecting our territory at the expense of new initiatives. Be a champion and promoter of data initiatives; align the information center’s mission to foster data management, education, and policy development from the get-go. We will benefit from the reallocation of resources and strengthen our role while enhancing the organization’s competitive stance.

**Enduring and Increasing**

Once again, we are being urged to tweak our skill sets, change perceptions, and capitalize on the latest trend. So, what makes the challenge of big data different from every other challenge to librarians and information professionals from (at least) the past decade? The difference is that, while the term *big data* may be hype, the focus on data in general within our organizations will be both enduring and increasing. Big data poses unique issues in terms of velocity, variety and volume and may require more care and feeding than “small” data, but the ability to overcome our weaknesses and threats and capitalize on our strengths and opportunities will reap manifold benefits. Let’s be data evangelists, promote data literacy, and emphasize the human element that is essential to making data relevant and useful to our users.

**REFERENCES**


Big Data’s Role in Information-Centric Organizations

INFORMATION PROFESSIONALS CAN EXTRACT VALUE FROM BIG DATA TO SUPPORT EFFORTS WITHIN THEIR ORGANIZATIONS AS A WHOLE AND WITHIN THEIR LIBRARIES AND INFORMATION CENTERS.

BY ELAINE TEAGUE, MSLS, AND JULIE LERGEROS, MLS

Big data. Everyone is talking about it; in fact, it seems to be the buzzword du jour. But, what is big data—or, more to the point, what’s the big deal about big data? What does big data mean for information professionals, and what impact will it have on us?

Gartner, a leading information technology research and consulting firm, defines big data as “high-volume, high-velocity and high-variety information assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision making” (Gartner 2014). Thomas H. Davenport, author of the recently published book Big Data @ Work, puts it more simply: big data, he says, is “perhaps the most sweeping change in what we do to get value from data since the 1980s” (Davenport 2014).

Just how big is big data? Enormous and getting more so, according to a report published by IDC, a provider of market intelligence to IT and telecommunications firms. “The digital universe in the United States—the digital bits created, replicated, and consumed each year in the country—is expected to grow from 898 exabytes to 6.6 zettabytes between 2012 and 2020, or more than 25 percent a year, which means it will double about every three years” (Gantz and Reinsel 2013). IDC also forecasts that the market for big data technology and services will grow at a 27 percent compound annual rate, to $32.4 billion through 2017 (IDC 2013).

While there is no disputing that the quantity of data is immense (be it text, voice, images, or video), the real revolution is that we can now do something with this data using analytics and thereby extract some meaningful value from it. A recent Bain & Company report revealed that companies that use analytics insights perform better financially than their counterparts that do not use analytics, are three times more likely to execute decisions as intended, and are five times more likely to make decisions faster (Wegener and Sinha 2013).

So, how are organizations using big data analytics? Retailers are analyzing customer activity to guide product placement decisions; colleges and universities are using predictive analytics to determine the success rate of students; and governments are developing models to predict criminal activity.

Our employer, SAS, lives and breathes big data and analytics, both for our customers and our employees. The...
 authors, as information professionals, play an integral role in providing context and meaning to big data and thereby increasing its impact.

Aligning Our Services
What role can you play to help support and use big data within your organization? You might be surprised at how much you are already doing. For example, are you providing access to online databases that allow users to view articles from magazines, journals, or proceedings? Are you answering research questions about big data? Are you providing a collection of print books or e-books that users can borrow?

It can be easy to get overwhelmed by big data. At SAS, our library staff consists of four information professionals, and we (like many of you) have had to consider the possibility of staffing reductions. We decided to focus on the services we provide that are aligned with our organization’s big data and analytics goals. This meant we had to re-examine and redefine our library’s mission statement, which allowed us to shift our services to meet corporate goals and objectives. As a result, we were able to introduce new services that can help the library, and SAS, remain relevant.

For example, we listen to all executive-level internal Webcasts, prepare a written summary of initiatives that were presented, and implement services that align with these initiatives. We also partner with our Competitive Sales Intelligence group to stay up to date with the activities of our major competitors, and we conduct research on lesser-known big data competitors.

We perform a monthly analysis of items that are borrowed from our collection and the searches that are conducted in our online catalog and make the necessary purchases to supplement our collection. For example, a significant interest in Hadoop (open source software for big data) led us to review our print and e-book collections and beef up our selection. In addition, we created an online Snapshot (subject guide) on Hadoop that provides our users with links to analysts’ reports and external thought leadership.

We offer an online avenue for employees to recommend books, resources, or services that will help others do their jobs more effectively or gain needed skills. To market and advertise our services and resources, we publish blog posts regularly on the SAS intranet and provide a mechanism for employees to receive posts through a news feed.

We publish daily posts on the SAS internal Facebook page (The Hub) that provide links to external thought leadership on topics that support SAS’ industry-specific solutions. More than 10,000 employees have joined The Hub, so this platform provides high visibility for the library. (In fact, the library is one of the 10 most active Hub groups.)

We offer a weekly “Library 101” orientation that showcases the ways the library can connect employees with the information they need. This orientation is available for new employees as well as those who need a refresher.

We participate in a monthly new-hire sales training program that allows us to exhibit the services and resources we offer. We also provide regular orientations and training for departmental and divisional employees worldwide.

We subscribe to Lynda.com so employees can take courses on topics such as Hadoop, big data, or analytics using an “anytime / anywhere” model. (Self-paced online training is in high demand at SAS and is critical to our success in developing, selling, implementing, and supporting our software.)

We continue to expand our collection of e-books so employees can tap into the most current and authoritative content on big data and analytics by reading books online or downloading them to the device of their choosing. (According to PricewaterhouseCoopers, e-books will account for 22 percent of all global book revenues by 2017.)

Big Data and Your Operations
In addition to putting context and meaning around big data for your organization as a whole, you can examine and analyze the big data in your library or information center. You might be surprised to realize that you are already collecting and using big data in your operations. Think about the Gartner definition of big data at the beginning of this article: “assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision making.” Then think about the massive amounts of data that libraries and information centers gather on a daily basis, such as circulation, acquisitions, cataloging, and other types of data from an integrated library system, usage data from online databases, Website visits and downloaded documents, and research requests and reference questions.

In our library, we collect and analyze the following types of data, paying particular attention to the value they can provide:

• We use SAS software (SAS® Enterprise Guide®) to generate textual and visual data to help with collection development. We analyze which titles, subjects, and keywords are searched most often and which materials are frequently borrowed. These analyses, in turn, help drive our purchasing patterns.

• We also use SAS software to assist our marketing efforts by identifying employees who are frequent library users, then targeting our outreach efforts to those users. By manipulating this data, we can drive usage of our resources and services.

• We use Web analytics software to monitor Website traffic and generate textual and visual reports. These insights have allowed us to continue offering shared access to industry and analyst reports, thus saving SAS money on employee purchases.

• Using an in-house electronic resource management (ERM) system, we manage more than 80 online database contracts and 9,000-plus employee accounts. Through a Web-based reporting application, library staff and company executives can view cost and
usage data in real time. The data that is generated is used to solicit employee testimonials and justify renewals.

• Library users can submit research requests using a Web client interface. Through a back-end report wizard, library staff can generate reports of the completed research requests by user, division or department, geographic location, and other data points. With SAS® Enterprise Guide®, we can generate visual and textual data that enable us to gather user-specific anecdotes on the value that the research provided to SAS.

By analyzing our data stores, we were able to demonstrate that the research projects we completed, the print and e-books that we loaned out, and the Snapshots that were used all contributed to the rollout of SAS In-Memory Statistics for Hadoop, a new SAS solution. As a result, we were able to transform big data into useful insights.

In our more than 60 years of combined corporate librarianship, we have seen a lot of changes. We are thankful that typing and filing catalog cards is a thing of the past. We have online databases instead of directories in multi-volume sets. Our worldwide employees can access library resources any time of day. As Thomas H. Davenport reminds us in Big Data @ Work, big data provides us with an opportunity to embrace this sweeping change in what we do to get value from data. So, let’s get it! SLA

REFERENCES


What training and skills are needed to prepare the workforce of the 21st century to work with big data? According to Gartner (2012), the demand for data and analytics workers will reach 4.4 million jobs globally by 2015, but only one-third of those jobs will be filled. The emerging role of data scientist is meant to fill that skills gap.

Our employer, SAS, is a leader in business analytics software and services and the largest independent vendor in the business intelligence market. SAS is looking for individuals who have excellent programming skills and the ability to deal with very large volumes of data. At SAS, a job posting for a data scientist requires a master’s degree in statistics, mathematics, computer science, engineering, or the physical sciences. Also required are two years of related experience, such as analyzing data and building analytical models.

Customers of SAS have stated that they need more people who are capable of leveraging world-class business intelligence systems. To address this need, SAS partnered with North Carolina State University to create a master’s degree program in analytics, which is housed in the university’s Institute for Advanced Analytics. It was the first graduate degree program in analytics offered in the United States.

Since the program’s inception in 2007, SAS has provided strong support in the development of the curriculum. The program has been so successful that each graduate receives an average of 10 job offers. More than 50 higher education institutions worldwide are now offering graduate degree programs in analytics.

“As leading organizations continue to recognize the value of advanced analytics tools and skills in increasing their competitiveness, we will see increasing need for this talent,” says Radhika Kulkarni, vice president of advanced analytics at SAS. “Without the right tools, people and processes to gain insight from the data, it is easy to starve for information while simultaneously drowning in data.”

The rising importance of analytics can be seen at the secondary school level. A high school in Charlotte, North Carolina, the Phillip O. Berry Academy of Technology, is helping high school students prepare for a world of big data. By offering an SAS programming course, the school is preparing students for college and careers using analytics.

The commitment of SAS to education and the importance of analytics was recently strengthened with the announcement of SAS Analytics U. This program provides free SAS software for academic research and educational purposes within higher education. With this program, students will be able to experience the depth and range of SAS analytics in their research as well as increase the pool of next-generation data users.
Teaching Librarians to be Data Scientists

Since arriving at the Harvard-Smithsonian Center for Astrophysics in 2010, I have been interested in exploring new forms of digital librarianship. My interest stems in part from my involvement with the NASA Astrophysics Data System (ADS), a repository of astronomical literature that contains more than 12 million records and 4 million full-text documents. The ADS, located within the John G. Wbolbach Library at the Harvard-Smithsonian Center, is an invaluable tool that I and other astronomy librarians use to perform digital curation, mining the literature and creating linked data.

Much of what we librarians do helps facilitate search and discovery in the ADS, but more importantly, we generate many of the data links that astronomers use on a daily basis. This curation activity also supports analyses of how telescopes and instrumentation are performing. I believe this type of work forms the backdrop of the data-centric library.

I soon decided that my staff needed formal training in creating and managing such a library. I made initial attempts at training my staff, but running in and out of the office, teaching in short bursts, is not the best way to go about it. Inspired by a staff member, Louise Rubin, I started a course titled Data Scientist Training for Librarians (DST4L)—but it did not come about without planning, hard work, and a bit of luck. In the spirit of the course, I would like to share with the library community how DST4L came to be, what we learned, and the next steps we plan to take. I hope this information will be of use to librarians and information professionals considering similar programs.

**Motivations for the Course**

Several factors led me to develop the DST4L course. For one, I strongly believe that librarians should learn how to program data. I think this skill has had a positive impact on my own career and my ability to improve services at the libraries in which I have worked. For this reason, I often encourage younger librarians to learn how to program, especially when they ask me what types of expertise and experience I am looking for in new hires.

Second, to inform our next steps in offering data services, we librarians need to dive into data, get our hands dirty in the research data life cycle, and experience the process of data science firsthand. By so doing, we can upgrade our skills and become true partners in the data-related work of our communities. By some estimates, data scientists spend up to 80 percent of their time translating data, leaving them less time to develop insights from it. Librarians, if...
THE MEANING AND IMPACT OF BIG DATA

retooled, could play a vital role in this area.

Finally, David Dietrich of EMC, a company that provides IT storage hardware solutions, offered additional encouragement. At a Boston Data Science Meetup, I expressed my concerns to David that librarians are not experiencing data science firsthand but that, if trained, they could be valuable in particular aspects of data science, such as assisting with data clean-up and discovery. David agreed that this direction might be beneficial to libraries—that data-savvy librarians could play a valuable role in their communities.

Developing the Course

When I first set out to learn more about data science, I found the literature to be scarce. Still, the following resources helped greatly:

• Data Jujitsu: The Art of Turning Data into Product, by DJ Patil
• Beautiful Data: The Stories Behind Elegant Data Solutions, by Toby Segaran
• The Data Journalism Handbook, by Jonathan Gray
• EMC Data Science and Big Data Analytics, by David Dietrich
• CS 194-16: Introduction to Data Science, by Jeff Hammerbacher and Mike Franklin

The first three resources gave me a better understanding of the topic and prepared me for future conversations with experts such as David Dietrich. David’s still-newly-minted EMC course on data science turned out to be an extremely helpful resource. He eventually came to speak at Data Scientist Training for Librarians, and his slides and a video of his talk can be found on the DST4L blog (see “Introductory Session to Data Scientist Training for Librarians, Round 2”). Course participants lauded his talk for providing a brief but complete summary of what data science entails. David’s visit also highlighted another aspect of the course—the importance of bringing in experts from the local community to put the course into context.

The final resource in the list, which comprises material taken from the Introduction to Data Science course taught at the University of California at Berkeley, allowed me to think more deeply about what each section of DST4L might cover and find experts who could help teach these sections (see the DST4L syllabi). At the time, finding course material like Berkeley’s was difficult; now, more and more data science programs are being taught, such as the Coursera Data Science Specialization course taught by Johns Hopkins University.

The two DST4L courses I have organized thus far would never have been possible without the contributions of the many guest instructors and speakers who have participated. I met many of these experts through local meet-ups, at conferences, in the Harvard University community, or just by chance. All of them were able to pick up the curriculum fairly quickly after I explained to them the relevance of librarianship to data science.

I hired a library student from Simmons College, Jennifer Prentice, to help with the planning, organization and reporting, and she did an amazing job helping me keep the course whole. I asked her to capture the essence of each class with a blog entry told from the perspective of a student, in keeping with my goal of making the course material and experience accessible to the outside world. (In later sessions, other students contributed to the blog as well.) Like the blog, our class notes, bookmarks, code, data, guest speaker videos, and everything else we used and produced were made available through the class WordPress site. An open approach to capturing and managing course material using Etherpad-like tools turned out to be the best solution, particularly when students needed to reference these resources later.

Several other resourceful Simmons Library School students joined with my staff in acting as teaching assistants. Though they had some experience with the technologies covered in the course, they, too, were learning along with the participants. It helped to have some experienced members of the group interspersed throughout the classroom to offer guidance to their closest peers and forestall some of the difficulties inherent in having one instructor address many problems.

The informal nature of the course helped minimize tension, though it could not be completely avoided. One such moment occurred during the setup of iPython, an interactive programming tool that allows you to step through code line by line. In the first DST4L course, we encountered a number of difficulties during this process; in fact, the experience almost completely scared participants away from iPython, especially when they witnessed the comparatively simple installation of RStudio. Since then, installation and setup have gotten a lot easier, with distributions like Anaconda and Web-based solutions such as Wakari.io.

Still, this experience made a lasting impression, and I was determined to make improvements in the next DST4L course. I turned to Software Carpentry, a group of volunteers who teach basic software skills to researchers. They conduct two-day “bootcamps” that teach core skills needed for productive research; for DST4L, they covered Anaconda and Web-based solutions such as Wakari.io.

When librarians ask me how they can conduct something similar to Data Scientist Training for Librarians, I often refer them to Software Carpentry as a first step (or the only step, if they cannot run a longer program). I also encourage them to invite other members of their community, especially graduate students, to the Software Carpentry bootcamps to network and foster connections around learning.
I felt strongly that the course needed to be open and diverse, a place where library school students could connect with librarians in the field.

### Tools and Instructors

I owe a huge debt of gratitude to two instructors: Rahul Dave, a brilliant scientist who works for the NASA ADS, and Tom Morris, the talented lead developer for OpenRefine. Rahul taught data extraction (APIs and Web scraping), data manipulation, natural language processing and statistical analysis, which participants saw as the most daunting part of the course. He stressed the importance of toolkits like the NLTK, which can be used to automate the classification of documents. For data sources, we often used open, accessible repositories such as the Internet Archive and the NASA ADS or datasets in CSV format from data repositories such as Zenodo, figshare and Dataverse.

In both courses, Rahul used the programming language Python and the iPython Notebook, a Web-based interactive computational environment that allows you to combine code execution, text, mathematics, plots, and rich media into a single document. The academic community is using this tool increasingly to produce interactive textbooks that librarians should note (see the example books at the Notebook Viewer).

Tom Morris introduced participants to a GUI-based tool called OpenRefine, which is used for data extraction, cleaning, manipulation, and extension. OpenRefine is growing in popularity within the library community, especially for linked data projects, but it is still surprisingly unknown despite efforts by groups such as Free Your Metadata (whose members wrote a book titled Using OpenRefine) to increase its visibility. OpenRefine is a helpful stepping stone to the more advanced training in Python. The OpenRefine interface allows you to run simple functions and regular expressions while hiding some of the complexities of programming. It also allows you to perform some data analysis.

Many participants gravitated to OpenRefine as their tool of choice, but DST4L is designed to introduce technologies of varying complexity. In the most recent course, for example, the students used Excel, then OpenRefine, and, finally, Python. In the end, the students chose the tool with which they are most comfortable.

Two other instructors, Alex Storer and Lynn Cherry, did their best to keep their classes as simple as possible despite the ambitious schedule. Alex framed his sessions by trying to reproduce a library data-related visualization from IfWeAssume, a blog by James Davenport at the University of Washington. In the process of reproducing Davenport’s work, Alex thoroughly explained each step at a manageable pace. He created an enjoyable experience, programming in R and RStudio. As a result, some participants adopted R as their preferred programming language moving forward.

Lynn started her training by showing the students how they could use Excel to perform data manipulation without knowing how to code and by demonstrating how pivot tables can be a powerful tool for exploring the shape of data distributions. She went on to discuss some of the principles behind data visualization and covered some of the tools that do not require much programming, pointing the students to sites such as Visualizing Information for Advocacy. Even her most advanced class on topic modeling, which culminated in the use of a tool called Gephi, was simple and easy to understand—I could see many of the students keeping pace with her and even exploring further during pauses.

Several guest speakers were invited to present their work and, in some cases, provide training. They included James Turk (Sunlight Foundation), Matt Carroll and Gabriel Florit (The Boston Globe), Erin Braswell (R Programming), Seth Woodward (Git), Raymond Randall (Tableau), and Jay Luker (MongoDB). Many of the instructors and speakers came from outside the Harvard community, and this was true of the students as well—they came from MIT, the University of Massachusetts, Simmons College, Brandeis University, Community Change, the Smithsonian Astrophysical Observatory, NASA, Boston University, the University of Connecticut, Bingham McCutchen, and the Federal Reserve Bank. I felt strongly that the course needed to be open and diverse, a place where library school students could connect with librarians in the field and librarians could connect with colleagues at other institutions. The only criterion for joining the program was to possess a genuine interest in the topic.

### Sharing What We Learned

Both DST4L courses were offered free of charge. Many librarians took the course because they felt the content would be invaluable to their careers. Neither the informal, experimental nature of the training nor the steep learning curve limited attendance; nor, for that matter, did the lack of a certificate (though participants did receive a badge near the end of their training). Perhaps the challenging nature of the program kept librarians from leaving the program, or maybe it was the learning environment—the realization that it was acceptable to not know the answer, to experiment, and even to fail.

The students mentioned the importance of their group work in keeping them motivated and engaged. I had created the group projects to give students the opportunity to apply what they were learning in class to similar situations they might face in their own work. The projects were overly ambitious,
At the most basic level, everyone involved in the program came away with a better understanding of the research data life cycle.

but they were meant to challenge the students. The desire to complete these difficult projects and not let down their fellow group members helped keep many participants engaged.

At the end of each course, the participants delivered presentations on their experience and work in a “tell all” session or created blog posts called data stories. These stories have largely been responsible for motivating others to consider the program and encouraging the Harvard Library to continue sponsoring the program.

After each course, students participated in a “share all” event where we discussed the pros and cons of the course and how it could be improved. Jennifer Prentice and Marc McGee summarized the events in two blog posts. In both sessions, it seemed the participants had an endless number of ideas to improve the training, but I was particularly struck by how engaged they were, how important they thought the program was, and how committed they were to continuing it. I believe that the courses made an impact with each individual on different levels.

At the most basic level, everyone involved in the program came away with a better understanding of the research data life cycle; each participant then applied this new knowledge to his or her own situation. Many librarians have since reported improved data-related interactions with their communities as a result of their increased knowledge.

Another goal of DST4L was to upgrade the skills of librarians, and many of the participants are now using their new-found skills. For instance, Vernica Downey has automated library processes using Python, Alex Holachek is helping the NASA ADS improve its visualization tools, and Katie Frey is implementing semantic technologies in astronomy.

The course also sought to address the culture within libraries and encourage the students to change the “library mindset” through abstract thinking, continuous learning, hacking, and other approaches. I hoped the participants in the course would start seeing challenges as opportunities, exploring whether they could do better, and helping to improve library processes and services through creative solutions. The students have achieved these goals to varying extents, but these outcomes are bonuses—the first goal was the most important.

DST4L is slated for further support from the Harvard Library, but in its next iteration, the emphasis will be on creating “data savvy” librarians. The current title creates the impression that librarians are trained data scientists once they finish the course, but the students who have taken DST4L relate better to being called “data savvy.”

Former DST4L students and external parties will help develop the new curriculum. As before, it will address aspects of the research data life cycle, though it will place more emphasis on applying the training in library settings. We also hope to continue the hands-on application approach from previous courses.

As is currently the case, DST4L applicants will be asked to demonstrate a genuine interest in the topic and pledge to apply what they learn. An announcement will be forwarded to the library community to apply to the next training program. The students’ communications will be made available via a Google group, which will be open to a greater audience than before. With any luck, the program will continue to grow a “data savvy” library community, steer us toward change, and benefit future data services in libraries. SLA
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Mark your calendars for our in-booth reception Sunday, June 8th from 5-7 pm. Meet our sales professionals and enjoy some light refreshments.

Visit Booth #909 during our product presentations to receive a complimentary power charger* and chance to win our grand prize raffle:

### PRESENTATION SCHEDULE

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SHE’S WORKED FOR THE SAME EMPLOYER FOR 20 YEARS, BUT LORA BRAY IS ALWAYS LOOKING FOR NEW OPPORTUNITIES TO EXPAND HER SKILLS SET AND CREATE GREATER AWARENESS OF HER ROLE.

BY STUART HALES

R oots are important to Lora Bray, in several senses of the word. Raised on a farm in Central Wisconsin, she still visits a farm to shop for vegetables for her family. The granddaughter of a high school librarian, she chose library and information studies as a career after graduating from college with a degree in English.

The roots analogies don’t end there. A pianist by hobby, she has two daughters who enjoy playing the piano, and she performed a duet with the older one at a Christmas recital. A longtime SLA member, she feels strongly about giving back to the association and helping those who are coming behind her.

A veteran of SLA Annual Conferences—SLA membership was included with her job when she started working at the Credit Union National Association (CUNA) nearly 20 years ago, and her then-supervisor soon started taking her to chapter meetings and conferences—Lora will be in Vancouver at SLA 2014 to participate in a panel discussion on competitive intelligence roles for information professionals. Information Outlook spoke to Lora about her SLA experience, her career at CUNA, and whether she ever thinks of playing the piano onstage at a concert.

When and why did you decide to become a librarian?

I graduated from high school thinking that I wanted to become a concert pianist. It took me one semester in college to realize that my fun hobby was being tainted by the rigors of intense study required for a music major. (laughs) So I decided an English major would be a better idea, and through that I indulged my other passions, which are reading and writing.

When I graduated from college, I wondered, what am I going to do now? I took a look at the job opportunities available, and it seemed to me that graduate school was a requirement. I chose library and information studies, not only because I thought it would be interesting to be surrounded by books in my profession, but also because my grandmother had been an inspiration in my life, and she had been a high school librarian. I figured that if it was good enough for granny, it was worth exploring.

Do you still play the piano in your spare time, and do you ever fantasize about being onstage in a concert hall?
I started taking piano lessons in fifth grade and continued taking them all through college—I was pretty dedicated. I still play the piano when I have the chance, and on occasion I think it would be great fun to don concert attire and perform for an audience.

I actually did get to play in front of an audience not too long ago when I performed a piano duet with my teenage daughter at her Christmas recital. It was wonderful to practice with her and play together. She’s always been interested in the piano—she would sit next to me on the bench when I played nursery songs to her. So she kind of grew up together. She’s always been interested. It’s been really fun to watch and participate with her.

I also have a 9-year-old daughter, and she started taking piano lessons this year. My son is 13, and he doesn’t want to have anything to do with the piano. (laughs) But my hobby remains a rewarding part of my life, all the more so because I can share it with my daughters.

Speaking of leadership roles, in 2012 you served as president of the SLA Wisconsin Chapter. Looking back at that year, what was your proudest achievement, and what was your biggest regret?

It’s kind of funny—despite my frequent participation in SLA functions over the years, I really hadn’t considered any volunteer opportunities until I was approached by a member of the Wisconsin Chapter’s Board of Directors, who suggested I might like to serve as the program chair and president-elect. I hadn’t taken on any other volunteer roles, so becoming president-elect meant I was starting off with a bang. (laughs) But it seemed reasonable enough to me that I should give back to the professional association that had helped me out over the years, so I said yes.

I think my proudest achievement as president was organizing a mentorship program with library students at the University of Wisconsin-Madison. We had several students pair off with professionals, and they decided between themselves what their objective would be. Some just wanted a professional to share their experiences; some tapped into networks of mentors to facilitate job searches. I was able to help my mentee secure an internship at CUNA.

We all met later in the summer at a chapter recreational event to discuss outcomes, and the results seemed to be overwhelmingly positive. I was really happy to be able to help facilitate these interactions, and I hope some of them have evolved into lifelong friendships.

As far as regrets, I really don’t have any, other than I wish I had gotten involved in volunteering in SLA a lot sooner. It’s been a great experience for me.

You’re the research librarian at CUNA. What attracted you to the job, and what do you like about it so much that you’ve stayed at CUNA for nearly 20 years?

A relocation from Illinois to Wisconsin required that I find new employment. I had worked for a council of governments in the Chicago area for a couple of years, and there were some similarities in the structures of that organization and CUNA—both were entities that existed to serve the needs of members.

CUNA has been a really good fit for me. There are a lot of great things about working here, not the least of which is that I believe in the people-helping-people philosophy of the credit union movement and the goal of financial cooperatives to provide consumers with affordable financial services. Many people who work at CUNA are longtime employees, and I often hear them say that once you become part of the credit union movement, it becomes a part of

When and why did you join SLA?

When I began my job at CUNA [the Credit Union National Association], membership in SLA was part of the package. I attended chapter meetings regularly with my then-supervisor, and we went to the SLA Annual Conference together. I really didn’t surmise in those early days that the things I learned in the chapter meetings and conference sessions would amount to only a fraction of what I would acquire through my SLA membership, especially as I became more active in the association and accepted leadership roles. These roles not only helped me build my résumé, they also helped grow my confidence and gave me a chance to expand my personal network.

I’ve attended the SLA Annual Conference for about 15 or 16 of the 20 years I’ve been here at CUNA. I think you really get out of SLA membership what you put into it. For me, the more time I’ve invested in SLA, the more rewards I’ve reaped. It’s been a wonderful experience.

Lora at the piano, which she started playing in fifth grade.
you. So it’s a great place to work with a great service mission that I believe in, and I’ve enjoyed some nice opportunities to evolve over the years.

You write frequently for CUNA’s magazine and other publications. What do you write about, and is writing something you enjoy doing, or is it just another part of your job?

I write a weekly online column for Credit Union magazine called “Research Roundup,” in which I refer to various reports, surveys, articles and other secondary sources on a given topic—say, trends in the housing market, human resources issues, a particular marketing strategy, mobile commerce developments, or anything else in the literature that our members would find relevant. I draw out important bits of information from each source and connect the dots, with a bit of an analysis of my findings. Frequently, I find that many of the sources have issues that are connected.

The column is something that sort of presented itself. I had been sending out a distribution list every week to a handful of people here at work about studies and things I thought they might find interesting. The man who was the senior vice president of publications at that time said, Hey, this stuff is great. Can we work it into a column for the magazine? It just went from there, and it was a nice opportunity for me.

I’m often able to put a creative spin on my writings—I like to create analogies, tell a story, refer to a historical figure, or incorporate some type of literary device to draw in the reader and create engagement with the research findings. It’s a nice way for me to tap into my English major background, explore my creative side, and present data in a way that I hope is appealing to my audience. I love to write, and this has been a very fun part of my job for over two years now.

In addition to writing frequently, you’re an avid reader as well, especially of nonfiction adventure stories. If you were to write a book, what would you write about?

I have a lot of interests, and lately, nonfiction has been more appealing to me as a reader than fiction. I enjoy expository writing, but I also like to unearth interesting tidbits about circumstances or situations that have a compelling human interest angle.

If I were to write a book, I think maybe I would identify a relatively obscure person who made a big impact or self-discovery in some way—perhaps someone who innovated or accomplished an outstanding personal achievement, or someone who conquered a challenging situation. I’ve discovered that everyone has an interesting story to tell about themselves or their experiences, and many of them are intriguing and even astounding. So, writing about the accomplishments of an everyday person who made an impact could be inspirational and rewarding. It’s not just the rich and famous who can be effective role models.

You grew up on a farm in central Wisconsin, and you still visit a farm to shop for vegetables. Are there any lessons that information professionals can learn from farmers?

People with a connection to the land are always aware of their surroundings. They know what resources are available to them and the challenges that might present themselves in the way of weather or predators or other potential obstacles. And they know they should expect the unexpected. But they also know that if they’re attentive and carefully tend their crops, they can yield a big harvest despite the problems they face along the way.

Information professionals also need to monitor their environment and be aware of the resources available to them. They need to know and accept the challenges of their jobs and understand the capabilities of the technology at their disposal. Just as farmers feed people by harvesting crops, information professionals feed the minds of researchers and decision makers by harvesting and sharing accurate and timely data. And, like farmers, they reap what they sow.

In special libraries, the current economic climate has been challenging, and search engines like Google could certainly be considered predators. But Google is really just another tool. Our challenge is that everybody knows about it and thinks it provides an immediate solution; the challenge for users—one they often don’t even consider—is how to use Google effectively.

Google has strengths and weaknesses, but perhaps we can lessen Google’s negative impact on our profession by viewing it as an opportunity. We can teach others how to best use its wide-ranging search capabilities; even better, we can use it as a training tool to foster discussions about information literacy. How can we determine whether an Internet source is trustworthy? How can we determine if bias exists? How do we verify accuracy? What if we find something that requires further exploration? How do we find tips within

SLA MEMBER INTERVIEW

Lora at her desk at CUNA.
search results that can lead us to other important information? I think Google could help us if we consider using it in a way that touts our skill set and creates greater awareness about information literacy issues.

Speaking of challenges, one of your favorite quotations is, “If we’re growing, we’re always going to be out of our comfort zone.” What is it about that message from John Maxwell that appeals to you?

I think it’s a message that information professionals can take to heart. Many of us think about evolving from a reactionary role to a more proactive one, but we hold back due to fear, perceived obstacles, or other concerns that might create feelings of apprehension or trepidation. I think we need to challenge ourselves and embrace change. Complacency isn’t just boring, it’s dangerous. Let’s not fear the unknown—let’s explore it.

We can’t afford to be order takers anymore. I’ll speak for myself here—when I started working at CUNA, a lot of what I was doing was responding to someone’s inquiries. As Google and the Internet became more pervasive, people grew more interested in finding their own answers to problems. At that point, I had to start thinking about the skills I have that could enhance what end users could find on their own through Google.

A big part of this process is an educational outreach that needs to be ongoing. We need to create an awareness of information literacy, an understanding that there are other resources available that you will not find through Google. This needs to be part of our everyday activities—we need to let people know that we have some wonderful resources at our disposal that they aren’t going to have on their desktop.

Another part of being proactive is being aware of what people in other departments are working on and anticipating their needs and providing them with information they aren’t even asking for. This has been the sort of thing that has created visibility for me and has been very appreciated.

Something else that has worked for me is writing my column every week. I’m allowed to determine the subject matter, and I just look at available resources that have come to my attention and try to anticipate the needs of our credit union members and what might be interesting to them. So I present the information without being asked for it.

I think it all goes back to that need we all have to create this awareness of who we are and how we can make a difference. And I think a big part of that is providing information or data or an idea—anything you think might be helpful and timely.

You followed in your grandmother’s footsteps and became a librarian. Looking ahead, would you encourage any of your children to enter the information profession?

Absolutely! My job gives me an opportunity to learn something new every day, work for an employer whose mission I believe in, help people discern their information needs, and tap into my own curiosity to meet those needs. And it provides me with a sense of gratification and personal achievement when I deliver information that’s critical to decision making. I think my job is rewarding, challenging, and fun.

My oldest child is very scientific and likes math, and she has engineers for uncles. I didn’t get that gene! (laughs) I don’t know what the other two might find of interest. I take them to the library frequently and to my office, so they know what my office space looks like. And I talk to them about things I’m doing at work, and they read some of my columns. Ultimately, they’re all going to do their own thing. But would I encourage them if they asked? I sure would.

***

Soon after being interviewed, Lora contacted Information Outlook to say that she was undergoing a transition—a restructuring within CUNA resulted in her being relocated to the Economics and Statistics Department. She is now CUNA’s information research analyst, a title she hopes will give others a better understanding of her role.

“It is a very interesting time for me right now both in terms of the changing information industry as a whole and great new opportunities for change and growth in my own career,” she wrote.

“I would like to share the message that career evolutions can be made, and that the companies and organizations we work for are receptive to—and in fact will foster—these beneficial changes as well. We simply need to talk about it.” SLA
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Collaborating with one or more partners adds new skills to the mix, makes it easier to complete projects, and provides opportunities to teach and learn from others.

BY ALYSON AVERY, MLIS, JAN CHINDLUND, MLS, MBA, AND MARTHA FOOTE, MLIS

At the SLA 2013 Annual Conference in San Diego, newly named SLA Fellows and Rising Stars teamed up to deliver presentations on selected industry topics and trends. Alyson Avery, a 2013 Rising Star, and Jan Chindlund, a 2013 Fellow, presented “Ten Lessons Learned” based on their collaboration as co-chairs of the Local Arrangements Committee for the SLA 2012 Annual Conference in Chicago. In this column, Alyson and Jan discuss the 10 lessons along with 2013 Fellow Martha Foote.

One Is the Loneliest Number

Jan: “None of us is as good as all of us” was a mantra at McDonald’s. The company’s founder, Ray Kroc, said this and believed in it fiercely. I agree. We’ve also heard, “Two heads are better than one.” These proverbs ring true with me, as I’ve chosen co-chairing whenever possible in my volunteer responsibilities and my professional work assignments. During “co-ing,” we learn from each other; even better, we lean on each other to reach our goals.

Alyson: From my standpoint, being invited by our then-chapter president, Lorene Kennard, to co-chair the Local Arrangements Committee for the SLA 2012 Annual Conference in Chicago was intimidating. But the idea of having someone along for the ride, someone familiar with the process and the chapter (I was brand new), made it all seem so much more doable. I realized that having a partner, a built-in support system, helped minimize any apprehension I had in taking on this important task. It is something that I’ve applied in my professional and personal lives—having a reliable support system can be a really great thing.

Martha: I’m going to use examples from this year. I’m currently the chair of the Leadership and Management Division and also the program planner for the Museums, Arts and Humanities Division. We have a very strong LMD board. The members have their tasks and have hit the ground running. Board members are collaborating on various projects and relying on each other to achieve our goals.

Within MAHD, we have delegated some tasks to colleagues. One is publicity, which is so important in terms of giving people a reason to attend the annual conference. We have a very keen student member, Andrew Hinton, who is taking care of all the publicity and blasts to members. Frankly, without this teamwork, there is no way everything would get done. And on top of it, I’m meeting new colleagues and learning a great deal.

Make No Small Plans

Jan: “Make no little plans. They have no magic to stir men’s blood and probably will not themselves be realized.” That’s a quotation from Daniel Burnham, one of Chicago’s great architects. Yes, thinking and planning big create the largest vision. Even if only a portion is accomplished, the bar was set high.

Alyson: We had an amazing group of volunteers supporting all of our big plans. We formulated our ideas with early adopters and established several teams and appointed leaders. There was a lot of ground to cover: our volunteer wiki; the WordPress site; posting to the chapter blog; social media; service projects; a restaurant guide; shopping, sightseeing and transportation guides; warm welcome videos; virtual library tours; giveaways; raffle baskets; and dine-arounds.

While we didn’t have leaders for everything immediately, we knew we eventually wanted to have all these areas covered, so we worked toward that end. As we met new people and accrued more volunteers, we listed the roles we were still looking to fill, and we were able to fill them pretty effectively.
I also learned how to approach people who seemed to have fallen off track by initiating a conversation with them—checking in to see how they were doing and offering to find them additional help if they needed it. Reminding our volunteers that they were not alone and not unsupported proved to be very valuable.

Jan: When working with others on a project, assignment, or role, it helps to map out a plan early. And, of course, regular communication is essential for the duration. Establishing how communication will occur is extremely important. How frequently will you communicate? Does your collaborator prefer e-mail, phone calls, texts, video conferences, face-to-face, Google Docs, or Dropbox? Does keeping a prefix (project name) for e-mail subject lines help keep communication organized?

Martha: Regular communication is vital if a project is to be successful. Regular meetings, e-mail communiqués and telephone calls help keep the team on track and motivated. This is especially important when the team members are scattered around Canada, the United States and abroad. Note that taking minutes is very important. Distribute them after the meeting so no one forgets their tasks and responsibilities.

The Devil Is in the Details

Alyson: Dropbox and Excel spreadsheets proved to be great collaborative tools. Also, making sure that all of your information is easily accessible when it’s “show time” will prove to be a great asset. That’s where the “Volunteer Binder of Goodness” made its debut. It was a great tool for keeping volunteers, schedules, and plans coordinated and on task.

Jan: Perhaps one collaborator is more of a visionary and the other is more detail oriented. Perhaps both are visionaries, or both play both roles. In any case, vision is not enough! Someone has to pay attention to the myriad details that any project, assignment or role requires. Here we can borrow from the project management world by reverse engineering the process, deciding on deadlines, tasks, dependencies, resources, and ownership.

Martha: I’m a real believer in project planning. It makes planning easier, facilitates delegation, and helps ensure that you don’t overlook tasks or details. We developed a project planning spreadsheet for LMD a few years ago when we were working on the Chicago conference. We tracked everything—deadlines, responsibilities, costs, speak-
Stress? What Stress?
Jan: Partnering is a great stress reliever. Knowing that we could bounce ideas off each other, admit we were overwhelmed and ask for help, and trust each other to pinch hit when one of us had work or life conflicts made the whole big job possible.
Martha: Everyone feels overwhelmed from time to time. This year we created a volunteer pool of LMD members who don’t have a defined role but are willing to step in as needed. The board members know there’s additional help when they need it.

A Little Gratitude Goes a Long Way
Jan: Gratitude makes the work lighter and more rewarding. Thanking teammates and collaborators along the way and celebrating successes at various points in the project helped bond the group, smooth out rough spots, and recognize victories and meaningful activity.
Alyson: I know we couldn’t have done it without our volunteer collaborators. We’re really grateful.
Martha: This is when you are so glad your mother made you write thank-you notes for Christmas and birthday presents. Be sure to write thank-you notes to all your volunteers once a project has wound up. It’s very important to recognize and acknowledge the people who volunteer for SLA.

Divide and Conquer
Alyson: Leverage strengths. Play to your partner’s strengths—but also use them to your advantage to try new things. If your partner is good at something and that something makes you a bit wary, try it with their advice, encouragement and support. Going back to me being a bit anxious and fearful—it makes things a lot less intimidating. Co-learn.
Jan: One of the greatest advantages of collaborating is the ability to divide and conquer—not only in terms of dividing labor, but also teaching each other new hard skills and mentoring each other about soft skills. Again, when a skill is needed beyond the existing collaborators, look for others to join the work.
Martha: My experience is that all team members bring at least one unique skill to the group. It could be technology, project planning, writing—anything at all. Leverage these skills. It will make life much easier, and the final result will be stronger.

Never Walk Alone
Jan: Volunteering is a significant part of my professional life. For years, I’ve cross-pollinated what I’ve learned in SLA with my work life, and it has strengthened my performance in both arenas. Taking on new responsibilities, whether in SLA or at work, is more rewarding with a partner. It’s easier to take on a new and challenging role when you have a partner.
Alyson: This is the point I want to stress the most, and it succinctly describes everything that I have gotten from my experience volunteering with SLA—having a partner made everything less intimidating, more manageable, and a lot more fun. Working together just makes sense. Having someone more experienced paired with someone brand new is, I think, a great way to bring more people into your chapters and divisions and get them involved. It’s a way to grow leaders and a strong support system for them. Again, it just makes sense.
Martha: You can’t do it all yourself. Share, delegate, discuss. I agree with Jan’s comment about cross-pollination. One of the reasons I got the job I have now is that I had experience with volunteer boards. You will enjoy volunteering so much more if you don’t try to do everything yourself. SLA
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Because Canada and the United States share a border, the 49th parallel, you may think the copyright laws in the two countries are pretty much the same. Think again. The laws are quite different, and they can result in very different outcomes when using, reproducing and sharing copyright-protected content.

Let’s start with an example. You are based in Canada and reproducing an article written by a U.S. author and published by a U.S. publication. Do you need permission? How would you determine whether permission is necessary?

Under the global copyright law principle of national treatment, you apply the law where the work is being used. So, in this example, you apply Canadian copyright law and look at the Canadian Copyright Act to determine whether permission is needed.

One of the first questions you must address is whether the work is protected by copyright. Thus, you apply the copyright duration of life-plus-fifty (50 years after the death of the author) under Canadian copyright law rather than the longer duration of life-plus-seventy that exists under the U.S. Copyright Act. So, if the author of the article has been dead for 60 years, the work is in the public domain (in Canada) and you do not need permission to use it.

Now, suppose you are based in the United States and reproducing the same article. You then apply U.S. copyright law and determine that the work is protected by copyright for another 10 years. So, unless an exception or fair use applies to the situation, you must obtain permission when using the article in the United States.

Using Government Works
Duration of copyright is only one of the many differences between Canadian and U.S. copyright law. Another difference relates to the protection of government works. In Canada, federal government works are protected by copyright; U.S. government works, however, do not enjoy copyright protection. U.S. government works are in the public domain and may be freely used without permission. This rule applies to any work prepared by an employee of the United States that is created as part of that person's official duties.

So, what happens when a U.S. government work is reproduced outside the United States? Is it freely available? The answer depends on where the work is being reproduced. If a U.S. government document is being photocopied in Canada, you apply the copyright laws of Canada. This means that in some situations, a work that is unprotected in the United States will be protected in Canada. It also means that you may be in the odd situation of seeking permission to use a U.S. government work in Canada even though that work is freely available in the United States.

To complicate matters, not all U.S. government works are freely available for use by the public. In some situations, the U.S. government does own copyright in works, or it may obtain copyright through an assignment, bequest or other transfer. For example, a work created by an independent contractor (such as a consultant, freelance writer or artist) may be assigned to the U.S. government. When a copyright is transferred or assigned to the U.S. government, the government is then a copyright owner.

In addition, the U.S. government may have a license to include copyright-protected material in a work created by or for the government. In this situation, the copyright owner continues to own the copyright in its material, regardless of the fact that the material is being included in a government work that, as a whole, is not protected by copyright. To reproduce that government work incorporating third-party-licensed content, you will need permission from that third-party copyright owner. (Third-party content is content owned by someone other than the government.)

Moral Rights
The explicit moral rights protection in the U.S. Copyright Act applies to only one group of creators—visual artists, or, more accurately, those who create “works of visual art.” The moral rights provision provides the author of a work...
of visual art the right to claim authorship of that work (i.e., have his or her name on the work) and to prevent the use of his or her name as the author of any visual work that he or she did not create. In addition, the author of a work of visual art has the right to prevent the use of his or her name in situations where the work is distorted, mutilated or otherwise modified in a manner that would be prejudicial to his or her honor or reputation, and to prevent any destruction of a work of “recognized stature” and any intentional or grossly negligent destruction of that work.

The author may not transfer these rights and maintains them even if he or she is no longer the copyright owner of the work. The author may, however, waive these moral rights by signing a written document to that effect. The moral rights last until December 31st of the year in which the author dies.

In Canada, authors of all works—including paintings, computer software, and even corporate memoranda—have moral rights, which last 50 years after the author dies. Thus, if you reproduce or publicly perform any work in Canada (even a U.S. work), you must respect the moral rights of the author. You must include the author’s name on the work, refrain from making any changes that may be prejudicial to the honor or reputation of the author, and avoid using the work in association with a product, service, cause or institution in a manner that may harm the reputation of the creator. These rights may be waived, but they cannot be assigned or transferred to another person except upon the death of the author. These moral rights last 50 years after the author’s death.

Note, again, the differences—works being used in Canada may be entitled to moral rights even if those same works do not have moral rights in the United States or if the moral rights in the United States have expired. Conversely, Canadian authors do not enjoy the same broad moral rights in the United States as they do when their works are reproduced in Canada.

Additional Differences
Both Canada and the United States have exceptions or special provisions for libraries and archives in the areas of preservation, inter-library loan, and some other specific purposes. The United States recognizes the copyright defense known as fair use, while Canada has fair dealing. Both defenses require judgment calls based on specific circumstances to determine when they apply. The registration of a work is not necessary in either country to obtain copyright protection, though it is helpful prior to commencing any court action to enforce one’s rights.

Both Canada and the United States are members of the leading international copyright treaty, the Berne Convention (wipo.org). This means that the two countries are obligated to provide similar copyright protections. However, as you can see from these examples, each country has interpreted the Berne Convention in its own manner and has a unique piece of copyright legislation.

Further Information
The U.S. Copyright Office has extensive information on many aspects of its law. One of the office’s roles is to provide general information (not legal advice or opinions) on U.S. copyright law. The best place to begin your research is the office’s Website, copyright.gov. You can also submit a question electronically at www.copyright.gov/help/general-form.html.

The Canadian Copyright Office also has copyright information online, and most of its information is related to registering a copyright. Visit www.cipo.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/h_wr00003.html. SLA
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