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Editorial

Peggy Johnson

I am part of an informal group of library and information science (LIS) editors who met for the first time in January 2008 to discuss common concerns and identify ethical guidelines and best practices. Our goal is to strengthen the ability of LIS journals to serve the discipline and the professionals who create and rely on that literature. Other disciplines have similar groups, and we felt that the time had come for LIS editors to articulate the guidelines and standards that we perceive as important and that we have promoted in the literature as desirable in all disciplines. In addition, we are trying to create a vital resource for authors, editorial board members, paper referees, and new LIS editors.

To achieve these purposes, we have created a website, Library and Information Science Editors (www.lis-editors.org), and have begun to populate it. One useful section, “Resources,” offers bibliographies of sources and links to tools for editors, authors, and reviewers. I strongly encourage authors who are considering writing and submitting a paper to *Library Resources and Technical Services* to consult the resources for authors.

Our primary focus during the last eighteen months has been on developing a draft, “A Statement of Ethics and Guide to Best Practices for Editors of Library and Information Science Journals,” which begins with the following:

> Ethics are principles of conduct or standards of behavior governing an individual or a profession. The integrity of our journals rests on the professionalism of its authors, referees, and editors. The statements here describe ethical behavior for participants in the editorial processes of recruitment, selection, and production of publishable articles. Editors should conform to high standards of integrity generally and must also act ethically in their relationships with their publishers, reviewers and editorial board members, and authors. In addition, some principles are articulated for ethical behavior by authors in submitting their work to editorial processes and for ethical behavior by referees in the review process.1

The document concludes with a guide to best practices that are in place for many LIS journals and are recommended goals for all journals. This section addresses electronic formats, authors rights practices, preservation, and standards and pertinent standards organizations.

I am excited by the collective energy of this informal group and its commitment to publishing the highest quality papers and developing resources and tools to advance this mission. Please visit the website and let me know what you think.

Reference

Librarian for Latin American and Caribbean Studies in U.S. Academic and Research Libraries

A Content Analysis of Position Announcements, 1970–2007

By Jesús Alonso-Regalado and Mary K. Van Ullen

The present research investigates the evolving requirements, roles, and responsibilities of the Latin American and Caribbean studies librarian. Content analysis was used to study 94 position announcements published from 1970 to 2007. Variables were examined from the following categories: position description, educational background, work experience, technology skills, languages, personal traits, duties, and subject responsibilities. Cross tabulations and chi-square tests were executed to determine the statistical significance of relationships between variables. An advanced degree in a related subject field is expected by employers. Strong Spanish language abilities are required, and a working knowledge of Portuguese is highly desirable. The average number of duties per announcement has increased over time, reflecting the evolution of the position from being narrowly specialized to being more diversified. The Latin American and Caribbean studies librarian may also be responsible for additional subjects, in particular Iberian studies.

Latin America has always been a region of considerable importance to the United States because of its proximity, economic and political interrelations, shared history, and immigration. This interest is reflected in a letter signed by more than 360 Latin American experts that was sent to then Senator Barack Obama during the final days of the 2008 U.S. presidential campaign, calling for improved U.S.–Latin America relations in “a new period of hemispheric understanding and collaboration for the common welfare.”

U.S. universities have a long tradition of Latin American and Caribbean studies (LACS), stemming from Cold War–era tensions and accelerated by the Cuban Revolution. In 1979, Lozano and Mesa-Lago stated, “The funding and development of international studies at U.S. universities (particularly in the Latin American area) peaked in the 1960s as a result of domestic and foreign events.” Since then, interest in the study of Latin America in the United States has grown significantly, as can be seen in the increasing number of academic programs dealing with Latin America, the increasing number of students enrolled in...
these programs, and the volume of scholarly research and publications on topics pertaining to the area. According to The College Blue Book, in 1972 there were 120 LACS academic programs, and the number increased steadily to 146 programs in 2001. Growth increased sharply over the next several years to 204 such programs in 2009.\(^4\) Data from the National Center for Education Statistics show that the combined number of bachelor’s, master’s, and doctoral degrees in Latin American studies conferred by U.S. institutions of higher education has nearly doubled from 1970–71 to 2006–7, climbing from 431 to 834 degrees.\(^4\) These trends will most likely continue because of demographic changes in the population that influence demand for programs of study in higher education. The U.S. Census Bureau predicts that Hispanics will grow from 12.5 percent of the U.S. population in 2000 to 24.4 percent in 2050.\(^5\)

The significance of Latin American and Caribbean studies as an area of research, given its interdisciplinary nature, can be demonstrated by the growth in the number of dissertations and theses published. A search of the Dissertations and Theses: A&I database using “Latin America” or “Caribbean” as a subject showed an increase in the number of dissertations and theses published from 908 during the 1970s to 3,696 from 2000 to 2008. There also is a substantial increase in the publication output from Latin American countries. According to the Regional Centre for the Promotion of Books in Latin America and the Caribbean (CERLALC), from 2001 to 2006 the number of new materials from Latin American countries that were assigned an International Standard Book Number grew from 64,640 to 99,566, a 54 percent increase.\(^6\) All these factors have made the study and research of Latin America and the Caribbean more prevalent in U.S. higher education institutions.

While libraries have historically collected materials covering the cultures, languages, and literatures of Latin America, the rise of area studies programs broadened collections to include a multidisciplinary perspective. As Stern explained, “With these programs came the systematic development of collections to support instruction and research, and of professional organizations to coordinate and guide this process of collection-building.”\(^7\) The Seminar on the Acquisition of Latin American Library Materials (SALALM), founded in 1956, is the key professional organization for LACS librarians and book dealers.

With the growth of area studies programs in the 1960s and 1970s, universities began hiring subject specialists in academic libraries. Prior to this, collections in academic libraries were developed mainly by faculty. Early area studies librarians concentrated heavily on collection-building tasks, but over time their role has evolved. As Jakubs discussed, “Once almost exclusively focused on materials selection, the responsibilities of the librarian engaged in collection development now extend to the creation and maintenance of websites, intensive faculty outreach, teaching, specialized reference service, fund-raising, and other tasks.”\(^8\) Evidence about the changing role of the LACS librarian over time remains largely anecdotal. This study adds to the body of literature by using content analysis to document changes in the scope of positions within a narrowly defined area of librarianship.

The present research examines the requirements and responsibilities of the LACS librarian as reflected in position announcements between 1970 and 2007. Prior research has been limited in scope, detail, and time coverage, and generally has not been specific to LACS librarians. Content analysis of job announcements provides essential information about the evolution of the positions over time, the nature of the job market, and predictions of employment trends. Findings from this study would be useful to library students interested in pursuing LACS careers, library school faculty responsible for curriculum decisions, library administrators who define the scope of bibliographer positions, and LACS librarians as they reflect on developments within their profession.

This investigation was framed by the following questions:

- How were these positions described from 1970 to 2007?
- What skills, experience, and abilities do institutions seek in LACS librarians?
- What and how many duties are required for these positions?
- What and how many subject responsibilities are required for these positions?
- What trends can be observed in the job announcements over time? Which of the changes are statistically significant?
- How does the institutional type shape the nature of the position?
- What is the value of experience in relation to some duties?
- Were some duties or subject responsibilities commonly found together? Were some subject responsibilities and languages commonly found together?

**Literature Review**

The literature covering LACS librarianship has mainly dealt with topics such as selecting materials, analyzing particular reference research resources, and general overviews focusing on building Latin American collections. A 2007 contribution to this last topic is the chapter “Latin American Collections” in *Building Area Studies Collections* by Shirey.\(^9\) Also in 2007, Mazurkiewicz and Potts published a research article presenting the results of a national survey on how
new generations of users are researching Latin America, a topic not previously discussed in the literature.\textsuperscript{10} Other issues pertaining to LACS librarianship remain to be explored in detail. Some articles examine the role of LACS librarians from a historical point of view while some attempt to predict the future of these positions. Most articles are personal analyses, opinion pieces, descriptive accounts, or literature reviews, and do not provide empirical research.

A few studies used surveys to examine the role of area studies librarians. Smith interviewed 93 specialists employed in 10 Association of Research Libraries (ARL) institutions.\textsuperscript{11} The author noted a trend to hire individuals with highly specialized training and subject expertise to fill specialist positions, but his findings included little quantitative data about the specifics of the specialist position responsibilities. Another examination of the role of area studies librarians was undertaken by Stueart, who surveyed area studies librarians, library administrators, and faculty in departments and programs served by the librarians.\textsuperscript{12} In Stueart's study, basic information about gender and subject area was collected for 126 librarians, and, of those, 26 were Latin American studies librarians. More specific information, including education, languages spoken, and research interests, was collected for a small subset of 30 respondents, only 3 of whom were Latin American studies librarians. The focus of Stueart's research was the divergent perception of the responsibilities of the area studies librarian by the faculty, library administrators, and librarians themselves.

A significant compilation of survey research was presented at the Future of Area Librarianship Conference held in 1995.\textsuperscript{13} Questionnaires from 187 area studies librarians were analyzed to report on background qualifications, job functions, and professional development. Responses from 26 Latin American studies librarians were included. The survey questions were general in nature, and participants at the conference expressed interest in having more detailed information about the nature of job duties for area librarians.

A survey that focused specifically on Latin American research collections in the United States was presented in 1969 by Miller and Fort.\textsuperscript{14} This survey collected information on the size and nature of the collection, staffing levels, and budgetary support. It did not attempt to address specifics about the LACS librarians themselves.

Many researchers have employed content analysis as a tool for examining job advertisements to develop a picture of the work performed by academic librarians over time. Their studies typically include analyses of position types, geographic locations, education, experience, salary, and skills, but do not include much detail about the specific duties and responsibilities entailed. Rayman examined a large number of job announcements appearing in \textit{Library Journal} during the 1970s.\textsuperscript{15} His study included position announcements for 85 bibliographer jobs, and those jobs were listed primarily in the middle years of the decade, declining substantially by 1979. Wells studied job postings found in \textit{Library Journal}, \textit{ALA Bulletin/American Libraries}, \textit{College and Research Libraries}, and \textit{College and Research Libraries News (C&RL News)} from 1959 through 1979.\textsuperscript{16} She looked only at advertisements that appeared at five-year intervals during this span. Wells' data included a category for subject specialist positions, and her data concurred with that of Rayman, finding a peak demand for these positions in 1974. Wright looked at a large number of job advertisements published in American Libraries, \textit{College and Research Libraries}, and \textit{Library Journal} from 1980 to 1984.\textsuperscript{17} Her study included both public and academic library positions, with 67.2 percent of the advertisements falling into the latter category. Wells' data included a category for subject specialist positions, and her data concurred with that of Rayman, finding a peak demand for these positions in 1974. 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observed a fairly steady increase in the number of these types of advertisements published throughout the 1980s. White analyzed subject specialist positions appearing from 1990 through 1998 in American Libraries, C&RL News, and the Chronicle of Higher Education. He focused on academic business, social science, and science librarian positions and found that the number of position advertisements for social sciences remained fairly constant throughout the period. Haar examined advertisements for bibliographer positions in college and university libraries that appeared in the Chronicle of Higher Education between March and October 1990. Haar’s study included only a small number of job advertisements, and the short period of time covered provides a snapshot of employers’ requirements at that time. A more specific study that focused on advertisements for academic library area studies or language-specific library positions was undertaken by Knowlton. This study looked at job postings advertised from January 2001 through May 2002 in American Libraries and in the SALALM Newsletter. Of the 28 advertisements identified during this time, only 4 were for Latin American and Iberian area studies positions.

To date, no study has been published that uses content analysis to examine a large number of position announcements for LACS librarians over a broad span of time. Furthermore, no study has looked in detail at this type of position to include a wide range of variables, including position characteristics, education, experience, skills, duties, and subject responsibilities. This research contributes to the body of literature by providing an extensive and quantitative analysis of LACS librarian job announcements spanning several decades.

**Research Methods**

Three sources of job advertisements were examined for this study: C&RL News, the SALALM Newsletter, and LALA-L, the Latin Americanist Librarians’ electronic discussion list for SALALM. C&RL News has been a major venue for the publication of academic library positions over the past several decades. Both the SALALM Newsletter and LALA-L have been primary tools for advertising LACS librarian positions. The sources and associated numbers of advertisements by publication period are shown in table 1.

Issues of C&RL News and the SALALM Newsletter were examined for job advertisements from 1970 through 2007. The first job advertisement appeared in C&RL News in 1975 and in the SALALM Newsletter in 1976. LALA-L was launched in August 1991, but the postings were not archived until April 1995, so only job advertisements appearing after this date are included in the study. Access to LALA-L is restricted to members of SALALM. Within these three sources, all appropriate job advertisements were included, thus providing a census of the position descriptions over the time period covered.

Two leading sources of advertising for academic library positions are the Chronicle of Higher Education and JobLIST, a service of American Libraries, and C&RL News. These sources were not utilized in the present study for logistical reasons. The Chronicle of Higher Education is published in both print and electronic form. Both JobLIST and the electronic version of the Chronicle do not permanently archive job advertisements, and they are removed after a few months. The Chronicle is a weekly publication, archived on microfilm. Reviewing decades’ worth of past issues for job announcements for this research project would have been prohibitively time-consuming.

Job advertisements were examined for duplication, and, in the case of duplicates appearing in multiple sources, all sources were consulted for the purpose of coding them, but the position was only counted once. If a position was reposted unchanged within a year of the original publication date, it was eliminated. However, if substantive modifications were evident, the job advertisement was added to the study.

<table>
<thead>
<tr>
<th>Source</th>
<th>1970–89 ( n = 25 )</th>
<th>1990–99 ( n = 35 )</th>
<th>2000–2007 ( n = 34 )</th>
<th>Total ( n = 94 )</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>( \text{#} )</td>
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<td>( \text{#} )</td>
<td>( % )</td>
</tr>
<tr>
<td>LALA-L</td>
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<td>0.0</td>
<td>6</td>
<td>17.1</td>
</tr>
<tr>
<td>SALALM Newsletter</td>
<td>6</td>
<td>24.0</td>
<td>13</td>
<td>37.1</td>
</tr>
<tr>
<td>C&amp;RL News</td>
<td>13</td>
<td>52.0</td>
<td>3</td>
<td>8.6</td>
</tr>
<tr>
<td>SALALM Newsletter &amp; C&amp;RL News</td>
<td>6</td>
<td>24.0</td>
<td>8</td>
<td>22.9</td>
</tr>
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<td>0.0</td>
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</tr>
<tr>
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<td>0.0</td>
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<tr>
<td>All sources</td>
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<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Table 1. Sources of Advertisements by Publication Period
The advertisements had to mention both collection development as a duty and LACS as a subject responsibility for inclusion in the study. This also included positions where only certain Latin American countries or regions were mentioned rather than LACS as a whole. Positions with additional significant responsibilities, such as reference or management, were included provided that they also entailed selection for the LACS collection. Only full-time jobs located in the United States were considered.

A total of 94 unique advertisements were identified for inclusion in the study. The LALA-L discussion group yielded 28 exclusive advertisements, and 21 and 18 advertisements each were found exclusively in the SALALM Newsletter and in C&RL News, respectively. Twenty-six announcements were found in 2 sources, and 1 advertisement appeared in all 3.

Descriptive content analysis was performed on each job advertisement using the content analysis methodology described by Neuendorf as “the systematic, objective, quantitative analysis of messages characteristics.” As a first step, the researchers developed a set of variables and values reflecting the position description, requirements, duties, and subject responsibilities. These variables and values were used to develop a coding sheet as described by Hall-Ellis. In the present study, each job advertisement was examined for the presence of language corresponding to the variables and values developed. To examine the way that these positions have evolved over time, job advertisements also were grouped into three time periods: 1970–89 (25 positions), 1990–99 (35 positions), and 2000–2007 (34 positions).

Because only six positions were advertised in the 1970s, they were grouped with positions appearing in the 1980s. As Haar pointed out, “It was during the 1960s, however, that bibliographers appeared in major libraries nationwide.” Not until the 1970s did the position of the bibliographer start to become more commonly advertised as it achieved general acceptance in academic libraries.

To standardize the coding, two tools were created to form a single codebook. A coding sheet was developed to identify variables and assign corresponding values. A dictionary was created to define more ambiguous terms to help provide consistency in the interpretation of the job postings when coding. The set of variables and values was developed by examining a sample of job advertisements, reviewing the literature, and drawing on background knowledge of the subject. This set was further refined during the course of the data analysis. Both authors analyzed all job announcements.

If the logical operator “or” was used between two variables found in a job announcement, the variable was assumed to be positive for both. For example, if a posting stated that the applicant should speak Spanish or Portuguese, both languages would be counted as positive.

Data were entered into the Statistical Package for the Social Sciences (SPSS). Descriptive statistical information was generated in the form of frequencies and cross tabulations. Pearson’s chi-square values were calculated to determine the statistical significance of relationships between variables. A $p < .05$ level of significance was used for this study. Chi-square tests were run to determine the association between all job advertisement characteristics and the time periods in which the advertisements were published. This was done to investigate changes in advertisement content over time, all duties listed in the advertisements to identify duties commonly found together, and all subject responsibilities and language requirements to identify those commonly found together. The statistical tests were not valid for many of the variables because of the distribution of the data among the cells. For others, the tests were valid but the associations were not significant at the $p < .05$ level.

Findings

The findings from this research project are organized into three categories: position description characteristics, requirements, and duties and subject responsibilities. The data are provided in the appendix.

Position Description Characteristics

A job title may be seen as a brief summary of a position’s role within an organization. As reported in section A of the appendix, the most common job title was “Librarian,” which appeared in 46 advertisements (48.9 percent), followed by “Bibliographer,” which appeared in 21 advertisements (22.3 percent). Fourteen job postings (14.9 percent) listed “Head/Director” as the position title. “Subject Specialist” was the title for 10 positions (10.6 percent), and “Curator” was the title of 3 positions (3.2 percent). Over time, position titles have changed. The title “Bibliographer” has declined in popularity. Nearly half (44 percent) of the jobs advertised from 1970 to 1989 used this title while it was used on only 8.8 percent of those advertised from 2000 to 2007. This term has largely been replaced by the title “Librarian,” the use of which grew from 24 percent from 1970 to 1989 to 64.7 percent from 2000 to 2007.

Libraries were categorized by institutional type as being part of public universities (61 positions), private universities (20 positions), or research and specialized libraries (13 positions). The latter category includes the Library of Congress, Inter-American Development Bank, New York Public Library, Organization of American States, Radio Martí, and the John Carter Brown Library. Unless otherwise noted, this category is included under the term academic libraries. Most of the positions (75.5 percent) were advertised by Association of Research Libraries members.
Institutions were divided into four geographic areas using the classification categories on the Library and Information Technology Association’s job webpage (www.lita.org/ala/mgrps/divs/lita/litaresources/litajobsite/litajob site.cfm). Overall, job advertisements were fairly equally distributed around the country, with 31 appearing for positions in the South, 25 in the Northeast, 18 in the Midwest, and 20 in the West. However, data show a shift in the distribution of job advertisements over time. In the 1970s and 1980s, 68 percent of the jobs advertised were located in the Midwest and West, while the Northeast and the South accounted for 76.5 percent of the jobs offered in 2000–2007.

Faculty status and tenure are difficult variables to analyze using content analysis because these terms lack usage standardization across different institutions. For this reason, an advertisement was only counted as having faculty status if the term faculty status, faculty appointment, or Assistant/Associate/Full Professor appeared. To be counted as a tenure track position, the term tenure, continuing appointment or continuing employment had to be present. Faculty status was indicated in 14 advertisements (14.9 percent). Tenure track was indicated in 17 (18.1 percent) of the cases. Both variables were positive in only 8 positions.

Information about how a position is placed within the organizational structure can be drawn from looking at its reporting line. Only 37 (39.4 percent) of the advertisements analyzed listed the reporting line for the position. They included 9 area or international studies positions (9.6 percent), 8 collection development positions (8.5 percent), 5 public services positions (5.3 percent), 4 Latin America library or unit positions (4.3 percent), and 11 “other” positions (11.7 percent). This last category included 4 positions in which the employee had dual reporting lines.

Advertisements were also examined for salary information. Only 7 (7.4 percent) of the advertisements contained no reference to salary. In 74 cases (78.7 percent), dollar amounts were mentioned in the advertisements, but the information given was in the form of minimums or salary ranges instead of a specific starting salary for the position. In some cases, several ranges were given depending on the rank at which the applicant would be hired. Thirteen postings (13.8 percent) stated that the salary was commensurate or competitive but did not state a numerical value.

The data show a trend over time to replace specific salary information with a more general statement that the salary would be commensurate or competitive. No job advertisements appearing from 1970 through 1989 contained the “commensurate/competitive” language, but from 2000 through 2007 it appeared in 11 cases, which represents 32.4 percent of the positions advertised in this period. Information about salary in the form of minimums or salary ranges decreased from 92 percent in 1970–89 to 55.9 percent in 2000–2007.

Requirements

Requirements were identified in the areas of academic background, background knowledge, work experience, technology skills, language skills, and personal traits (see section B of the appendix). Seventy-four positions (78.7 percent) required a master of library science (MLS) degree, while an additional 12 positions (12.8 percent) stated that an MLS was preferred. Fifty-seven positions (60.6 percent) more specifically required an American Library Association (ALA)–accredited MLS, and an additional 11 (11.7 percent) preferred it. Only 22 advertisements (23.4 percent) mentioned that an MLS equivalent was a requirement while 3 cases (3.2 percent) specified it as a preference.

Subject knowledge could be satisfied in a variety of ways. An advanced degree in a related field was required in 28 cases (29.8 percent) and preferred in 35 cases (37.2 percent). Most of the job advertisements in the present study were quite specific about the nature of the advanced degree required. Of the 94 total job postings, 41.5 percent stipulated that the advanced degree be in Latin American studies or with a Latin American emphasis. Another 21.3 percent mentioned the degree should be in a relevant subject. Only 2.1 percent allowed for a degree in the social sciences or humanities, and another 2.1 percent did not specify a particular field. A noticeable growth in the number of positions that required or preferred an advanced degree in a related field is apparent over time. In 1970–89, 14 positions (56 percent) required or preferred an advanced degree, while in 1990–99 this requirement or preference was stated in 25 cases (71.4 percent). In 17 cases (18 percent), a PhD was preferred, but was only required in 2.

Only 12 positions (12.8 percent) required an undergraduate degree in a related field—this was preferred for an additional 3 positions. Some advertisements called for additional subject-related education without specifying a degree requirement, categorized here as “coursework in related field.” Examples of such expressions include “educational background,” “relevant education,” and “comparable academic background.” This was required or preferred in 32 cases (34 percent).

Along with formal educational requirements, the advertisements frequently required fields of knowledge specific to LACS librarian positions. Knowledge of Latin American history, culture, and society was required in 32 cases (34 percent) and in 18 (52.9 percent) of all the positions advertised between 2000 and 2007. Far fewer positions—only 15 (16 percent)—required the knowledge of specialized Latin American reference tools.

The Latin American publishing industry has unique characteristics that affect collection development. A total of 30 positions (31.9 percent) specifically required knowledge of the Latin American publishing industry. Over time, the
demand for this knowledge has increased from being present in 12 percent of positions advertised in 1970–89 to 44.1 percent in 2000–2007.

The types of work experience sought by employers reflect changes over time in job responsibilities for LACS librarians. Figure 1 shows the types of required prior experience listed in job advertisements by time period; position advertisements that listed types of experience as preferred are not reflected in this figure. The requirement for experience in an academic or research library has increased from 12 positions (48 percent) advertised in 1970–89 to 20 (58.8 percent) in 2000–2007. Likewise, required experience in a similar position increased from 3 cases (12 percent) in 1970–89 to 8 (23.5 percent) in 2000–2007. The number of positions requiring collection development experience climbed during each of the three time periods, going from 5 cases (20 percent) in 1970–89 to 10 cases (28.6 percent) in 1990–99 and 20 cases (58.8 percent) in 2000–2007.

The growing trend of libraries providing information literacy instruction is reflected in the position descriptions. From the 1970s through the 1990s, none of the advertisements required experience in instruction, while this was required in 11 (32.4 percent) of the advertisements published from 2000 through 2007.

The most requested types of experience were experience in academic or research libraries, collection development, experience in similar positions, reference, and instruction. Fewer advertisements mentioned experience in supervision, grant writing, or special collections.

One of the key factors affecting libraries over the past few decades has been the rise of computer technology and automation, profoundly altering the work of every employee. A total of 28 positions (29.8 percent) specifically required computer and information technology skills in general. Of the positions advertised in 1970–89, only 2 (8 percent) required these skills. This grew to 15 advertisements (44.1 percent) in 2000–2007. Surprisingly few advertisements included reference to more specific technology-related skills such as Web design, creation and management of digital projects, or online searching.

Latin America is a region with a rich diversity of languages; the most common languages are Spanish, Portuguese, English, and French. This is reflected in the job advertisements for LACS librarians. Figure 2 shows the number of advertisements by time period that included language skills as being either preferred or required. English
language skills were expected in only 1 case (4 percent) in 1970–89. In 1990–99, English was included in 6 (17.1 percent) cases, rising to 10 (29.4 percent) in 2000–2007. Spanish and Portuguese exhibited a similar pattern, showing a steep increase from the 1970–89 period to the 1990s, and remained essentially steady in 2000–2007.

When languages were included in job advertisements, they were mentioned either as a requirement or as a preference. Spanish language was the most frequently required, appearing in 82 cases (87.2 percent). Only 3 cases (3.2 percent) listed Spanish as preferred. In contrast, Portuguese was required in 38 cases (40.4 percent), but was preferred in 23 cases (24.5 percent). English was required in only 17 cases (18.1 percent).

The data were also analyzed for the level of language skills specified. A total of 71 cases (75.5 percent) required fluency in Spanish. The demand for fluency in Spanish increased from 16 (64 percent) in the 1970–89 period to 30 (88.2 percent) in 2000–2007. Working knowledge was only required in 8 cases (8.5 percent), followed by reading knowledge in 6 cases (6.4 percent). Fewer advertisements required fluency in Portuguese, with 20 cases (21.3 percent) demanding it. This requirement rose from 3 (12 percent) in the earliest period to 11 (32.4 percent) in the most recent. More advertisements required a lesser level of Portuguese language skills. A working knowledge was required in 24 cases (25.5 percent), and a reading knowledge in 17 cases (18.1 percent).

In addition to specific work experience and skills, job advertisements often call for certain types of personal characteristics. Over time, more of these traits were being sought from applicants. Figure 3 shows the frequency of personal traits that appeared in the job postings in each of the three decades studied. The most highly demanded trait in all time periods was communication skills (oral and written). Roughly half (53.2 percent) of the job advertisements mentioned this ability. In 1970–89, 6 advertisements (24 percent) requiring communication skills were published; this increased to 28 (82.4 percent) in 2000–2007. The association between communication skills and time period was statistically significant ($x^2 = 20.955$, df = 2, $p = .000$).

Similar trends were observed over time for interpersonal relations, the ability to work collaboratively in teams, and a public service (user-centered) perspective. In 1970–89, 2 cases (8 percent) requiring interpersonal relations were published; this increased to 17 (50 percent) in 2000–2007. The relationship between this variable and time period was statistically significant ($x^2 = 11.702$, df = 2, $p = .003$). Also observed was a dramatic increase in the number of advertisements mentioning the ability to work collaboratively or in teams, from no cases in 1970–89 to 16 (47.1 percent) in 2000–2007. This relationship was statistically significant ($x^2 = 22.276$, df = 2, $p = .000$). In addition to expecting applicants to work well with other employees, the advertisements stipulated that the applicant have a user-centered perspective. Only 3 cases (12 percent) appeared in 1970–89 mentioning this trait, while 13 (38.2 percent) were published in 2000–2007. The remaining personal traits, including the ability to work in a changing environment, in a multicultural environment, and independently, were less frequently observed in the job postings, with only 8 cases (8.5 percent) containing each of these traits. The latter 2 traits show an increase in frequency over time, particularly in 2000–2007.

**Duties and Subject Responsibilities**

Duties define the daily work of a position (see section C of the appendix for study findings). By design, collection development was an expected duty in all cases. Several other duties are related to collection development activities. Of those, the most frequently occurring duty mentioned in the advertisements was managing collection budgets, which was listed in 29 instances of the 94 positions (30.9 percent). The number of positions requiring this variable grew from 3
cases (12 percent) in 1970–89 period to 7 cases (20 percent) in 1990–99 and 19 cases (55.9 percent) in 2000–2007. This increase is statistically significant ($x^2 = 16.082, df = 2, p = .000$).

Three specific methods of adding materials to the collection were mentioned in the advertisements, and data show a steady growth in their appearance over time. Gifts and exchange program duties were included in 17 cases (18.1 percent). Only 1 of the postings (4 percent) published in 1970–89 mentioned gifts and exchange programs, while 10 cases (29.4 percent) mentioning this appeared in 2000–2007. Two duties, approval and blanket plans and cooperative collection development, were included in 11 cases (11.7 percent). In 1970–89, only 1 position (4 percent) included approval and blanket plans, while in 2000–2007 this duty was stated in 8 cases (23.5 percent). In 1970–89, only 1 case (4 percent) mentioned cooperative collection development, which increased to 5 cases (14.7 percent) in 2000–2007.

Closely related to collection development for subject specialists is the function of liaison, which involves outreach and interaction with individuals in LACS studies centers, programs, and departments. More than half (56.4 percent) of the job advertisements mentioned liaison as a duty. Another duty is community outreach, which differs from liaison in that it involves initiatives that aim to reach the general public. Only 6 advertisements (6.4 percent) listed community outreach as a duty.

Other methods of library outreach and promotion assigned to subject specialists include involvement in various in-house library publications and special projects, such as exhibits and on-campus events. A total of 24 cases (25.5 percent) specified library publications as a duty, which increased from 2 advertisements (8 percent) in 1970–89 to 12 (34.3 percent) in the 1990s to 24 (61.8 percent) in 2000–2007. Ten job announcements (10.6 percent) stated that participation in special projects was a position duty.

LACS librarians, as subject experts, traditionally have provided specialized reference and research service. Increasingly, they have been providing general reference as part of their duties. Of the 94 job announcements, 63 (67 percent) mentioned specialized reference, with growth from 14 cases (56 percent) in 1970–89 to 24 cases (70.6 percent) in 2000–2007. A total of 52 postings (55.3 percent) listed general reference as a position duty. In 1970–89, 13 cases (52 percent) mentioned this duty, and 21 advertisements (61.8 percent) specified general reference in 2000–2007.

Universities have recognized the role of the librarian as an educator, as shown by the growth of information literacy and instruction programs. In particular, course-integrated instruction has become more prevalent as a natural outgrowth of their liaison activities. For subject specialists, information literacy often involves course- or discipline-related instruction. Of the 94 advertisements, 54 (57.4 percent) listed instruction as a job duty, with 12 of the cases (48 percent) appearing in 1970–89 and 22 (64.7 percent) in 2000–2007. In some instances, instruction may include teaching credit-bearing courses. Only 7 advertisements (7.4 percent) included teaching these courses as a duty.

The prevalence of course-related instruction can be seen in the Association for College and Research Libraries’ 2003 Academic Library Trends and Statistics for Carnegie Classification: Doctorate-Granting Institutions. More than 91 percent of institutions in this category state that they provide library presentations that are developed in collaboration with course instructors and are tailored to course objectives. Also, librarians and faculty have developed information literacy instruction taught as an integral part of some courses in 73.9 percent of these institutions. These ACRL statistics are pertinent because more than 95 percent of the academic library job advertisements in the present study are from doctoral degree-granting institutions. The independent variable institution type affects the variable information literacy in a statistically significant manner ($x^2 = 12.186, df = 2, p = .002$). A higher percentage of advertisements from private institutions (75 percent) included information literacy as a duty. The percentage (60.7 percent) for public institutions is higher than for research and specialized libraries (15.4 percent).

Librarians are often expected to have a service component to their positions. Service can encompass both working on committees within the library and representing the library in external professional associations, consortia, and projects. A total of 40 position announcements (42.6 percent) specified service as a job duty. In 1970–89, 7 cases (28 percent) listed service as a duty, while in 2000–2007 the number had increased to 21 cases (61.8 percent). The relationship between service and time period was statistically significant ($x^2 = 8.278, df = 2, p = .016$).

Along with effectiveness in librarianship and service, some academic libraries expect librarians to undertake research activities. Only 7 of the cases (7.4 percent) under study included research as a job duty.

In addition to library-specific duties, job advertisements also call for more generic managerial, administrative, and technology skills. The category of administrative and management duties includes cases that specify such activities as “planning,” “implementation,” and “direction,” while some advertisements mentioned only “supervision,” which is included as its own category. Of the 94 total positions, 26 (27.7 percent) required administrative and management skills; this increased over time from 3 cases (12 percent) in 1970–89 to 12 (35.3 percent) in 2000–2007. Supervision includes directing the work of students, staff, or other librarians, and was requested in 28 cases (29.8 percent). Over time, there was an increase from 7 cases (28 percent) in 1970–89 to 12 cases (35.3 percent) in 2000–2007. Only 15 advertisements (16 percent) mentioned grant writing and development as a duty, but the frequency increased from...
only 1 position (4 percent) in 1970–89 to 8 (23.5 percent) in 2000–2007.

Several different technology skills were sought in job announcements. The most highly sought were online searching, which was mentioned in 13 instances (13.5 percent), and creation of subject-based webpages, requested in 10 cases (10.6 percent). The growing presence of the Internet in the daily work of bibliographers is reflected in the increase in the job announcements that required the creation of subject-based webpages. This skill first appeared in only 1 advertisement (2.9 percent) in 1990–99 and was present in 9 cases (26.5 percent) in 2000–2007. The inclusion of online searching as a requirement peaked in the 1990s, with 7 instances (20 percent).

Other duties that appeared in a smaller number of cases were cataloging (11), work with vendors (8), acquisitions (6), acquisition trips (3), and archives (1).

The heart of a bibliographer’s job is subject responsibility. The 82 job postings (87.2 percent) that included LACS as a whole formed the basis of the present study. However, an additional 12 advertisements were specific to certain countries or territories within Latin America and the Caribbean, including Cuba, Mexico, Brazil, Puerto Rico, and the Dominican Republic.

Iberian studies was the second most frequently occurring responsibility, with 42 cases (44.7 percent). This variable includes instances that mention both Spanish and Portuguese studies. From 1970–89 to 1990–99, the percentage of advertisements that included Iberian studies increased from 8 cases (32 percent) to 18 (51.4 percent).

Spanish and Portuguese language and literature appeared with similar frequencies, 17 (18.1 percent) and 16 cases (17 percent) respectively. The Spanish language and literature variable (section C in the appendix) includes bibliographer positions that serve Spanish or Hispanic studies academic departments and programs. This may include language and literature from both Spain and Latin America. Similarly, the Portuguese language and literature variable includes positions that support Portuguese academic departments and programs. This may include language and literature from both Brazil and Portugal. Another frequently occurring subject responsibility was U.S. Latino studies, which was included in 11 advertisements (11.7 percent). This variable also includes positions that mention Mexican American or Chicano studies.

Discussion

The role of the traditional LACS bibliographer, reflected even in the title of the position, has changed over time. Today's subject specialist is more likely to have the title of librarian, which is a broader title encompassing more duties and responsibilities than just collection development, which was common in the past.

The majority of openings have been in public universities throughout the United States. The only positions specifically mentioning faculty status and tenure track were located at public universities. Ascertaining the scope and implications of faculty status simply by reading the position announcements is difficult. Terms such as faculty and professional mean different things at different institutions. Without knowing the institutional promotion and tenure requirements and faculty status policies of a particular institution, determining the responsibilities and expectations associated with these terms is impossible.

Public universities tended to be more forthcoming than private colleges or specialized libraries concerning salary information, with 71.6 percent of the cases that included salary information being from public universities. Still, because most advertisements listed only minimum salaries or salary ranges or stated that salary was commensurate with experience, looking at published salary surveys for this type of data would be informative.

Academic Background

The importance of the MLS has been widely debated. Grimes and Grimes examined position descriptions for professional academic library jobs appearing from 1975 through 2005 to determine the extent to which the MLS was a prerequisite for employment.\(^{31}\) This study included all professional positions, including systems and administrative jobs. They found the highest proportion of job announcements that required an MLS appeared in the early 1990s. This dropped off in later years, and the decrease was particularly dramatic in 2005. In contrast, the present study showed a small increase in the MLS requirement over time. When Grimes and Grimes categorized the advertisements by job function, they found that the MLS requirement remained important for certain types of jobs. They reported that “results suggest that the MLS is important for libraries when hiring workers to perform core functions in public and technical services.”\(^{32}\) Findings from the research reported here suggest that the MLS remains important for LACS librarians, who perform some of these core public services functions, including collection development, reference, instruction, and liaison work. However, this degree is not an absolute requirement for positions in specialized libraries, which may be open to more diverse educational backgrounds.

The research reported in this paper suggests that the ideal educational background for a LACS librarian is an MLS and also a master's degree in a field related to Latin American studies. Job advertisements do not often specify having an undergraduate degree in a related field. An advanced degree in a relevant subject area is valued by both public and private universities, but it is more often a preference than a requirement. Of all the job postings that required an MLS,
33.8 percent required an advanced degree, and an additional 33.8 percent preferred an advanced degree. All of the tenure track positions specifically required an ALA-accredited MLS, and all of the cases in which the position had faculty status required or preferred an ALA-accredited MLS.

Only 17 cases (18 percent) did not require, prefer, or mention an MLS or a subject degree in the advertisement. These positions were largely in private universities or research centers. Omitting strict educational requirements in the announcement allows an institution more flexibility in screening a more diversified pool of applicants. As Block stated, “Vagueness allows for wide latitudes in hiring in a buyers’ market.” In the past, efforts have been made to attract PhDs to the field of librarianship. Only 17 cases mentioned holding a PhD. Of those, all but 2 stated that the PhD is preferred rather than required. Duke University’s post-doctoral fellowship program, which ran from 1995 to 2001, focused on training PhD recipients in any field of Latin American studies as research librarians. This program did not require the participants with PhDs to obtain an MLS, but instead trained them about research libraries to complement their extensive subject knowledge. While the individuals completing this program were successfully placed in library positions, the data do not suggest a substantial increase in employer demand for the PhD as a requirement. A 2008 article by Lindquist and Gilman surveying academic librarians who hold subject doctorates found that only 4 percent were in area studies. How many of those were in Latin American studies is not known.

Detlefsen, in her analysis of job listings for subject specialist librarian positions, suggested the creation of an “Executive MLS” degree for qualified individuals as an alternative to the traditional MLS. The Executive MLS would be a condensed program, patterned after the popular executive MBA degrees offered by many business schools. In this way, people with strong subject backgrounds and familiarity with research practices or those who have worked in libraries could obtain professional positions without the time and expense involved in taking a traditional MLS program. This type of program might be attractive to individuals highly educated in the field of Latin American studies.

Work Experience

While having experience in many aspects of library service is seen as a positive attribute in a prospective candidate, those with experience in certain library tasks were more sought after than others by employers. Nearly half of the job postings (46.8 percent) included “experience in collection development” as required or preferred. Since all the positions examined in the study were for collection development librarians, that this type of experience does not appear more frequently is surprising. Employers may wish to expand the applicant pool by omitting this requirement or be willing to train the successful candidate.

In the case of reference and instruction, the numbers are even lower. Of the job announcements where general or specialized reference is a duty, only 32.7 percent and 27 percent respectively required or preferred experience performing it. Similarly, when instruction is a duty, only 25.9 percent of job advertisements required or preferred experience in it.

When different types of experience were mentioned in the advertisements, the amount of experience was seldom quantified. However, the majority of the jobs that required four or more years of experience in research or academic libraries were offered in 2000–2007. This was a relatively small number of positions (going from none in 1970–89 to 7 in 2000–2007). The increase in the director and head types of positions may be because of the retirement of professionals at this level.

Technology Skills

Given the tremendous influence of technological developments on library services, collections, and work patterns, one might expect that job advertisements posted in the late 1980s through 2007 would be replete with specific technological proficiency requirements. Contrary to the authors’ expectations, not many of these job advertisements mentioned skills like working with digital projects, creating Web-based subject guides, or designing and maintaining websites. A plausible explanation was offered by Xu, who noted that “there is a time gap from the implementation of new technology in libraries to the corresponding changes in library professional duties and responsibilities… However, requirements concerning the knowledge of such relevant skills did not immediately appear in job advertisements.” Also largely absent from more recent job announcements were skills like online searching, which were more prevalent in the 1990s. A possible explanation for the absence of online searching is also offered by Xu, who observed that because “certain sorts of requirements or responsibilities have become relatively commonplace, they might not always be mentioned in the job descriptions.” Lynch and Smith noted that, “because the ALA-accredited degree is an accepted job requirement, the assumption of employers seems to be that a graduate’s knowledge base will include knowledge of computer technologies as they relate to library and information science.”

Languages

Little research has been undertaken into the requirement for area studies librarians to hold foreign language skills. Zhang used content analysis to examine academic librarian job postings from 1966 to 2006. Zhang’s analysis included a category for “bibliographer and area studies librarians”
positions. This category showed a substantial increase in the demand for foreign language skills from 1966 to 1991. This is consistent with data in the present study for Spanish and Portuguese language skills. After that time, Zhang found a slight decrease in the number of job advertisements requiring foreign language skills. In contrast to Zhang's data, the current study showed that growth for Spanish and Portuguese skills as a requirement leveled off in the 1990s and throughout 2000–2007. One possibility for this disparity is that Zhang's category included bibliographer positions, for which language skills would not be expected to be of importance.

The requirement for English language skills showed a different trend in this study. While relatively few advertisements mentioned a requirement for English, data show a steady growth in the number of occurrences, from 4 percent in 1970–89 to 29.4 percent in 2000–2007. Not only did the numbers increase, but the requirement was for fluency in English in all cases. Perhaps in the earlier years English language skills could be assumed by employers. In later time periods, with a more globalized applicant pool, employers apparently felt the need to explicitly mention fluent English as a requirement.

One of the questions the authors sought to explore was, Were some subject responsibilities and languages commonly found together? The relationship was very strong between Spanish language ability and Iberian studies, Latin American and Caribbean studies, Portuguese language and literature, Spanish language and literature, and U.S. Latino studies. More than 90 percent of the job postings including these subjects required Spanish language ability, with the exception of U.S. Latino studies, in which more than 70 percent of the advertisements required it. Portuguese language ability was also an asset. Nearly half of the job announcements with LACS responsibilities specified having Portuguese language skills as a requirement. In the case of Iberian studies responsibilities, 59.5 percent of the advertisements required Portuguese language skills.

Duties

With the creation of subject specialist positions within the library, Byrd and Haro recognized core duties for subject librarians that encompassed traditional collection development responsibilities as well as specialized reference, instruction, and liaison responsibilities. Robinson, in his examination of job advertisements for collection development positions from 1980 to 1991, identified a number of additional expected duties, including online searching and resource sharing. White looked at subject specialist positions advertised from 1990 to 1995. His analysis found a basic set of highly ranked core duties as identified by Byrd, Robinson, and Haro, with additional technical and managerial responsibilities for the positions.

The position of LACS librarian includes a wide range of duties. The number of duties per advertisement ranged from 1 to 14. The overall average of duties per job advertisement was 6.44. Over time, the number of duties has increased, from an average of 4.8 duties in 1970–89 to 6.25 in 1990–99 and 7.85 in 2000–2007. These figures reflect the evolution of the LACS librarian profile from a narrowly focused specialist with a limited number of duties to a more diversified and multitasking librarian. Given the added workload associated with providing new services and electronic resources, often coupled with staffing constraints, the fact that collection development librarians are undertaking additional duties is not surprising.

Some differences were seen in job duties at public and private institutions. Public universities are more likely to include general reference as a job duty (62.3 percent) than are private universities (35 percent). Both types of institutions are highly likely to state that specialized reference is a duty, with the requirement being slightly higher in private universities (75 percent) than public universities (67.2 percent). Activities such as research and publication are closely associated with the issue of faculty status or tenure. None of the jobs advertised by private universities listed research as a requirement, nor were any positions identified as being tenure track or having faculty status. While the total number of positions that included research or publication as a job duty was small—only 7 cases (11.5 percent)—all of them occurred at public institutions. Service as a duty often also is associated with requirements for promotion and tenure, but it is also a required duty for many other nontenure track librarian positions. Applicants can anticipate that service, such as committee work and participation in professional organizations, may be required at both public and private institutions (39.9 and 60 percent respectively).

In particular, the demand for the ability to manage collection budgets is growing. This trend was also observed by Haar, who noted, “Its presence may be another sign that stretching ever more precious dollars is a growing concern among libraries.” Haar found a growing demand for general reference service, a trend also seen in the present study. Robinson noted the trend toward combined positions and away from jobs that were full-time collection development only; nearly 80 percent of the combined positions in his study involved reference work.

Collaborative collection development is another way to leverage tight collection budgets and simultaneously expand collections and services. The library literature has widely discussed this issue. Jakubs has observed an “increased focus on cooperation and collaboration in librarians.” Hazen has predicted that cooperative endeavors will increase in the future. The Spec Kit Collaborative Collections Management Programs in ARL Libraries considered these programs commonplace, noting that collaborative collection development programs occur more
frequently in the field of area studies. While relatively few job postings specifically mentioned cooperative collection development as a duty, it is fairly common on the job. This is evidenced by initiatives such as the Latin American Research Resources Project (http://lanic.utexas.edu/larrp), currently including 57 participating libraries. This projects calls for LACS librarians with leadership skills, experience in teamwork, and a deep knowledge of collection strengths and weaknesses.

The data also reflected a moderate but growing call for working with approval plans, which may be a reflection of the increased demands on the bibliographer’s time from myriad other duties in addition to collection development. In some cases, the LACS librarian may be responsible for collecting in areas outside his or her field of expertise, and relying on an approval plan may be a convenient way to fill specific needs within the collection.

While the diversity and number of duties listed in a job advertisement may seem daunting to a potential applicant, few employers seem to expect experience with all or even most of the duties listed. If a prospective employee is looking to get experience in a particular duty, collection development, reference, and instruction (in that order) likely would make them more marketable.

Some duties were more commonly found together than others. Chi-square values for the most commonly occurring duties presented in section C of the appendix were calculated to determine if the relationships between them were statistically significant. The results are given in table 2. The core duties typically performed by the bibliographer tended to be associated with a larger number of other duties: specialized reference, instruction, liaison work, and collection budget management. Applicants should expect to find these duties together. Because collection development was a constant for these advertisements, it was not included in the analysis of duties. The creation of library publications as a duty showed no statistically significant relationship with any other duty.

Subject Responsibilities

In contrast to the growth seen in the number of duties, the number of subject responsibilities has remained fairly constant over time. Job announcements had an average of 2.31 subject responsibilities. The number of subject responsibilities per advertisement ranged from 1 to 8.

The most prevalent combination of subject responsibilities was Latin American and Caribbean Studies, found in 42.6 percent of the total job advertisements. This relationship was statistically significant ($x^2 = 4.368, df = 1, p = .037$). This association shows that a LACS librarian has a good chance of also having Iberian studies responsibilities because Latin America and Iberia share a common language, history, and culture. The next most commonly occurring combination was that of Latin American studies and Spanish language and literature, found in 18.1 percent of the total job announcements, followed by Portuguese language and literature and Latin American studies, found in 14.9 percent.

As more U.S. universities have implemented Latino studies programs as part of a growing interest in the study of immigrant populations, one would expect that many LACS position postings would have included this subject responsibility, but only 10.6 percent of the cases examined included both Latin American and U.S. Latino studies. However, announcements for positions such as Chicano studies, ethnic studies, or diversity librarians are not included because the focus in this study was job advertisements with subject responsibility in Latin American and Caribbean studies or a country or territory within it.

Summary and Conclusions

A distillation of the job announcements yields a picture of the typical LACS librarian. In terms of educational background, an MLS is standard and an advanced degree in a related subject field is highly desirable. Prior experience in an academic or research library, particularly in collection development, is sought by employers. Experience performing reference and library instruction is also valued. General technology skills are commonly expected. Strong Spanish language abilities are required, and at least a working or reading knowledge of Portuguese is highly desirable. In today’s work environment, excellent communication skills are essential. Related traits such as interpersonal skills, the ability to work in teams, and a public service orientation are expected. In addition to performing collection development, the LACS librarian will be responsible for reference (both general and specialized), library instruction, and liaison with academic departments, programs, and centers. The LACS librarian also may be assigned additional subject responsibilities, including Iberian studies, Spanish and Portuguese language and literature, or U.S. Latino studies.

The LACS librarian is now expected to undertake a wider range of duties than in the past, and this trend will likely continue in the future. As technology continues to transform the workplace, librarians are expected to expand electronic offerings and services. For example, chat and text messaging reference are offered by many libraries. Collection development now encompasses technologies like streaming video and electronic books, which require additional selection, evaluation, and management skills. These technologies also affect the library instruction process as librarians are often asked to teach students and faculty how to make the best use of the powerful and sophisticated added features offered with many electronic resources.

Academic and research libraries are facing difficult budgetary times. The cost of materials has outpaced the overall...
rate of inflation for several years and simultaneously the volume of materials published has grown explosively. This adds to the scope of duties expected from bibliographers as libraries are often loath to cut services but may not be able to replace staff. In times of constrained collections budgets, open-access materials offer one way to provide information. For LACS librarians, identifying and promoting open-access materials offer one way to provide information.

While the data do not show a parallel growth in subject responsibilities over time, one can logically expect expansion in that area in the future. One explanation could be that bibliographers are being assigned more subject responsibilities after they are hired. This could be confirmed by a survey study of bibliographers who have been employed in their current positions for some time.

Content analysis provides a rich source of data about what employers seek in LACS librarian positions. Increasingly, libraries publish job announcements only electronically. This presents a challenge for studying these postings because they are often retained for only a limited time period. As Kinkus noted, “To this end, it would be useful if reputable library science journals such as C&RL News and American Libraries maintained an archive of electronic job advertisements for research purposes…. It would be fitting if the leading professional journals of our field took steps to facilitate research about librarianship by electronically archiving librarian positions announcements in addition to other content.” The LALA-L distribution list is only open to SALALM members. However, since 2007, a public archive of job and internship postings is maintained as part of the SALALM website (http://library.lib.binghamton.edu/salalm/news/jobs.html), which will help facilitate this type of research in the future. Of particular importance to the study of academic library job advertisements would be the creation of an electronic archive of positions advertised in the Chronicle of Higher Education. This would provide access to a larger universe of advertisements, which would enable more robust research to allow stronger generalizations to ascertain findings and trends.

One limitation of the content analysis method as applied to job advertisements is that it does not necessarily reflect the actual work experience of individuals employed in this field. A survey study of those librarians actually hired for those positions would give a more detailed picture of the current profile of this type of employment.

To complement the study of the LACS librarian, the question of how well existing library science programs prepare students for these positions also should be examined. A study of current course offerings would reveal any disparities between what students are being taught and what employers are requiring. This type of study could provide opportunities to tailor the curriculum to better prepare students to gain employment.

Because LACS librarianship is a highly specialized field, the number of job advertisements is limited. By expanding the universe of position announcements to include all area studies positions, such as Asian studies or Africana studies, one could gain a broader picture of the scope of area studies positions and also compare differences and similarities among them. As globalization studies gains recognition in academic programs, it may affect the scope of the traditional area studies positions. Likewise, comparative studies of different regions, such as East Asia and Latin America could reshape the definition of area studies positions in the future.

References


21. Ibid., 416.


29. Haar, "Scholar or Librarian?" 18.


32. Ibid., 338.

Appendix. Change in Position Description Characteristics, Requirements, and Duties by Publication Period

A. POSITION DESCRIPTION CHARACTERISTICS

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### TECHNOLOGY SKILLS

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### LANGUAGE SKILLS

#### Spanish Language

| **Required** | 21 | 84.0 | 30 | 85.7 | 31 | 91.2 | 82 | 87.2 |
| **Preferred** | 0 | 0.0 | 2 | 5.7 | 1 | 2.9 | 3 | 3.2 |

#### Spanish Language Skill Level

| **Fluent** | 16 | 64.0 | 25 | 71.4 | 30 | 88.2 | 71 | 75.5 |
| **Working knowledge** | 2 | 8.0 | 4 | 11.4 | 2 | 5.9 | 8 | 8.5 |
| **Reading knowledge** | 3 | 12.0 | 3 | 8.6 | 0 | 0.0 | 6 | 6.4 |

#### Portuguese Language

| **Required** | 9 | 36.0 | 14 | 40.0 | 15 | 44.1 | 38 | 40.4 |
| **Preferred** | 5 | 20.0 | 9 | 25.7 | 9 | 26.5 | 23 | 24.5 |

#### Portuguese Language Skill Level

| **Fluent** | 3 | 12.0 | 6 | 17.1 | 11 | 32.4 | 20 | 21.3 |
| **Working knowledge** | 7 | 28.0 | 7 | 20.0 | 10 | 29.4 | 24 | 25.5 |
| **Reading knowledge** | 4 | 16.0 | 10 | 28.6 | 3 | 8.8 | 17 | 18.1 |

#### English Language

| **Required** | 1 | 4.0 | 6 | 17.1 | 10 | 29.4 | 17 | 18.1 |
| **Preferred** | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |

#### English Language Skill Level

| **Fluent** | 1 | 4.0 | 6 | 17.1 | 10 | 29.4 | 17 | 18.1 |
| **Working knowledge** | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| **Reading knowledge** | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |

#### French Language

| **Required** | 2 | 8.0 | 1 | 2.9 | 3 | 8.8 | 6 | 6.4 |
| **Preferred** | 3 | 12.0 | 4 | 11.4 | 2 | 5.9 | 9 | 9.6 |

#### French Language Skill Level

| **Fluent** | 2 | 8.0 | 1 | 2.9 | 1 | 2.9 | 4 | 4.3 |
| **Working knowledge** | 3 | 12.0 | 3 | 8.6 | 4 | 11.8 | 10 | 10.6 |
| **Reading knowledge** | 0 | 0.0 | 1 | 2.9 | 0 | 0.0 | 1 | 1.1 |

#### Other Language(s)

| **Required** | 1 | 4.0 | 3 | 8.6 | 3 | 8.8 | 7 | 7.4 |
| **Preferred** | 9 | 36.0 | 3 | 8.6 | 3 | 8.8 | 15 | 16.0 |

#### Other Language(s) Skill Level

| **Fluent** | 0 | 0.0 | 2 | 5.7 | 4 | 11.8 | 6 | 6.4 |
| **Working knowledge** | 7 | 28.0 | 4 | 11.4 | 1 | 2.9 | 12 | 12.8 |
| **Reading knowledge** | 2 | 8.0 | 0 | 0.0 | 1 | 2.9 | 3 | 3.2 |
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How the Current Draft of RDA Addresses the Cataloging of Reproductions, Facsimiles, and Microforms

By Steven A. Knowlton

The cataloging of microforms and other reproductions has been difficult throughout the history of cataloging codes, particularly due to the "multiple versions problem." The proposed new cataloging code, Resource Description and Access (RDA), seeks to clarify the relationship between reproductions and originals by applying the principles of Functional Requirements for Bibliographic Records (FRBR) to cataloging. While the use of FRBR principles does help to identify the relationships between works in the catalog, RDA as currently designed is challenging for the cataloger and includes many data that may prove to be difficult for catalog users to understand.

The conceptual and practical aspects of cataloging microform reproductions and other types of reproductions have long been a challenging part of bibliographic control. Under the proposed new cataloging code, Resource Description and Access (RDA), catalogers will have to expand on current cataloging practices. The thinking that motivates the most innovative sections of RDA is concerned with defining the relationships between items in the collection, and microforms and other reproductions fall into an interesting grey area—they are neither a different edition in the usual sense, nor are they simply an extra copy of an extant edition. The potential relationships between library holdings are detailed in a document titled Functional Requirements for Bibliographic Records (FRBR).1

RDA, in its current draft form, is a bulky document that may be difficult for catalogers to consult with confidence that they are applying all the necessary rules for the item in hand.2 However, a catalog entry created according to RDA will provide deeper information about the item and its relationship to other bibliographic entities than do catalog entries created using Anglo-American Cataloguing Rules, 2nd edition (AACR2).3 But some aspects of RDA, such as the use of library or publishing jargon, mean that catalogs created using RDA may present the data in a way that is less meaningful to catalog users than it might have been using other cataloging rules.

This paper will outline the ways in which RDA approaches reproductions, beginning with a brief historical exploration showing how the problem of defining reproductions in relation to their originals has proven elusive through all the
cataloging codes of the twentieth century. This paper also includes a discussion of FRBR principles as they apply to reproductions.

The Historical Problem of Defining the Relationship between Reproductions and Originals

A persistent difficulty for catalogers has been conveying to patrons the fact that a publication may appear in the collection in several versions; originally these took the form of various editions, but alternative formats of the same edition are now also an issue for catalogers. This issue was addressed in two of Charles A. Cutter’s famous “Objects of the Library Catalog,” namely, a catalog should show what a library has by a given author, and a catalog should assist in the choice of a book’s edition.4 Cutter felt that the means to achieve these objectives were title entries and notes, when necessary. For the most part, Cutter’s view has prevailed since that time, as shown by the Statement of Principles, known as the Paris Principles, of 1961, which established an international standard for cataloging rules.5

Cataloging of Reproductions in Earlier Codes

Microforms were not a practical commercial enterprise during the nineteenth century, although pioneers such as John Benjamin Dancer had created prototypes of microfilmed documents.6 However, the development of lithography allowed for the production of facsimiles.7 In a famous example, Secretary of State John Quincy Adams authorized a wet-ink transfer of the original engrossed copy of the Declaration of Independence so that the original could be copied for wide distribution in 1823; the removal of some of the ink accounts for the current faintness of the original document.8 The earliest cataloging codes did address reprints and facsimiles.

When the American Library Association (ALA) first approached the task of compiling a cataloging code applicable to all libraries in the United States, it based its work on Cutter’s Rules for a Dictionary Catalog.9 Although Cutter’s Rules for a Dictionary Catalog were not retained explicitly in the 1908 Catalog Rules: Author and Title Entries, two of them are reflected in the rules for cataloging reprints.10

The rules for cataloging a reprint with two title pages (one a title page for the reprint and one a reproduction of the original title page) call for added entry under the reprint title, with the original title mentioned in a note.11 Thus, as Cutter stated, the catalog enables a person to find a book of which the title is known and assists in the choice of a book’s edition. Although a modern catalog user would expect additional added entries for the original title, the use of notes in a card catalog was seen as a reasonable accommodation for the researcher, who was expected to exhibit enough diligence to review all the appropriate catalog entries before deciding which edition to select.

Nonetheless, cataloging codes had difficulty defining what exactly a reproduction is. If it is simply another copy of the original, then entry under the original was called for. If it is a different edition, then a separate entry was appropriate. A reprint falls into the cracks between those categories.

Over the next seventy years, four more cataloging codes were issued, and successive versions also addressed microforms. One constant was the rule of entry under the original title unless a separate title has been added for the reproduction. Confusion reigned when describing the reproduction. A code might require a description for the number of pages and dimensions of the original or a description of the microform with its own extent.

By the time the next set of cataloging rules was published in 1941, the dissertations and early English books projects of University Microfilms (now ProQuest), and Harvard’s Foreign Newspaper Microfilm Project, among others, had introduced microforms into library collections.12

The 1941 A.L.A. Catalog Rules allowed for the added entry of works “reproduced in facsimile (either by type print or by some photomechanical process)” according to the same title-page rules as the 1908 rules.13 However, the rules also included prescriptions for describing the collation of reproductions (collation being the term for what AACR2 calls the “extent” of an item). In keeping with the reputation of the 1941 rules for pedantic exactitude combined with a lack of sensible examples, the cataloger was required to determine whether the microfilm was produced as a commercial enterprise before applying one of two rules for describing the collation of a microfilm.14 No examples were provided to guide the cataloger in making this judgment. In addition, a separate set of rules applied to describing reproductions produced by the Photostat process, a predecessor to xerographic copying that involved photographing documents onto sensitized paper that had to be developed in chemical baths, much as photographic film is developed.15 The result was that catalog entries made under the 1941 rules might feature one microfilm described with the word “facsimile” in the collation, and another similar microfilm described as though it were a bound book, with the fact that it was a microfilm appearing only in the notes section, while a Photostat reprint was described as though the Photostat were an original edition.

The 1941 rules were quickly superseded in 1949 by two separate but equally essential guides: A.L.A. Cataloging Rules for Author and Title Entries (Author and Title Entries) and Rules for Descriptive Cataloging in the Library of Congress (RDC).16 Despite the clear distinction of scope implied by the titles, the Author and Title Entries rules prescribed some descriptive cataloging, and RDC prescribed some rules for title entry. In the case of microfilms,
Author and Title Entries introduced a form subject heading, namely “Manuscripts—Facsimiles.” RDC prescribed the title entry of facsimiles of all kinds according to the original 1908 rule of entry under the reprint title with other titles in the notes. Further, RDC simplified the description of all reproductions by calling for the same standard in all cases—namely, recording the extent of the reproduction with the extent of the original in a note.

Throughout the first half of the twentieth century, cataloging rules for reproductions had varied along with changing technology and formats, but, at the fundamental level, they remained the means by which a catalog could achieve the objects set forth by Cutter.

During the 1950s and early 1960s, an international movement toward universality in cataloging led to the establishment of the Paris Principles in 1961. The Paris Principles state not only the functions of the catalog but also describe the structure of the catalog and prescribe basic rules for entry. The Paris Principles seem very similar to the rules previously used in American cataloging, but they did represent a breakthrough in the acceptance of the notion of corporate authorship by cataloging agencies in the Prussian and other non-Anglo-American traditions.

The Paris Principles informed the next revision of American catalog rules, which were issued in 1967 under the title Anglo-American Cataloging Rules (AACR). AACR was also strongly influenced by the work of Seymour Lubetzky, a scholar at the Library of Congress (LC) who systematically critiqued previous cataloging codes in the hope of establishing a logical approach to building catalogs. Lubetzky stated that the purposes of the catalog are “1) To facilitate the location of a particular work; and 2) To relate and bring together the works of an author and the editions of a work.” In the case of facsimiles and microfilms, AACR approached cataloging with an eye firmly fixed on Lubetzky’s second purpose. Reproductions were entered under the title of the original (except in the case of facsimiles with a new title page), the collation consisted of a description of the original book, and the description of the reproduction was restricted to the notes field.

Even as the Anglo-American cataloging community was catching up to the numerous changes imposed by AACR, the international cataloging community moved ahead with more standards, the most significant being the International Standard Bibliographic Description (ISBD). ISBD was first promulgated for monographs in 1971, and its acceptance necessitated a revision of AACR to bring descriptive cataloging into line with ISBD requirements. While the revisers were at work, they also tidied up some other issues that had arisen as the first edition was applied in libraries. The second edition of AACR, called AACR2, has proven more lasting than most of its predecessors, as libraries are still cataloging according to AACR2 thirty years after it was first published in 1978. Although several revisions have been issued, the fundamental structure and concepts of AACR2 remain unchanged.

Rules for Cataloging Reproductions in AACR2

AACR2 introduced a number of practices that make cataloging microforms a more distinct practice than hitherto. The first was the requirement to consult the “chief source of information.” In the case of microfilms, the cataloger must view the frame bearing the title rather than relying on packing slips or box labels. A second practice, derived from the ISBD, was the introduction of the General Material Designation (GMD) immediately following the title. The GMD is a “term indicating the broad class of materials to which an item belongs” and includes “microform” and “art reproduction.” This practice allows the catalog user to distinguish between print and microform editions of the same work without referring to notes, thus satisfying Lubetzky’s second purpose: “to relate and display together the editions which a library has of a given work and the works which it has of a given author.” Perhaps because the GMD makes comparing editions easier, the physical description area no longer shows the extent of the original, but rather describes the microform.

Facsimiles and reprints are treated similarly. They are cataloged and described according to the characteristics of the reproduction, with the information about the original reserved for notes. AACR2 goes a long way toward clarifying which editions—and, of importance to the average library patron, which formats—of a work are in the library’s collection.

The “Multiple Versions Problem”

ISBD, as well as AACR2, which reflects it, are structured to provide a separate entry for each different format of a work, whether print, microform, or electronic resource. Many librarians find this practice “to have a very negative impact on the usability of the catalog, causing an increase in catalog entries for what to many users is essentially the same resource.” The Council on Library Resources and the LC convened a meeting in 1989 to address this “multiple versions problem.” The participants in the Multiple Versions Forum considered several options for revising cataloging practice to make the entries for titles held in multiple versions more usable, and they recommended a “two-tier hierarchical model for multiple versions,” in which the catalog contains “an independent bibliographic record for one version of an item . . . and dependent partial records” indicating holdings in different formats.

As a result of the recommendations of the Multiple Versions Forum, many libraries now present catalog records with holdings in multiple versions on one record. Current LC policy is to “transcribe the bibliographic data appropriate to
the original work being reproduced,” and to “give in a single note (533 field) all other details relating to the reproduction and its publication/availability.” Although this practice is contrary to AACR2, it allows LC records to comply with the two-tier hierarchical model. The top tier is represented by the entry consisting of information about the original, and the details relating to the reproduction are one way of completing a dependent partial record for the second tier. Despite the LC’s use of a single record with multiple holdings, many libraries continue to catalog multiple versions according to AACR2. For instance, the policy of the Program for Cooperative Cataloging’s Cooperative Online Serials Program (CONSER) is to present a separate record for each version, although serials with online versions may use a single record.

**Functional Requirements for Bibliographic Records**

AACR2 was published just as early computer catalogs were being implemented, and experience with online public access catalogs during the last several decades has led to a belief that the capability of computers for searching across numerous entries can allow catalogs to do more to help patrons ascertain which works and which editions are in a library. These developments have occurred in an environment that has seen a great increase in shared catalog records, contributing to a reconsideration of what a library catalog can and should do for its users.

After numerous meetings throughout the 1990s, IFLA issued **FRBR** in 1998. **FRBR** takes the Paris Principles further and calls for a catalog to enable users to complete four tasks:

- to find entities that correspond to the user’s stated search criteria
- to identify an entity
- to select an entity that is appropriate to the user’s needs
- to acquire or obtain access to the entity described

To accomplish these tasks, catalogs should not only state the holdings of the library under various titles, but demonstrate in a formal way how those holdings are related.

**Resource Description and Access**

Since 2004, a committee of experts, known as the Joint Steering Committee for the Development of RDA and drawn from the Anglo-American cataloging community, has been developing a revised Anglo-American cataloging code that is based on **FRBR**. This code, known as Resource Description and Access, or RDA, has generated considerable controversy, with some bodies calling for a suspension of RDA’s development pending further review. However, the Joint Steering Committee insists that the publication of RDA will be released as planned in 2009, so any libraries that plan to adopt it should be prepared for the changes it will present. RDA is still undergoing revision, so discussion about the current draft is subject to change.

Because it is based on **FRBR**, catalogs created using RDA will identify in a formal manner the relationships between the items cataloged. In **FRBR**, every type of data that might be entered in a catalog is considered an entity. Entities include people, corporate bodies, concepts, objects, events, and places. Most important for the cataloging of reproductions, entities include “products of intellectual or artistic endeavor,” which consist of works, expressions, manifestations, and items.

Briefly, in **FRBR**, the entities are defined as “work (a distinct intellectual or artistic creation) . . . expression (the intellectual or artistic realization of a work) . . . manifestation (the physical embodiment of an expression of a work) and item (a single exemplar of a manifestation).” A classic example is *Hamlet*. The plot and characters that constitute *Hamlet* are the work, while Shakespeare’s play is one expression of that work. The 2006 Penguin edition of Shakespeare’s play is a manifestation of that expression, and one copy of the Penguin edition is an item.

**Reproductions as FRBR Entities in RDA**

Given these considerations, the place of a microform or other reproduction as a **FRBR** entity is not immediately obvious. Earlier cataloging codes treated reproductions alternately as new editions or simply as additional copies of existing editions. In **FRBR** terms, the reproduction would be either a separate expression or another manifestation of the existing expression.

The committee in charge of RDA has made some decisions about how to approach reproductions in a **FRBR** catalog. RDA calls on the cataloger to record relationships between resources in one of three ways:

1. providing a resource identifier for the related resource (a resource identifier is a standard number, such as an ISBN)
2. naming the related resource in the form prescribed as the controlled access point representing the related work, expression, manifestation, or item
3. describing the related resource

The last two options, naming the related resource and describing the related resource, are verbal in form, such as
added entries or notes. In addition to the requirement of identifying related resources, RDA calls for “relationship designators,” that is, terms from the approved list of relationship terms, such as “reproduction of” or “preservation facsimile of.”

In the current draft of RDA, reproductions are identified as “Related Manifestations” of the expression being cataloged. “Related manifestations” can be qualified with relationship designators, such as “Equivalent Manifestation,” which is defined as “a manifestation embodying the same expression of a work.” That is, the particular intellectual content is exactly the same, although the physical form is different. A microform copy of a printed book, then, would be described as a “reprint of” the printed book in an RDA catalog. The current draft does not have a separate designation for microform reproductions. The relationship designator will be formatted according to the rules for the notes area in ISBD, and RDA also maps the relationship designators to MARC 21 fields.

Descriptive Cataloging of Microfilms in RDA

Practically speaking, how will this affect the entry and description of microforms and other reproductions? Due to the inclusion of relationship designators, one no longer needs to enter one expression under the headings appropriate to another, as was required in some earlier catalog codes. Thus, under RDA, each reproduction will be entered according to the appropriate access points for title and author. The additional information about equivalent manifestations will allow catalog users to identify and select the expression appropriate to their needs.

In addition, because of the use of relationship designators, entering multiple versions of an expression on the same record will no longer be practicable. Each version will need its own record in order to express its relationship to other entries in the catalog.

The burden on catalogers, then, will be twofold. First, catalogers will need to provide appropriate entries for the item in hand. Second, they will need to provide appropriate entries for equivalent manifestations of the reproductions being cataloged. As a reproduction, the item will necessarily contain the information pertinent to the equivalent manifestation, so little additional research should be required.

In keeping with practical matters, RDA will continue the AACR2 policy of describing the reproduction rather than the original. However, RDA will redefine some of the aspects of descriptive cataloging of microforms from the methods prescribed by AACR2. The GMD will not be required per se. However, one optional element of description is media type. In the case of reproductions, “microform” is the media type that will apply to “media used to store reduced-size images not readable to the human eye,” while “unmediated” is “Media used to store content designed to be perceived directly through one or more of the human senses without the aid of an intermediating device,” such as facsimiles or reprints on paper.

RDA also includes a requirement to describe the carrier type, which “reflects the format of the storage medium and housing of a carrier in combination with the type of intermediation device required to view, play, run, etc., the content of a resource.” Examples include “microfiche,” “microfilm reel,” and “volume” of printed material. In terms of extent, RDA calls for the description of not only the number of units, but also subunits. For example, if the carrier type is microfiche, the extent will be described as “1 microfiche (120 frames).”

RDA offers catalogers the option of recording the dimensions of the carrier, whether it is the length and width of a microfiche or the gauge of a microfilm reel. Another optional element of the descriptive cataloging is base material (“the underlying physical material on which the content of a resource is stored”), which in the case of microfilm might be acetate, nitrate, or polyester film, along with applied material (“a physical or chemical substance applied to a base material to record the content of a resource”), that is, the emulsion applied to the film, whether diazo, silver halide, or vesicular. Other optional elements pertinent to reproductions include the following:

- Generation, which is the “relationship between an original microform carrier and the carrier of a reproduction made from the original,” such as “first generation,” “printing master,” or “service copy.”
- Polarity, which “indicates the relationship of the colours and tones in an image on film to the colours and tones of the object filmed (e.g., positive, negative).”
- Reduction ratio, which “indicates the size of a microimage in relation to the original from which it was produced.”

If this all seems like a lot more work than cataloging microforms under AACR2, one aspect of RDA is less onerous than AACR2. The requirement to consult the title frame as the chief source of information has been made optional; under RDA, information about microform or computer images may be taken from an eye-readable label attached to the resource.

One difficulty in cataloging a reproduction using RDA is the dispersal of applicable rules throughout the code. Readers who have followed the references to statements in the preceding section will have noted that a cataloger needs to consult up to six separate chapters and appendixes to be sure of applying the correct rules to a reproduction in hand. There is no rubric, such as that found in each chapter of
AACR2, to guide catalogers through general rules as they apply to particular formats.

Summary

The ill-defined status of reproductions—somewhere between a new edition and an extra copy—has given cataloging codifiers difficulty through the years. RDA proposes to provide definitions and descriptions of the relationships between different forms of a work, and the very useful relationship designator “equivalent manifestation” will serve many of the purposes that the GMD does under AACR2 while allowing for the entry and description of a reproduction as a unique item in the collection.

For the great purposes of a catalog—to assist a reader in finding the works of an author and in choosing an edition from them—RDA will provide a treasure trove of information about each of the items in a library. Whether such copious information is actually helpful to most library patrons is currently unknown. Entries for microform reproductions cataloged using RDA will also contain numerous data, such as the emulsion and dimensions of a microfiche, that will increase the amount of information in a catalog record and are not necessarily productive to achieving any of Cutter’s or Lubetzky’s objects of a catalog.

For catalogers, RDA will be a challenge in the positive sense of requiring intellectual effort and perhaps research to determine the relationships between expressions, and in the negative sense of being unwieldy in its organization. For catalog users, RDA’s effects need to be tested. The inclusion of bibliographic relationships may provide better insight into the library’s collection and therefore more fruitful searching, but many additional entries may provide too many results in a given search and simply frustrate the user in his or her attempt to find information.

References

10. American Library Association and (British) Library Association, Catalog Rules: Author and Title Entries (Boston: ALA Publishing Board, 1908).
11. Ibid., 45.


30. Ibid., 11.1C.

31. Ibid., 1.1C1, appendix D-4.

32. Lubetzky, Principles of Cataloging, 191.


34. Ibid., 1.11.

35. Ibid., 1.0, 1.11.


40. IFLA Study Group on the Functional Requirements for Bibliographic Records, Functional Requirements for Bibliographic Records.
Academic libraries supporting education and library science programs collect juvenile literature to support courses that teach students to evaluate and use books with children and teenagers. Graphic novels have not only become popular with teens but also are being frequently discussed in both the education and library literature. This paper discusses the literature on graphic novels for teens, explores the extent to which academic libraries supporting education and library science programs collect graphic novels for teens, and concludes that academic librarians responsible for juvenile collections should evaluate their graphic novel holdings and begin actively collecting graphic novels for teens.

Two decades ago, graphic novels were virtually unknown to librarians and educators, but during the last decade graphic novels exploded in popularity and began to appear regularly on recommended book lists. By 1994, the Library of Congress Authority File included graphic novels as an authorized subject heading. As librarians noticed that teenagers, traditionally a hard audience to reach, read graphic novels, the library literature began to feature lists of good graphic novels, tips on developing graphic novel collections, and anecdotes about teenagers’ insatiable demand for graphic novels. By 2005, several library journals had regular columns on graphic novels for young adult collections, and articles on using graphic novels in the classroom were appearing in education journals.

The current study began when one of the authors, a former high school librarian, noticed the excitement about graphic novels and reluctantly decided to read a few highly recommended titles to update her knowledge of young adult literature. None of the titles she wished to read were available in the university library’s juvenile collection even though the university library supported a large teacher education program with courses in both children’s and young adult literature. Juvenile literature courses are a staple of teacher education because future teachers must learn to select and use books with the students they will be teaching just as future librarians learn about selecting and marketing books to library users. The former high school librarian mentioned her inability to find the desired titles to a colleague who read graphic novels for pleasure; he was unsurprised because his personal experience was that graphic novels were more often found in stores than libraries.

If both the education and library literature discuss graphic novels for teens, academic libraries supporting education and library science programs should provide graphic novels for students in those programs to examine and evaluate. The authors decided to investigate whether academic libraries that support teacher education and library science programs have been collecting graphic novels for teens.
Literature Review

According to Rothschild, Will Eisner coined the term **graphic novel** in 1978 as a description of his book *Contract with God*, but people still disagree about just what a graphic novel is.4 Eisner, who had worked with comics for more than forty years, used graphic novel as a marketing term; he later explained that he wanted to distinguish his series of illustrated stories about a Jewish family in the Great Depression from comic books to improve his chances of finding a publisher.3 Eisner referred to graphic novels as “sequential art,” but Weiner called them “book-length comic books that are meant to be read as one story.”4 Goldsmith, who defines graphic novels as “storytelling through . . . sequential art,” distinguishes them from comic books by saying that graphic novels present a story with a distinct beginning and end, even when that story is told in multiple volumes, while comic books are serials with a limitless number of episodes.5 People sometimes confuse manga with graphic novels. The term manga refers to Japanese comic books, which may be fiction or nonfiction; translated manga and graphic novels are often displayed together in stores and libraries.6

No doubt some of the confusion stems from the connotations of **graphic** and **novel**. Although novel suggests fiction, the term **graphic novel** describes the format of the books, not their content; nonfiction graphic novels range from Jay Hosler’s *Clan Apis*, which describes bee behavior, to Marjane Satrapi’s *Persepolis*, an autobiographical account of growing up in Iran.7 While “graphic” suggests sexually explicit content in some contexts, graphic novels may be appropriate for any age. The research described in this paper focused on graphic novels for teenagers, but some graphic novels are appropriate for elementary school children, while others are definitely for adults.9 The graphic novel format has been growing in popularity and acceptance. In 2002, graphic novel sales in the United States were $110 million, but only two years later sales had almost doubled to $207 million.9 According to popular culture business news source ICv2.com, graphic novel sales rose to $395 million in 2008.10 Graphic novels have become so well established that Barr and Harbison list them as a distinct category of American book production in the *Bowker Annual*, with production increasing from 1,826 titles in 2004 to 7,717 in 2007.11 Graphic novels also have won literary awards; for example, Art Spiegelman’s *Maus* won a special Pulitzer in 1992, Gene Luan Yang’s *American Born Chinese* won the Michael L. Printz Award and was a National Book Award finalist, and Brian Selznick’s *The Invention of Hugo Cabret* won the Caldecott Medal.12 Figure 1 shows the cover of *American Born Chinese* and offers one example of the images found in graphic novels. By 2005, graphic novels were being regularly reviewed in journals frequently used by public and school librarians, including *Booklist, Library Journal, Publisher’s Weekly, and School Library Journal*.13 In 2007, the Young Adult Library Services Association (YALSA) introduced a new annual list of recommended books, *Great Graphic Novels for Teens* (www.ala.org/yalsa/ggn1).14

For several years, graphic novels have been a popular topic among librarians. YALSA sponsored the “Get Graphic @ your library” preconference at the 2002 American Library Association (ALA) Annual Conference. Goldsmith, who had expected to lead a small discussion on bibliographic control issues, later reported that she was amazed to find the room filled with roughly seventy-five librarians eager to discuss how to manage graphic novels.15 Many articles about developing collections have appeared, ranging from Welch’s self-described boastful one on the Cleveland Public Library’s constantly growing and heavily used collection to Behler’s serious article on how to start a collection with an annotated list of selection tools.16 A number of books about graphic novels also have been published; for example, Rothschild’s 1995 annotated bibliography and Pawuk’s 2007 entry in the Genreflecting series would be useful for reader’s advisory and retrospective collection development.17
reviewed the literature on graphic novels in school library media centers, discussing many of the articles that explain why graphic novels should be included in school libraries, while high school librarian Ching noted that graphic novels accounted for more than 17 percent of circulations even though only 1.5 percent of her library's collection was graphic novels.\textsuperscript{15} Haines used the graphic novel format to discuss the decisions involved in starting a graphic novel collection at the University of Michigan.\textsuperscript{19} Greyson discussed some of the intellectual freedom and censorship issues that librarians should consider when developing graphic novel collections for teens.\textsuperscript{20}

Graphic novels also have been discussed in the education literature during the last decade. Education professors Bucher and Manning discussed the types of graphic novels, defined the characteristics of quality graphic novels, and suggested some ways to use them in middle and high school classrooms.\textsuperscript{21} Schwarz, who taught high school before becoming an education faculty member, explained how graphic novels can be used to develop both text and visual literacy and suggested strategies for incorporating graphic novels into high school classes.\textsuperscript{22} Frey and Fisher described using graphic novels as writing prompts for English-language learners and native English speakers struggling with high school writing.\textsuperscript{23} Crawford and Christensen identified specific titles that can be used in high school social studies classrooms, while Cromer and Clark discussed the format's possibilities for helping students understand that historical events are subject to interpretation.\textsuperscript{24} High school teachers Cohen and Peery described a literature unit on women in Islam, which used several genres, including the first chapter of Marjane Satrapi's graphic novel \textit{Persepolis}, to explore Islamic culture and examine their biases.\textsuperscript{25} O'English, Matthews, and Lindsay acknowledged in an article on graphic novels in academic libraries that education students need to learn how to identify appropriate graphic novels for classroom use.\textsuperscript{26}

\textbf{Research Questions}

Although this research began from an interest in learning about the extent to which academic libraries collect graphic novels for teens, as Porta and Lancaster noted, the first problem in evaluating collections is the selection or creation of a bibliography that represents the types of books the library's users are likely to seek.\textsuperscript{27}

The authors selected the Great Graphic Novels for Teens (GGNT) list, prepared annually by the YALSA, as a representative list of quality books appropriate for academic libraries that collect graphic novels to support teacher education and library science programs. A committee of eleven school and public librarians select the titles. Criteria for inclusion on the list include quality, appeal to ages twelve to eighteen, publication during the sixteen months preceding the award, and wide availability in the United States. All types of graphic novels are eligible; the only limitation is that comic book compilations must "contain an overarching story arc."\textsuperscript{28}

The authors examined library holdings for two groups of institutions: those with programs accredited by the National Council for Accreditation of Teacher Education (NCATE) and those with programs accredited by the ALA. As of August 1, 2008, NCATE accredited 652 institutions and ALA accredited 49, with 27 having programs accredited by both groups. The authors determined library holdings by searching each title in OCLC WorldCat between August 5 and August 15, 2008. For institutions with multiple libraries, holdings for any education libraries or library science programs, as well as the main library, were considered. The authors also searched each institution on the Carnegie Foundation website and recorded the basic Carnegie classification.\textsuperscript{29}

The authors compiled the checklist from the 2007 and 2008 GGNT lists. Graphic novels published in series, with several volumes having an overall story arc, presented two challenges. First, the GGNT lists treated these titles inconsistently; in some cases they recognized a specific volume, while in others they recognized several volumes, or no volume was indicated. Second, WorldCat often contained multiple records for the titles because some libraries have

\begin{itemize}
  \item Do academic libraries that support library science programs collect graphic novels recommended for teenagers?
  \item Are graphic novel collections different in different regions of the United States?
  \item Are graphic novel collections different in libraries that have different size collections?
  \item Are graphic novel collections different in libraries in institutions with different Carnegie classifications?
\end{itemize}
treated them as a serial and others have treated each volume
as a monograph. When WorldCat includes both serial and
monograph records, the authors recorded all holding codes
for the serial and for each monographic volume included in
the GGNT lists. When the GGNT lists included multiple
volumes of a series, the authors treated them as a single
work in determining holdings. When no volume was indi-
cated for a series in the GGNT lists, the authors recorded
holding codes for the serial record and the monographic
record of the first volume. The 2007 GGNT list contained
sixty-seven titles, while the 2008 list contained forty-three
titles. With multiple volumes of a series treated as a single
work, the checklist contained a total of one hundred titles.

The authors compiled a data matrix showing which of
the one hundred GGNT titles were held by each of the 667
institutions, then calculated the number of GGNT titles
held by each institution. To determine the extent to which
libraries supporting teacher education and library science
programs collect graphic novels, the authors calculated the
number and percentage of NCATE– and ALA–accredited
institutions that held each possible number of GGNT
checklist titles, from no holdings to all one hundred titles
held. To determine whether a relationship exists between
collection size and GGNT holdings, they calculated GGNT
holdings per million volumes for each institution, then com-
puted the coefficient of determination (r²). To identify varia-
tions in GGNT holdings by geographic region and Carnegie
classification, they calculated the average number of GGNT
titles held by region and classification.

Table 1. Graphic Novel Holdings by Accreditation Type

<table>
<thead>
<tr>
<th>No. of Titles Held</th>
<th>All Institutions</th>
<th>ALA–Accredited</th>
<th>NCATE–Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>0</td>
<td>168</td>
<td>25</td>
<td>7</td>
</tr>
<tr>
<td>1</td>
<td>105</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>68</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>52</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>39</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>34</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>31</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>24</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>22</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>18</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>10–19</td>
<td>82</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>20–29</td>
<td>15</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>30–39</td>
<td>7</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>40–49</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>50–59</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>60–100</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>667</td>
<td>100</td>
<td>49</td>
</tr>
</tbody>
</table>

Note: Twenty-seven institutions supported both ALA– and NCATE–
accredited programs. Percentages may not total 100 because of rounding.

Table 2. Average Graphic Novels Held by Collection Size

<table>
<thead>
<tr>
<th>Collection Size (in vols.)</th>
<th>No. of Institutions</th>
<th>Average No. of Graphic Novels Held</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–999,999</td>
<td>514</td>
<td>3.4</td>
</tr>
<tr>
<td>1,000,000–1,999,999</td>
<td>70</td>
<td>7.5</td>
</tr>
<tr>
<td>2,000,000–2,999,999</td>
<td>33</td>
<td>9.4</td>
</tr>
<tr>
<td>3,000,000–3,999,999</td>
<td>22</td>
<td>12.5</td>
</tr>
<tr>
<td>4,000,000–4,999,999</td>
<td>6</td>
<td>8.5</td>
</tr>
<tr>
<td>5,000,000–5,999,999</td>
<td>6</td>
<td>17.7</td>
</tr>
<tr>
<td>6,000,000–6,999,999</td>
<td>2</td>
<td>22.5</td>
</tr>
<tr>
<td>7,000,000–7,999,999</td>
<td>1</td>
<td>2.0</td>
</tr>
<tr>
<td>8,000,000–8,999,999</td>
<td>4</td>
<td>19.3</td>
</tr>
<tr>
<td>9,000,000–9,999,999</td>
<td>1</td>
<td>0.0</td>
</tr>
<tr>
<td>10,000,000–10,999,999</td>
<td>1</td>
<td>37.0</td>
</tr>
<tr>
<td>Total</td>
<td>660</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Note: Collection size was not available for seven institutions.

Findings

The authors checked library holdings for 667 institutions;
these institutions held an average of 4.8 titles from the list
of 100 GGNT titles. The number of GGNT holdings ranged
from 0 to 58 titles held. Most institutions (84 percent) held
fewer than 10 titles from the checklist, and a quarter held
no GGNT titles. The University of Tennessee held the most
with 58 titles from the list. See table 1 for complete data on
holdings by type of institution.

GGNT holdings differed between ALA–accredited and
NCATE–accredited institutions. The 49 ALA–accredited
institutions held an average of 11.2 GGNT titles, while
the 645 NCATE–accredited institutions held an average of
4.6 GGNT titles; 27 institutions supported both ALA– and NCATE–accredited programs and are reported in both groups. A total of 166 (26 percent) of the NCATE–accredited institutions held no GGNT titles, but only 7 (14 percent) of the ALA–accredited institutions held none. While just 15.3 percent of the NCATE–accredited institutions held 10 or more GGNT titles, 36.7 percent of the ALA–accredited institutions held 10 or more.

The 27 institutions with both ALA– and NCATE–accredited programs held an average of 10.4 GGNT titles. The University of Tennessee, the only institution holding more than half the GGNT titles, has both NCATE–accredited and ALA–accredited programs, but 5 other institutions with programs accredited by both ALA and NCATE held none of the GGNT titles: Louisiana State University in Shreveport, North Carolina Central University, University of Missouri Columbia, University of Maryland College Park, and Universidad de Puerto Rico Rio Piedras Campus.

Examining the number of graphic novels per million volumes held revealed a mild ($r^2 = 0.32$) relationship between GGNT holdings and collection size. Larger collections tended to have more GGNTs; on average, the number of GGNTs held increased 2.4 for every additional million books in the collection. However, of the 24 institutions that held 20 or more GGNTs, 8 had total collection sizes of less than 1 million volumes, while the institution with the second largest collection held no GGNT titles (see table 2).

GGNT holdings also varied by the Carnegie classifications and geographical locations of the institutions. The average number of graphic novels held was 2 for institutions that primarily award bachelor's degrees, 4.63 for master's colleges and universities, and 8.1 for doctoral and research-oriented institutions, but there were some institutions with no GGNTs in any Carnegie classification except Special Focus/Arts (see table 3 for details on holdings by Carnegie classification). As table 4 shows, the average number of holdings per institution ranged from 3.8 in the southern United States to 6.9 in the western states. Every region had institutions with no GGNT holdings, ranging from almost 10 percent of institutions in the western states to one-third of institutions in the southern states. The authors noted that the University of Tennessee, which held the most GGNT titles, is a research-oriented institution in the southern region, making it an excellent example for teaching about why one should not generalize from a single data point.

Only 5 of the GGNT titles were not held by any of the

---

**Table 3. Graphic Novel Holdings by Carnegie Classification**

<table>
<thead>
<tr>
<th>Basic Carnegie Classification</th>
<th>No. of GGNTs Held</th>
<th>No. of Institutions</th>
<th>Average GGNTs per Institution</th>
<th>No. Holding Zero GGNTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baccalaureate Colleges—Arts &amp; Sciences</td>
<td>3</td>
<td>5</td>
<td>0.6</td>
<td>2</td>
</tr>
<tr>
<td>Baccalaureate Colleges—Diverse Fields</td>
<td>179</td>
<td>113</td>
<td>1.6</td>
<td>53</td>
</tr>
<tr>
<td>Baccalaureate/Associate's Colleges</td>
<td>188</td>
<td>65</td>
<td>2.9</td>
<td>17</td>
</tr>
<tr>
<td>Master's Colleges and Universities (smaller programs)</td>
<td>110</td>
<td>39</td>
<td>2.8</td>
<td>14</td>
</tr>
<tr>
<td>Master's Colleges and Universities (medium programs)</td>
<td>281</td>
<td>76</td>
<td>3.7</td>
<td>16</td>
</tr>
<tr>
<td>Master's Colleges and Universities (larger programs)</td>
<td>1,049</td>
<td>196</td>
<td>5.4</td>
<td>38</td>
</tr>
<tr>
<td>Doctoral/Research Universities</td>
<td>221</td>
<td>45</td>
<td>4.9</td>
<td>9</td>
</tr>
<tr>
<td>Research Universities (high research activity)</td>
<td>567</td>
<td>75</td>
<td>7.6</td>
<td>5</td>
</tr>
<tr>
<td>Research Universities (very high research activity)</td>
<td>597</td>
<td>51</td>
<td>11.7</td>
<td>13</td>
</tr>
<tr>
<td>Special Focus/Arts</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Special Focus/Faith</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>3199</td>
<td>667</td>
<td>4.8</td>
<td>168</td>
</tr>
</tbody>
</table>

**Table 4. Graphic Novel Holdings by U.S. Regions**

<table>
<thead>
<tr>
<th>Region</th>
<th>No. of Institutions</th>
<th>Avg. No. of Graphic Novels</th>
<th>No. of Institutions with No GGNTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwest</td>
<td>203</td>
<td>5.5</td>
<td>43</td>
</tr>
<tr>
<td>Northeast</td>
<td>104</td>
<td>4.9</td>
<td>20</td>
</tr>
<tr>
<td>South</td>
<td>289</td>
<td>3.8</td>
<td>98</td>
</tr>
<tr>
<td>West</td>
<td>71</td>
<td>6.9</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>667</td>
<td>4.8</td>
<td>168</td>
</tr>
</tbody>
</table>
libraries supporting NCATE– or ALA–accredited programs, while only 8 were held by at least 100 of those libraries. Analyzing collecting patterns for different types of graphic novels was beyond the scope of this paper, but the authors did note that 4 of the 5 titles held by none of the libraries in this study are part of multivolume series (see table 5 for a list of least and most frequently held titles).

### Implications for Collection Development

This study relied on the list-checking method to evaluate the extent of graphic novel collections in academic libraries, so the results obtained should be considered in relation to the list used: the combined 2007 and 2008 Great Graphic Novels for Teens. GGNT consisted of 100 titles published between 2005 and 2007 selected by experienced school and public young adult librarians for quality, appeal, and suitability for a teenage audience. Since the list used is both evaluative and focused on recent titles, one would expect a library that is actively collecting graphic novels to support teacher education and library programs to hold some of the titles. The finding that 14 percent of ALA–accredited and 26 percent of NCATE–accredited programs held no GGNT titles indicates that many of these libraries were not actively collecting graphic novels for teenagers. As the literature shows, graphic novels have not only proven popular with teenagers but also have been used in schools to teach literature, history, social awareness, and writing; academic library juvenile collections should provide examples so faculty, future teachers, and future librarians who read about graphic novels in their professional literature can find examples in their libraries.

The number or proportion of recommended titles held that indicates a strong collection is another factor to consider when using list checking to evaluate collections. The number of GGNT titles held ranged from 0 to 58, with ALA–accredited institutions holding an average of 11.2 percent of GGNT titles, while NCATE–accredited institutions held an average of 4.6 percent of GGNT titles. No generally accepted standard exists for the proportion of titles on a list that constitutes a strong collection. Since the list used contains only a small proportion of the graphic novels published during those years, some institutions likely hold other graphic novels that support their teacher education and library science programs. The authors would suggest that in the case of graphic novels, which are a relatively new and fast-growing genre, libraries that are collecting higher proportions of GGNT titles are more likely to be able to support assignments such as requiring all students enrolled in a juvenile or young adult literature class to read and evaluate a graphic novel.

As tables 2, 3, and 4 show, library science students, students at doctoral and research-oriented institutions, and students in the western United States are more likely to find graphic novels suitable for teenagers in their library collections than are teacher education students, students at primarily undergraduate institutions, and students in the southern United States. Only 14 percent of libraries supporting ALA–accredited programs did not hold a single title from the 2007 or 2008 GGNT lists; 27 doctoral and research-oriented institutions held none of the GGNT titles; and, although average holdings of GGNT titles was lowest in the southern United States, the institution with the highest number of GGNT holdings was in that region, and some institutions in every region held none of the GGNT titles. These comparisons indicate that academic libraries that support teacher education and library science programs need to evaluate their collecting practices to determine whether they are providing adequate support for students.

<table>
<thead>
<tr>
<th>Table 5. Least Frequently and Most Frequently Held Titles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Great Graphic Novels for Teens, 2007 and 2008</strong></td>
</tr>
<tr>
<td><strong>No. of Holding Libraries</strong></td>
</tr>
<tr>
<td>Urasawa, Naoki. <em>Herr Dr. Tenna: Naoki Urasawa’s</em>, volume 1 of <em>Monster</em>. Viz Media, 2006.</td>
</tr>
<tr>
<td>Lat. <em>Kampung Boy</em>. Roaring Brook Pr./ First Second, 2006.</td>
</tr>
</tbody>
</table>
to learn about graphic novels suitable for teenage students and library users.

Although the scope of this research did not include reviews or awards given to the GGNT titles, the authors did briefly investigate reviews and awards for one title. The most commonly held title from this study was *The Wall: Growing Up Behind the Iron Curtain* by Peter Sis. *The Wall* received many accolades; it was recognized by the ALA as a Caldecott Honor Book, a Notable Children's Book, and a Best Book for Young Adults, but it was held by only 55 percent of the 667 libraries supporting NCATE– or ALA–accredited programs. The authors were surprised that so many libraries supporting teacher education and library science programs did not hold such a celebrated title, especially given that it appears to be a good choice to support a school social studies curriculum. One possibility for this omission is that libraries that rely on approval plans or slips may not have authorized the graphic novel format. Another possibility is that, since not all publishers distribute through academic book vendors, libraries may need to acquire graphic novels from a different source than the primary vendor. Perhaps some academic libraries are not collecting juvenile materials? If they are not, one has to wonder where their students are obtaining resources for the children's and young adult literature classes commonly included in education and library science programs.

Conclusions and Areas for Further Research

Graphic novels have become increasingly popular during the last decade and have garnered awards ranging from the Caldecott Medal to the Pulitzer Prize. The school library literature includes many articles on teenagers’ attraction to graphic novels, and the education literature has articles on using them to develop language skills and teach social studies, but the findings from this research indicate that many academic libraries supporting teacher education or library science programs are not collecting graphic novels suitable for teenagers.

Without access to graphic novels, future teachers and librarians cannot learn to evaluate them, assess their appropriateness for instruction, and use them to promote reading to teenagers. Since graphic novels are being discussed both as popular reading materials and valuable instructional materials for teenagers, libraries that support programs for future teachers or public and school librarians should evaluate their collections to determine whether they are providing materials that these students need. Given the growing evidence that graphic novels are both popular with teens and useful for classroom instruction, librarians responsible for academic library juvenile collections should consider actively collecting graphic novels for teens.

These findings also suggest several avenues of future research on graphic novels in collections supporting education and library science programs. To what extent are academic librarians who select juvenile materials aware of the library and education literature on graphic novels? Do juvenile material selectors avoid graphic novels because education and library science faculty express no interest or express negative attitudes? What are the selectors' own attitudes toward graphic novels? Do libraries that are collecting graphic novels collect them because of faculty demand, student interest, awareness of their growing popularity, or some combination of factors? Why does the extent of graphic novel holdings suitable for teens vary by Carnegie Classification, collection size, program accreditation, and geographic region? Research on vendors used by academic libraries and the extent to which those vendors distribute graphic novels and juvenile materials might also be enlightening.

Since the authors noted that 4 of the 5 titles not held by any library in this study are part of multivolume series, an investigation into the types of graphic novels collected might also be revealing. Do selectors consciously choose not to collect graphic novels in series? Are series graphic novels issued by publishers that do not distribute through academic book vendors? Does the subject matter of series graphic novels differ from that of single titles? Graphic novels may be fiction or nonfiction and address many subjects; are graphic novels with subjects related to school curricula more likely to be collected than those with subjects unrelated to school curricula?

The finding that only 55 percent of the libraries hold a graphic novel that was recognized as a Caldecott Honor Book suggests perhaps that some academic libraries may lack not only graphic novels for teens but also other critically acclaimed juvenile literature, suggesting that research on the extent and funding of juvenile collections in academic libraries is also needed. Academic libraries that support teacher education and library science programs should evaluate the extent to which their collections enable students to learn about both critically acclaimed juvenile literature and emerging trends such as graphic novels.

References


6. Rothschild, Graphic Novels.


15. Goldsmith, Graphic Novels Now.


26. O’English, Matthews, and Lindsay, “Graphic Novels in Academic Libraries.”


User Tags versus Subject Headings

Can User-Supplied Data Improve Subject Access to Library Collections?

By Peter J. Rolla

Some members of the library community, including the Library of Congress Working Group on the Future of Bibliographic Control, have suggested that libraries should open up their catalogs to allow users to add descriptive tags to the bibliographic data in catalog records. The website LibraryThing currently permits its members to add such user tags to its records for books and therefore provides a useful resource to contrast with library bibliographic records. A comparison between the LibraryThing tags for a group of books and the library-supplied subject headings for the same books shows that users and catalogers approach these descriptors very differently. Because of these differences, user tags can enhance subject access to library materials, but they cannot entirely replace controlled vocabularies such as the Library of Congress subject headings.

The advent of interactive websites, part of what is known as the Web 2.0 or second-generation Web development and design, has called into question the ways in which libraries provide access to their collections. Today’s library users, who are increasingly comfortable with searching on the Internet, have certain expectations about how to search for information and how it will be displayed. These expectations, however, do not match how information is contained, discovered, and presented in traditional library catalogs. A recent study, for example, found that students using the University of Oklahoma’s online public access catalog (OPAC) performed keyword searches fourteen times more often than subject searches.1 In addition to a reliance on keyword searching, today’s users increasingly use interactive websites that allow them to both upload their own data or content and to connect with other users of the site—the Web 2.0 phenomenon. Facebook, MySpace, and YouTube are several currently prominent examples of websites that thrive on user-supplied content, but even a now venerable site like Amazon has always allowed its customers to post reviews and comments. This paper will look closely at LibraryThing (www.librarything.com), a website that could be considered a Web 2.0 version of a union catalog.

Many of today’s most popular websites allow users to “tag” specific content; that is, users can supply their own keywords to describe websites, images, or other content. User-supplied tags of this type potentially offer a way for libraries to improve subject access to the materials in their collections. The Library of Congress (LC) Working Group on the Future of Bibliographic Control, convened to study the present state of cataloging in libraries and to make recommendations...
for the future, recommended that libraries allow users to add tags and other user-supplied data to their catalogs.2 The LC Working Group noted that allowing user-supplied data in online catalogs will make the catalogs more relevant to users accustomed to the Internet and also will improve access to the materials in library collections. Most libraries currently provide subject access to their materials through Library of Congress subject headings (LCSH) supplied by catalogers. Professional catalogers typically perform this work, since LCSH are governed by a complicated set of rules that requires training and specialized knowledge to follow. Providing subject access to collections, therefore, is an expensive part of cataloging work, since it is time-consuming and usually performed by professional staff. In addition, in an environment where users are accustomed to keyword searches on the Internet, many librarians question the value of the complicated pre-coordinated subject strings that make up an LCSH. The Working Group observed that “the creation of pre-coordinated subject strings, combining the topical, geographical, chronological, and genre aspects of a work into a single subject heading, can be a time-consuming and complex process. . . . While pre-coordination can offer users an implicit indication of the relationship between subject terms, the carefully crafted subject strings created by catalogers are often misunderstood or incomprehensible to users and reference librarians.”3 In recommendation 4.1.2, the Working Group explicitly advises integrating user-contributed data into library catalogs.

Many technological and policy issues are involved in opening online catalogs to user-supplied data, but the present study will address even more fundamental questions: How do user tags differ from the subject headings assigned by catalogers? Will user tags provide better subject access than the cataloger-supplied subject headings? Can user tags provide insight into how readers think about the subjects of books and therefore suggest ways in which library-supplied subject access can be improved? An exploratory and initial comparison of tags and subject headings will lay the groundwork for further research.

This paper will use the term tags to refer to the descriptors, which may be single words or phrases, assigned to a website or other resource, typically by the users of the site. Folksonomy refers to the collective grouping of tags assigned by an aggregate of users of a particular website. Finally, the term tag cloud refers to the display of tags using visual cues, like size, color, and proximity to indicate the importance of terms or their relations to each other.

**Literature Review**

During the past several years, articles that discuss user tags and folksonomies have begun appearing in library and information science journals. The appearance and popularity of Web 2.0 sites like Delicious (http://delicious.com) and Flickr (www.flickr.com), which allow users to add tags to the sites’ content, have inspired researchers to take a look at these tags and to explore how libraries might incorporate user tags into their Web-based services, including, but not limited to, the online public catalog.

Most of the authors who have studied tags and folksonomies generally feel that user tagging would enhance librarians’ websites and catalogs. Spiteri, for example, believes that allowing user tags on a library site can supplement controlled vocabularies.4 User tags would also permit patrons to personalize the library’s website, thereby bolstering a spirit of belonging and also fostering online communities organized around the library. Fichter agrees that tags, since they are popular and fun to work with, can help users feel more connected to the library’s website.5 In her opinion, tags have a low barrier to participation because users do not need to learn complicated thesauri or controlled vocabularies. Once users breach this low barrier and see the ease and personal benefits of tagging, the social aspect then encourages more tagging. Fichter calls user tags “nimble and flexible,” a sentiment echoed by Spiteri.6 Spiteri notes that folksonomies can more easily accommodate new terms and concepts than heavily controlled vocabularies like LCSH.7 Fichter and Spiteri also point out that controlled vocabularies often do not use natural language, and therefore tags more closely represent how readers think and speak about a subject.

Although many of the authors who have studied tags and folksonomies generally display a positive attitude toward them, some recognize the inherent weaknesses of and problems with user tags. Golder and Huberman, for example, point out that tags, unlike controlled vocabularies, do not deal with problems created by polysemy (one word having multiple meanings), synonymy (more than one word with the same or similar meanings), and basic-level variation.8 The latter term refers to the continuum of meaning, from general to specific, that potentially exists for any given concept. To explain the concept of basic-level variation, Golder and Huberman give the example of a cheetah, which could be assigned various subject terms from most specific to most general: a cheetah, a cat, or an animal. In a completely uncontrolled, user-driven folksonomy, no rules exist to govern the level of specificity when assigning terms. Likewise, user tags do nothing to solve the problems of polysemny and synonymy, whereas one of the main purposes of controlled vocabularies is to disambiguate polysemous words and choose preferred terms from groups of synonyms. Golder and Huberman also bring up a key feature of user tags, one that is readily apparent in the tags on LibraryThing. Although tagging does allow the use of terms that are helpful to the community as a whole (i.e., terms that would allow other users to discover a certain website or book), it also...
permits the inclusion of terms that are personal in nature and only helpful to the person adding the term.

Other researchers who have studied user tags have discovered features of folksonomies that, while not inherently positive or negative, should be considered if libraries allow users to add tags to libraries’ websites or catalogs. Munk and Mørk performed a statistical study of more than seventy thousand keyword tags on Delicious and found that the keywords assigned to a specific resource (websites, in the case of Delicious) do form a distinct pattern. According to their study, only a very few keywords dominate the group of tags assigned to a resource. In their words, “These [few] keywords are primarily the so-called cognitive basic categories and essentially consist of a number of very broad and general content categories that are common to all people.” Users tend to pick terms representing the broader end of the basic-level variation continuum. Golder and Huberman also found this to be true. Munk and Mørk do find that the dominance of a few broad keywords potentially minimizes the usefulness of tags, since broad and general keywords do not enhance surprise and discovery. Another noteworthy feature of user tags that several researchers noted involves not the words that make up the tags themselves but rather who inputs tags. Munk and Mørk, for example, when looking at Delicious, found that many of the popular keywords were related to computers and information technology (IT). These IT–related tags also had a level of specificity that did not quite conform to the pattern mentioned above, in which general, broad concepts dominated the popular user tags. The prevalence of computer and IT–related tags indicates that a large portion of Delicious’s users work in or have a strong interest in computer-related fields. The fact that a disproportionate number of keywords within a particular folksonomy involve a specific discipline suggests a potential problem for libraries who want to allow user tags. If a library serves a more general population overall, it does need to be aware that user tags may come predominantly from specific populations or communities.

The research on user tags to date has looked primarily at tags that describe Web–based or digital resources. Delicious, for example, which was one of the first popular websites to allow tagging, has been the subject of several of the studies discussed here. Some researchers have also looked at tags on Flickr, a photo-sharing site that allows its users to assign tags to the images they upload. The present study, however, will consider the tags on LibraryThing, a website that allows users to assign tags to books. This study will compare the user tags for a set of books on LibraryThing with the LCSH assigned to the same set of books. Wetterstrom conducted similar research, comparing user tags to LCSH. Wetterstrom asked a group of twenty volunteers to come up with tags for a collection of books and compared these tags to LCSH assigned to the same materials. The present study, which uses LibraryThing tags as a basis of comparison, complements Wetterstrom’s work, since the tags on LibraryThing were created by a significantly larger group of people than Wetterstrom’s. Wetterstrom’s specific conclusions about user tags and LCSH will be discussed later, since they differ from the present study’s findings.

LibraryThing

Although library catalogs increasingly contain metadata about digital objects, websites, and other nonprint materials, libraries originally created their catalogs to describe and provide access to books and other printed matter. These materials still make up a large portion of what is represented in library catalogs. LibraryThing, then, more so than other sites that allow tagging, provides a useful comparison to the traditional library catalog and also can provide an example of what bibliographic records might look like if library catalogs are opened to user input. Like a library catalog, LibraryThing contains a comprehensive list of books, but, like other Web 2.0 sites, it allows users to interact with the content and supply their own data. Users of LibraryThing can create their own virtual libraries, rate books, and interact with other readers on the site. Also, and most importantly for this study, users can supply their own tags for their books. The integrated library systems (ILS) that currently run most library catalogs do not yet allow users to contribute data to bibliographic records. Some libraries already have begun to experiment with ways to incorporate tags and other user-supplied content into catalogs. The new generation of OPACs like Endeca, AquaBrowser, and Encore also offer tag clouds of various types. User tags, however, are still rare in a library environment, making this an excellent time to study whether they will help provide better subject access to library collections.

LibraryThing and Tagging

A useful first step is looking at LibraryThing’s explanation of user tags and its instructions on how the site’s members can apply them. In response to the question “What are tags?” the following answer appears on LibraryThing: “The short answer: Tags are a simple way to categorize books according to how you think of them, not how some official librarian does.” Two aspects of this definition are worth noting: the openness of tags—users can categorize their books any way that is useful to them—and the fact that LibraryThing is placing itself in opposition to “official librarians.” The site’s “long answer” continues these two themes:

Once you have a hundred books or so, you need some way to organize them. Library subject
classifications, including that of the Library of Congress, are one solution. For most personal libraries, however, they aren’t much use. “Tags,” informal, personal markers used on blogs and sites like Flickr and Del.icio.us, provide a better model.

Here are two examples from my (Tim’s) experience:

1. The LC catalogs Bean’s *Aegean Turkey*, a guide to the archaeological sites of Turkey’s western coast, under the single subject, “Ionia.” For me, however, the book is about turkey [*sic*] and archaeology, tags I’ve applied to dozens of books, including Bean’s other archaeological guides.

2. The LC thinks Bernadette Brooten’s *Love between women: early Christian responses to female homoeroticism* is about six different things, including the mouthful “Bible. N.T. Romans I, 18–32—Criticism, interpretation, etc.—History—Early church, ca. 30–600.” I get by with the tags early church, and homosexuality. To these I added the tag divination. Although the book doesn’t say much about divination, its comments on the topic were actually the reason I picked it up.

Tags can also mark “favorites” or “books to read.” I’ve used the tag ben’s to mark books I should return to my friend Ben. (That I included them in my catalog is, however, a bad sign for that!)

These instructions clearly exhort the site’s members to add tags for whatever reason they find useful, even for very personal instances like “books borrowed from Ben” and “books at the summer house.” In addition, both sets of instructions place user tags squarely in competition with LCSH and make the claim that tags are better. The present study aims to explore that claim.

**Research Method**

Since this study is meant as an initial foray into this arena and not the definitive answer on tagging and subject access, it initially examined a small number of books. A sampling was required that was large enough to provide enough data to analyze but also small enough that the language used in individual tags and subject headings could be studied in detail. Having a sampling of books on a wide variety of subjects and dealing with a variety of geographic regions also was desirable. To accomplish these goals, three searches were performed in LibraryThing using its Tagmash feature (essentially a keyword search of the user tag field): one for the “nonfiction,” one for “Africa” and “history,” and finally one for “Mexico” and “immigration.” The first fifteen titles returned on each of these searches, representing the titles in which the search terms were mostly frequently used, were chosen for the study. All of the titles chosen were in English. Choosing titles from these three searches accomplished the goal of having a sample that represented a variety of subject areas, and the author felt that the overall sample of forty-five books was an appropriate number for a small-scale and initial study. Once the list of books from LibraryThing was complete, these same titles were searched in OCLC’s WorldCat, and then the user tags and LCSH for each title were compared. A list of the titles studied appears in the appendix.

**Findings and Discussion**

**Numerical Comparison**

Perhaps the most dramatic difference between the application of user tags and Library-assigned LCSH is that the website’s users assign many more tags to books than library catalogers assign subject headings (see figure 1). Each of the forty-five books under consideration had more user tags in LibraryThing than subject headings in the catalog record by a large margin. The LibraryThing records for these titles had an average of 42.78 tags, while the library records had an average of 3.80 subject headings per record. In LibraryThing records, an average of approximately 7 tags
on each record consisted of personal terms; personal terms are explored in depth in the next section. Even disregarding these personal terms, there was an average of 35.16 user tags per record, still much higher than the average of 3.80 LCSH per record.

LibraryThing allows tags of more than one word, and LCSH are made up of strings of pre-coordinated terms, so both tags and subject headings can be broken down into individual keywords. Thus a tag cloud in LibraryThing might include the tags “British empire” and “British history,” which would count as two of the 42.78 average tags but would also count as three keywords, since the word “British” is repeated. Similarly, an LCSH subject string like “Mexico—Emigration and immigration—Social aspects” has five keywords in it, ignoring the conjunction. If keywords (not full tags or subject headings as seen in figure 1) are counted, then LibraryThing still averages more per record: an average of 45.42 per record (37.38, if the personal terms are not included) versus an average of 9.99 keywords represented by LCSH.

**Personal Tags**

Another aspect of LibraryThing tags is immediately noticeable. The user tags in these records contain many personal or individual terms, just as Golder and Huberman remarked in their study. Tonkin and colleagues found that personal terms, which they call “time, task, or project labels,” form 16 percent of unique tags on Delicious. LibraryThing’s instructions for tagging books encourage the use of personal terms. In addition to the examples of “Ben’s books” and “summer house” found in the website’s instructions, terms like “book group,” “book club,” “read,” “unread,” “to read,” “own,” “read in 2007,” and “not in library” frequently appear in the records studied. Several tags of this type appear in each of the forty-five records studied here. These terms may have strong personal value to the users who input them but, from a library’s perspective, they are not useful descriptor terms and do not provide any subject access to the books. LibraryThing’s tag cloud display, like most such displays, does give weight to more popular terms by increasing the size of words in the display according to how many users have assigned those tags to a work, so that visually, at least, these personal terms do not predominate in the tag cloud display. If libraries permit user tags in their catalogs, they will have to decide whether to allow and how to handle these individual and perhaps unhelpful tags. Conversely, certain personal tags (i.e., those that do not directly relate to the contents of the book but to the user’s experience with the book) could have practical value in a library catalog environment. For example, if students or professors come across books that are useful for a particular course, they could tag the book’s record with the course number to help other students find the same book.

**Comparing User Tags and Subject Headings**

In every LibraryThing record, the user tags contained at least one concept not covered by the subject headings in the catalog record. In many cases, these concepts represented ideas that a cataloger would not have brought out, deeming them irrelevant to the overall content of the book or somehow not consistent with the typical practice of subject analysis for books. Comparing LibraryThing’s instructions on assigning tags with the LCs instructions to catalogers on how to assign subject headings illuminates some of the differences between the use of tags and subject headings. In section H180 of the Subject Cataloging Manuals, the LC instructs catalogers to “assign to the work being cataloged one or more subject headings that best summarize the overall contents of the work and provide access to its most important topics.” Compare this to the longer instructions given by LibraryThing, in which a reader assigned the tag “divination” to a work not because the book was primarily about that topic but because its comments on divination interested him. The fact that the users of LibraryThing assign tags to books representing concepts not brought out by LCSH does indicate that catalogers, by following the LC guidelines, may omit concepts that are important to users.

For each of the forty-five titles in this sample, the LibraryThing tags contained subject terms or concepts that the subject headings did not express. That figure does not
include the personal or individual terms, but words and phrases describing the subject of the book. Conversely, the librarian-assigned subject headings in twenty-five records (55.6 percent) brought out concepts and topics that the user tags did not. Finally, the subject headings and user tags assigned to thirty-five records (75.6 percent) brought out the same subject or concept, although often expressed in different terms. Thus, approximately three-quarters of the time, catalogers and readers agree on at least part of what each book is about, even if the tags and subject headings express the content of the book differently. The specific ways in which the user tags and subject headings for these titles differ is instructive, and these differences do suggest that adding user tags to library catalogs could help improve subject access to collections.

First, user tags almost always include very general and broad subject terms. In each of the forty-five records under consideration, LibraryThing’s users added general or broader terms for the concepts discussed. Books about Africa show this clearly. Several of the books under consideration discuss the genocide in Rwanda, and at least one deals with the civil war in the Congo. The catalogers, following the instructions for assigning LCSH, assigned headings relevant to the specific events and countries. For example, the subject heading string “Rwanda—History—Civil War, 1990–1993” appears in a bibliographic record. The LibraryThing records for books on Rwanda and the Congo, however, all contained tags such as “Africa,” “African history,” and other similar broader terms. Catalogers did not—and as a rule do not—include broader geographic terms. The books on Mexican immigrants show the same pattern. Catalogers used headings that included the term “Mexican American,” but LibraryThing’s users added terms like “Hispanic” and “Latino,” which represent the broader population of which Mexican Americans are a part. Other examples from LibraryThing include the tags “science,” “modern history,” or “world history.” Catalogers would only use a term like “science” for a book that is an introductory textbook or that discusses the entire discipline of science. Similarly, a book with a cataloger-supplied subject heading “World history” would have to discuss the entire history of the world. Many LibraryThing users, however, following the pattern discussed by Munk and Mørk as well as Golder and Huberman, assign these broader subject terms to works that discuss a specific discipline in science or a specific time period of history.

Conversely, LibraryThing users often add terms that are more specific in nature than the subject headings supplied by catalogers. Eleven of the forty-five records (24.4 percent) examined in LibraryThing contained narrower or more specific terms than the librarian-supplied subject headings. These specific terms frequently described books that were general in nature or subject matter, such as comprehensive histories of Africa. For these books, the library catalogers typically followed standard practice and only assigned a broad heading appropriate to the overall content of the book, such as “Africa—History.” LibraryThing’s users, however, added terms for more specific concepts, such as “slavery,” “colonialism,” and “exploration.” The records for Stephen J. Hawking’s popular *A Brief History*
of Time also show this pattern. The record in the library catalog contains a single and very general subject heading, “Cosmology.” LibraryThing users, however, supplied several more specific tags, such as “physics,” “astrophysics,” “big bang,” and “black holes.”

One specific example shows all of these differences between LibraryThing tags and library-supplied subject headings. The WorldCat bibliographic record (see figure 3) for the book A Savage War of Peace: Algeria, 1954–1962 has one LCSH, “Algeria—History—Revolution, 1954–1962.” In LibraryThing, following the expected pattern, users have assigned many more tags to the book (see figure 4). Some tags express the same concept as the LCSH but in different words, like “Algerian history,” “Algerian Revolution,” and “Algerian War.” In addition, many LibraryThing users have added tags that describe much broader concepts or that refer to broader geographic areas, like “20th Century,” “Africa,” “Middle East,” “North Africa,” “Military history,” and “war.” Other LibraryThing tags also bring out more specific concepts that may not relate to the content of the book as a whole but that some users found important, such as “colonialism,” “guerrilla,” “counterinsurgency,” and “torture.” Interestingly, in this LibraryThing record, more users assigned the tags “France” and “French history” than the tags “Algeria” and “Algerian history,” whereas the subject heading that relates to the particular war described in this book does not even mention France.

Wetterstrom’s results in the study comparing user-assigned tags and LCSH differ from results reported here. As mentioned above, Wetterstrom asked twenty people to contribute tags to a small collection of books. Wetterstrom’s study group assigned significantly fewer tags than found in this study’s LibraryThing records. Wetterstrom found an average of 24.4 user tags compared to the average of 42.78 in the LibraryThing sample. Wetterstrom’s results also differ from those seen in the present comparison of tags and LCSH. In his study, 75.47 percent of tags did not match LCSH, fewer matches than seen here. Wetterstrom’s study also found a preponderance of broader and narrower terms in the tags (14.61 percent and 19.62 percent of overall tags, respectively), although he only counted the overall number of these broader and narrower terms and did not specify if terms of these types were assigned to every book. In Wetterstrom’s study, narrower terms appeared more frequently than broader terms, which is the opposite of the results found in this study. The difference in findings may be because of two reasons. First, Wetterstrom’s study group was consciously creating tags for a research project and not for describing books in their own personal collections and which they wanted to be able to retrieve. In other words, the LibraryThing users had a personal investment in the creation of the tags and were not part of a research study group. Second, Wetterstrom’s study group (twenty individuals) was much smaller than the universe of people contributing tags to LibraryThing, who could view tags added by others and who, in total, created significantly more tags.

**Library of Congress Subject Headings**

Examining the LCSH assigned to the forty-five books is instructive. Twenty-five of the WorldCat records (55.6 percent) contained LCSH expressing concepts that LibraryThing’s tags did not. These differences fall into several categories. First, LCSH in these records often refer to classes of persons, while the user tags generally only indicate abstract concepts. For example, books about Mexican immigrants have LCSH such as “immigrants” and “Mexican Americans,” nouns that refer to the groups of people. The user tags in LibraryThing for these same books, on the other hand, are “immigration” or “Mexican American,” “Chicano,” and “Latino,” that is, either the abstract concept or adjectives rather than nouns.

LCSH contains a collection of phrases known as “free-floating subdivisions.” Catalogers can append these free-floating subdivisions, with certain restrictions, to topical headings that already exist in LCSH and thereby highlight special aspects of the topical heading. Nothing like these free-floating subdivisions appears in LibraryThing’s user tags, and some records for the forty-five books considered here demonstrate the usefulness of these subheadings. Free-floating subdivisions are standardized phrases and are often not expressed in natural language. A common example of a free-floating subdivision is the term “Social conditions,” which catalogers can add to the names of places or to a phrase denoting a class of persons. The LC’s *Subject Cataloging Manual* defines this term in the following manner: “Use the subdivision for works discussing the social history or sociology of a place, ethnic group, or class of persons, including such subtopics of sociology as social problems, stability, change, interaction, adjustment, structure, social institutions, etc.” The term “social conditions” does not appear as a user tag, and one can see LibraryThing’s users struggling to come up with a good way to convey what the subdivision “Social conditions” expresses. Tags like “social problems,” “social history,” and “sociology” appear, but are not usually the bold-faced, more popular terms, so LibraryThing users do not seem to have a clear consensus on how to express this concept.

The tags in LibraryThing also fail to show any consensus with the expression of historical time periods, whereas in LCSH chronological divisions are established for all countries and regions. These chronological subdivisions vary from country to country and, ideally, conform to the important historical divisions within each country’s history. The library bibliographic record for A Savage War of Peace, as shown above, has the subject heading “Algeria—History—Revolution, 1954–1962.” The LibraryThing records for this book had very few chronological tags, and the few tags in
the record relating to time periods (“1950s,” “1960s,” “20th century,” “pre–1983,” and “post–war”) lacked specificity and consensus. The chronological subdivisions in the LCSH thesaurus do require time and effort on the part of catalogers to establish as well as to apply correctly. As the LibraryThing tags show, users do not necessarily think about historical events in neat chronological packages. The chronological subdivisions, however, like the free-floating subdivisions, do serve the purpose of bringing together materials about a given subject or, in this case, a given time period.

The LCSH system, like all thesauri and taxonomies, controls synonyms and also has an elaborate set of rules for how new subject headings are established. These rules include such basic grammatical guidelines as which types of nouns should be in the plural in subject headings and which in the singular. A subject heading that appeared frequently in this study, for example, is “Mexican Americans,” for which the LCSH thesaurus lists two nonpreferred terms, “Chicanos” and “Hispanos.” Within this system, catalogers know which term to add to a bibliographic record, and users, once they know which is the preferred term, theoretically can find all the materials under that topic. User tags in LibraryThing, however, like the tags and folksonomies studied by the authors cited above, neither control synonyms nor follow specific grammatical rules. As a result, various terms that mean more or less the same thing but are expressed differently (“Mexico,” “Mexican,” “México Americano,” “Chicano,” and “Latino”) appear in the same LibraryThing record. This situation occurred in each of the forty-five sample records. In each record several different subject terms, or terms in different grammatical forms, expressed the same concept. Other examples include “current affairs” and “current events”; “diet,” “eating,” and “nutrition”; “Jewish,” “Jews,” and “Judaism”; “economics” and “economy”; “mountain climbing” and “mountaineering”; “decision-making” and “decisions”; and “thinking” and “thought.” Both noun and adjectival forms were used for geographic descriptors, for example, “Africa” and “African”; “Mexico” and “Mexican”; “Iran” and “Iranian.” Librarians who defend LCSH, including Mann at the LC, base their defense on the ability of subject headings to control synonyms and specify the correct grammatical form to use, which helps to collocate similar materials.

With all the variations possible in LibraryThing, users searching for a specific topic cannot be sure that they have found all the relevant books because they cannot necessarily predict the terms or grammatical forms that other readers have used. LibraryThing has recently added a new feature, in which users can make two tags equivalent to each other, to try to control synonyms. When that happens, only the more popular tag displays. This interesting innovation can help reduce the redundancies in the tag cloud; however, combining tags only works when they are identical in meaning and use. Tags like “economics” and “econo- my,” for example, cannot be combined. Controlled vocabularies like LCSH, in addition to choosing preferred terms from synonyms, can also provide scope notes on how to choose between two similar but distinct terms.

Controlled vocabularies, then, help catalogers choose the appropriate subject headings to use. LibraryThing’s users, however, have an advantage over catalogers when they assign tags—they have probably read the book before tagging it on the website. Catalogers do not have the time to read an entire book before assigning subject headings and, therefore, base their subject analysis of books on words in the title, publishers’ blurbs, the preface of the book, and chapter titles. Catalogers can also be constrained by the fact that they are trying to assign subject headings that will be meaningful for a large group of unknown and potentially diverse end users, and they may not know what subjects in a book will be most important to all potential readers. In LibraryThing, the cataloger and the end user are the same.

User tags, as Spiteri has pointed out, also can adapt better and more quickly to changing terminologies and to new fields of study than LCSH or any controlled vocabulary can. The LC has to approve new terms added to LCSH, and catalogers have to do a certain amount of research before proposing a new topical heading. Because of this, new headings take time to appear in LCSH. In addition, LCSH are formulated to avoid polemical topics and maintain an objective stance toward the material, which often has the reverse effect of indicating a subtle bias. In the example of the book A Savage War of Peace, the only LCSH in the bibliographic record is “Algeria—History—Revolution, 1954–1962.” This subject heading does not explicitly mention France and its involvement in the war, while conversely more of LibraryThing’s tags for this book cited France than Algeria. The library-supplied subject heading, then, subtly erases the anticolonial nature of the war. The political implications and biases of the language used in LCSH have long interested researchers and have also inspired projects such as Berman’s alternative subject headings. The present study is more concerned, however, with the issue of subject access to materials. A solitary subject heading like “Algeria—History—Revolution, 1954–1962” potentially hinders access to the book for readers because, according to LibraryThing tags, this book interests many users because of what it says about French history. Users browsing or searching for subjects in the library catalog for books about French military history will not come across A Savage War of Peace.

The subject headings in library catalog records also can suffer from what can only be called bad cataloging. Several of the books considered here have very inadequate subject headings in the library record. The book Fast Food Nation by Eric Schlosser provides an especially egregious example. Because this is a widely read and widely discussed book, many people, even if they have not read it, know that it is an indictment of the fast food industry that discusses the environmental, economic, and nutritional aspects of fast food
restaurants. In the library catalog, though, this book’s record only has one subject heading: “Cookery, American.” Even leaving aside the unnatural language in this subject heading (one example of the LC’s reluctance to change headings once established), this subject heading does not accurately describe the contents of the book. It makes the book sound like a cookbook and not a social and political look at a specific part of the American food industry.

In LibraryThing, since more than one person can add tags to a record, the overall tag cloud for the book can correct a single person’s errors or questionable judgment. This does point to a potential disadvantage. If only a few users have added tags, then the aggregate of tags assigned may not provide the most accurate or helpful subject analysis of the book. A few of the records under consideration here had tags supplied by only six or seven readers, and in those instances the tag clouds were not comprehensive and the tags did not provide a good description of the contents of the books. The better and more complete records in LibraryThing usually belong to more popular books, which does have certain implications for user tags in library catalogs. A large portion of the collections of university and research libraries consists of rare and little-known materials, and these are often the most useful and valuable items these libraries own. Libraries cannot rely on their users to supply the subject access for rare materials if no users, or even just a very few, have read the books. Also, the university community consists of professors and students doing higher-level research who often will need to find every book on a certain topic. To serve these scholars, libraries need to provide consistent and comprehensive subject access, and also need to use some means of controlled vocabulary that will bring together all similar materials.

Conclusion

A comparison of LibraryThing’s user tags and LCSH suggests that while user tags can enhance subject access to library collections, they cannot replace the valuable functions of a controlled vocabulary like LCSH. Also, one must consider that different libraries serve different populations, and user tags will inherently be more appropriate for different libraries and types of users. Public libraries, for example, would probably benefit more readily from user tags, since their collections are often primarily popular materials. Popular books in LibraryThing tend to have tags supplied by more users, and therefore the records for these books tend to have more accurate and comprehensive tags.

If libraries do allow users to contribute tags to their catalogs, they will need to figure out how to deal with some of the inherent problems encountered in folksonomies, namely, the abundance of potentially unhelpful personal terms and the lack of control for synonyms and different grammatical forms of words. One possibility for controlling synonyms would be to run folksonomies against automatic indexing software, but libraries will need to study when and where such an action could take place within a library’s workflow and whether the results would justify taking this extra step. Many of the next-generation OPACs offer tag cloud displays that can improve the usefulness of user tags by presenting them in a way that highlights relevant terms and indicates relationships between terms.

Looking closely at the user tags in LibraryThing can also provide information on how users think about books and their subjects, and this can help improve library-supplied subject analysis, including ways in which LCSH can be improved. When library catalogs consisted of typed index cards, a conservative attitude toward changing subject headings made sense because all the cards had to be removed from the card catalog drawer and retyped. In a digital environment, however, updating bibliographic records is significantly easier, so subject headings using archaic language, such as “Cookery,” do not need to be retained simply because that is how they were established. If the unnatural language in subject headings impedes access, then the headings should be updated.

The comparison of LibraryThing user tags with LCSH also shows that library catalogs do not take full advantage of all the elements already present in the subject headings system, since catalogs generally only provide an alphabetical display of subject headings. This study has shown that users assign tags that range from general to specific, whereas the subject headings assigned to bibliographic records do not cover the entire spectrum. LCSH, like most thesauri, has a hierarchical structure, with broader, narrower, and related terms indicated for most headings. This hierarchy, however, is not readily visible to most users. Libraries should consider redesigning the public display of catalogs to allow users better access to the different levels of specificity within the LC thesaurus. Some researchers have proposed enhancements to the public displays of subject headings, such as a faceted display, that would take greater advantage of the syntactic structure of LCSH.

The LC Working Group, in addition to recommending that libraries allow user tags into their catalogs, also suggests improving LCSH by allowing for these hierarchical or faceted displays.

User tags by themselves cannot provide the best subject access to the materials in library collections, but they can help point libraries in the right direction. An examination of user tags also points out the limitations of how libraries currently provide subject access to their collections. The next step, both in practical terms and as further areas of research, will be further experimentation with the inclusion of user tags into library bibliographic records and OPAC displays. LibraryThing allows libraries to display its tag clouds as part of their bibliographic records, although this display is static and does not permit users to add tags to records within the
library's catalog. Going further, the next generation of Web interfaces for catalogs is including tag clouds as part of its display and discovery options. As libraries adopt these new catalog interfaces, they will need to explore the catalogs' new discovery tools, including user tags, to see if subject access to materials is improved. The comparison of LibraryThing's user tags with LCSH shows that both types of subject access have strengths and weaknesses and suggests that libraries can best serve their users by combining different types of subject access. A combination of both types, that is, user tags to enhance discovery and controlled vocabularies to collocate like materials, may well provide the best subject access to the materials in library collections.

The present study, because it focused on a small set of books and because the books chosen were more popular than academic in nature, suggests further research could be undertaken. User tags in LibraryThing for books from special collections and from specialized academic disciplines could be studied to see if folksonomies can provide useful access for less popular materials. Tags for works of fiction, including genre fiction, are also of interest because currently LCSH are not consistently assigned to belles lettres works. Comparing tagging to cataloging in a multilingual environment or to a set of materials not in English could also be useful because controlled vocabularies like LCSH are very good at bringing together materials in different languages. Also, LibraryThing tags could be compared to a study like Wetterstrom's to see if users assign tags differently in a more controlled context. In addition, researchers could study the next generation of OPACs, which incorporate tagging and tag cloud displays, to see if these innovations help enhance discovery.

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Appendix. List of Books Studied


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Notes on Operations

Name Authority Control in Local Digitization Projects and the Eastern North Carolina Postcard Collection

By Patricia M. Dragon

Authority control is a vitally important but frequently overlooked aspect of metadata creation for local digitization projects. The addition of digital projects metadata to the traditional cataloging environment creates a number of challenges for authority control, challenges arising in turn from the nature of the materials being digitized, choices made during the project, and the tools used for the project. By examining the authority control applied to named entities in the Eastern North Carolina Postcard Collection at East Carolina University, this paper describes these challenges in some detail, and also describes endeavors to overcome them.

Many libraries around the world are developing digitized collections emphasizing their regionally significant special collections holdings. By compiling these digitized collections, libraries are promoting access to the historical record of the local community while acting upon a belief that these resources inspire interest beyond the immediate community. An integral component of these digitized collections is the metadata that are applied to them, making the items in the collection findable through user searching. Authority control adds value to metadata by ensuring that the same heading is used to refer to all instances of a named entity, thus collocating related material.

The case studied in this paper is the Eastern North Carolina Postcard Collection, particularly the authority control of named entities and places used as subject headings. The case study illustrates how applying authority control to named entities in digital projects metadata creates several challenges for catalogers. These challenges include the complexity of work arising from the form and subject matter of the materials digitized, the volume of work created by a large number of new authorized headings per bibliographic description, and the inefficiency perpetuated by the lack of actual authority data in the repository database. The author proposes that, while some choices made by individual institutions may differ, the challenges encountered in this case study can be generalized to the many similar projects being undertaken in libraries throughout the world. Grappling with these challenges is essential to the achievement of goals with widespread appeal, such as the integration of digitized collections more fully into library collections and the improved usability of digital repositories through quality metadata. The paper commences with a literature review followed by a description of the Eastern North Carolina Postcard Collection. It then discusses in detail each of the challenges encountered when applying authority control to named entities in the subject analysis of this project as well as efforts to overcome these challenges. The paper concludes with a discussion of points needing future research and of the importance of meeting these challenges for the sake of future digitization projects.
Literature Review

Traditional application of authority control in the metadata context has not been explored extensively. Some even question whether the two concepts are compatible. Gorman disparages metadata standards such as Dublin Core (DC) because of their alleged lack of authority control. He ignores the fact that many metadata standards, including DC in its qualified form, make possible, even if they do not require, the explicit use of controlled vocabularies for subject analysis. Granted, applying these qualifications robs DC of much of its simplicity, one of its major advantages. Vellucci points out that many metadata schemes, including DC, offer the opportunity to apply authority control, but whether a particular project takes advantage of that opportunity is the result of local policy decisions. She argues that when information specialists and catalogers create metadata for high-quality and long-lasting documents in a library context, “authority controlled data content should be the norm.” This position is supported by Baca, who argues for the importance of controlled vocabularies for the subject analysis of cultural heritage material.

Baca indicates that many institutions are finding that the best practice is to create a local thesaurus rather than using a single, established one, but she does not dwell on that decision process. Instead, she outlines the benefits to users of a controlled vocabulary, regardless of its origin, including navigation helpers such as broader and narrower terms and cross references. While both Vellucci and Baca argue for the importance of authority control in the metadata context, neither details the process of applying authority control to digitized materials, nor do they indicate the specific authority control challenges involved in working with these materials.

The literature describing digital projects often focuses on resource description. When authority control is mentioned, it is usually to say simply that names are entered according to the Library of Congress Name Authority File (LCNAF) or constructed according to Anglo-American Cataloguing Rules, 2nd ed. (AACR2). Details about this process and experiences related to these types of materials are rarely given. An exception is Graham and Ross’s article “Metadata and Authority Control in the Civil Rights in Mississippi Digital Archive,” in which the authors explain the role of catalogers in creating new authorized subject headings and give philosophical underpinnings for having catalogers create authority records for personal and corporate names used as subjects: “The catalogers feel a sense of duty to establish headings of extramural reach in the Library of Congress (LC) authority file despite the increasing demands this activity requires.” This sense of duty, they write, arises out of a desire to “maintain global interoperability of the catalog” by using the same subject thesaurus for all library materials. The authors, however, do not go into detail regarding these increasing demands.

The challenges involved in subject analysis for images of named entities and its concomitant authority control have been well noted. Cuccurullo offers an intense look at the difficulties inherent in applying the guidelines in the LC Subject Cataloging Manual to images of the built world, including the confusion regarding which set of rules to follow—those for the subject file or those for the name file—and the implications for the user when the cataloger follows one or the other set of rules. She suggests several possibilities to alleviate the problem, including combining the authority files or adjusting or clarifying the rules. While she suggests that a quick resolution to the problem is needed because of the implications for digital projects metadata, she does not specifically address the challenge in the digital projects metadata context.

Cataloging Cultural Objects (CCO), a manual of AACR2 application to works of art, is primarily concerned with dividing descriptive information into a linked hierarchical construct wherein some elements would apply to the object (or building) itself, some to the image of the object, and some to the digital reproduction of the image. The introduction, however, contains a very useful examination of some of the challenges involved in the subject analysis of images, including the question of specificity and a rationale for making specificity decisions. The present paper addresses this issue below. Once again, however, specific challenges involved in establishing named entities as subjects are not directly addressed by CCO.

Because authority control is difficult, it is expensive. Tillett summarizes: “Since the 1970s people have claimed that authority work is the most expensive part of cataloging, and we still seek ways to automate and simplify the work to reduce costs.” She introduces the concept of the virtual international authority file, a means of sharing locally created authority data internationally without the unconstructive need to decide upon a single authorized heading for all. Borbinha interprets this need to share authority data created according to different standards in the context of digital libraries with the blunt statement, “Deal with heterogeneity.” Another practical approach to the challenges of authority control is offered by Younger, who argues for the selective application of authority control. She refers to the concept as “utility” and explains that because of the time and cost involved, as well as because of the online catalog’s superior access in comparison to the card catalog, authority control efforts in the new century should be directed to those areas in which it has the most potential effect on user retrieval in the online environment. The concept of utility is one heavily invoked in the case study below.
While the aforementioned articles and books are largely practical in their approach, a philosophical document, Functional Requirements for Authority Data: A Conceptual Model (FRAD) serves as the basis for the application of authority control to the metadata environment.16 Enumerating what authority data are, what place its creation has in the metadata assignment process, and what its functions are, FRAD is divorced from any specific schema or community of practice.17 In the present case study, FRAD reveals problems with the implementation of authority control and suggests a path for future development.

Description of the Project

The Eastern North Carolina Postcard Collection currently consists of 404 picture postcards of Eastern North Carolina scenes. It was selected from several manuscript collections held by East Carolina University (ECU) Joyner Library. The postcards have been scanned by the library’s Digital Collections Unit and ingested into a locally built digital object repository separate from the library catalog. This repository contains digitized versions of materials in the library’s collections, and the postcard collection makes up only a small component of it. Materials enter the repository from a variety of work streams, including locally created digital exhibits and collections, grant projects, and user-initiated scanning requests. The public interface to the Joyner Library Digital Collections repository (http://digital.lib.ecu.edu) is searchable and browseable using a variety of access points, including subject headings. Metadata Encoding and Transmission Standard (METS) records, containing both Metadata Object Description Schema (MODS) and DC data, have been created for each image and uploaded to the repository to support this access. Users coming to the repository can choose to limit their searches to the postcard collection, or they may search the postcards along with the entire contents of the repository. Figure 1 is an example of a postcard with its associated metadata.

Figure 1. Postcard with Its Associated Metadata

St. Peter’s Episcopal Church, Washington, N.C.

| Title | St. Peter’s Episcopal Church, Washington, N.C. |
| Creator | Hartley, Erm M. |
| Description | Postcard of St. Peter’s Episcopal Church, Washington, N.C. Addressed on verso to Mr. Martin Douglass, Chapel Hill, N.C. Date from postmark. |
| Date | 1905 |
| Publisher(s) of Original | N.E. Fayer & Stationary Co., Ayer, Mass. |
| Identifier | 794.4 b. 163 |
| Type | still image |
| Medium | postcards |
| Physical Description | 90mm x 140mm |
| Language | English |
| Collection(s) | Eastern North Carolina Postcard Collection Archives |
| Finding Aid | Fayer, William E. Collection |
| Other Items in This Folder in This Box in This Collection | Rights | Rights to some materials may still be retained by the publisher and/or author (or their descendants) in accordance with U.S. copyright law. |

Note also that although both sides of the postcard were scanned and are available for viewing, the front and back of the cards were treated as a unit for descriptive purposes. Because the library chose to view the postcards primarily as photographic resources rather than as items of correspondence, the photographer is considered the creator in the metadata, and the focus for subject analysis is the image portion, or the front of the card. Most postcards in the collection depict named structures of some sort, such as houses, streets, buildings, bridges, cemeteries, and so on. For the subject vocabulary, the Library of Congress Subject Headings (LCSH) and LCNAF were chosen. The reasons for this choice are discussed below. The final subject heading (shown in figure 1) is not an LCSH, but rather a hierarchical geographic coverage element that could potentially be used to locate items on a map of Eastern North Carolina. These “subject headings” are not the concern of this paper.

Some of the metadata were entered by Digital Initiatives staff as a part of the scanning process, including identifier, type, medium, physical description, language, collection, finding aid, other items, and rights. Several of these elements are standard across
the collection, while others are dependent on handling the physical postcard (e.g., physical description) and noting its place in an archival folder or box (e.g., other items). Metadata entered by Digital Collections staff were later enriched by other descriptive information, including title, description, date, subjects, publisher of original, and creator, if there was one, by the author, a staff member in the cataloging department. Cataloging staff worked without the physical item in hand, and based descriptions on the digital image.

Involving the cataloging staff in this way seemed to be natural given the expertise catalogers possess in descriptive metadata creation. The project also fits the current work trends within the cataloging department, which is spending an increasing percentage of effort on local and special collections materials. This is a result of spending less time on widely owned materials for which it is more efficient and cost effective to buy cataloging services. The regional and special collections emphases of the digitization program and the cataloging department naturally encourage these groups to work together. Part of Joyner Library’s in-house cataloging effort for traditional materials goes toward authority control. Though Joyner Library and Collections does not participate in the Name Authority Cooperative (NACO) or the Subject Authority Cooperative (SACO), catalogers create local authority records for named entities and places from Eastern North Carolina in the library catalog. While this commitment to authority work for local named entities was also applied to the postcard project in the repository database, it could only be partially applied because the repository does not include authority records per se. Rather than creating entire authority records, therefore, the cataloger merely assigned subject headings, which often involved creating new headings for named entities. The remainder of this paper will focus on the experience of applying authority control to named entities and places used as subject headings in the Eastern North Carolina Postcard Collection, and on the challenges faced by the cataloger performing this work.

Challenges

Complexities in the Subject Analysis of Images

Images are popular to digitize because they are attractive to users with varying levels of sophistication, and they may be manipulated in more ways in their digital form than in their print form, for instance by zooming in. They frequently belong to “hidden” collections of primary sources that were not easily accessible before digitization, and they give users valuable views of specific structures and places unencumbered by someone else’s interpretation, as users would find in a book. In the words of Coyle and Hillman, “these collections [of primary sources] . . . are not the product of the scholarly enterprise, but instead the precursor.” To the cataloger performing subject analysis, however, these images can be much more challenging than monographs or other library materials, precisely because of their form. Free from the interpretation a book gives its topic, an image often lacks the context that tells the cataloger what is important about it, how users may wish to search for it, or under what circumstances they may wish to find it. The problem of ambiguity is made more acute by the fact that, for an image, the cataloger is responsible for providing the only words by which this item may be recalled, which would not be the case for a full-text searchable digitized text. While this problem is somewhat mitigated in the case of postcards, which typically include a caption that provides some information about the focal point of the image, postcards remain much closer to contextless images than to interpretive monographs.

This lack of context gives rise to the question of how specific (and how general) the subject analysis should be. For instance, for a postcard of St. Peter’s Episcopal Church in Washington, N.C., should the cataloger assign a subject heading for the specific name of the church? LC practice is to assign subject headings at a level of specificity matching the content of the work being cataloged. But would exclusively assigning a name heading impede access for those interested in Washington churches but not knowing the name of this particular church? Should more generic headings be assigned, such as “Anglican church buildings—North Carolina—Washington,” even though such headings are normally assigned to works that discuss such churches collectively? What about users interested in Washington architecture? Should the heading “Buildings—North Carolina—Washington” also be assigned? In that case, where should one stop? On the question of specificity, Cataloging Cultural Objects (CCO) advises, “The greater the level of specificity . . . in catalog records, the more valuable the records will be for researchers.”

In keeping with this advice, two headings were assigned: a specific name heading and a heading for a generic category of entity: “Anglican church buildings—North Carolina—Washington.” This practice of dual (specific and generic) heading assignment is an attempt to make up for the lack of a syntetic structure of broader and narrower terms contained within LC subject authority records. That this deviation from LC practice creates a more useful repository is again supported by CCO: “If it is not possible to link to hierarchical authorities, it may be necessary for catalogers to enter both specific and generic terms in each record to allow access, which may differ from traditional bibliographic practice.”

It could be argued that it is unnecessary to create specific subject headings for named entities such as St.
Peter's Church, since keyword access to the titles, or captions, of the postcards should render the desired entity findable. Many similar projects rely on such keyword access and do not include subject analysis at all, or assign only generic subject headings. It is true that many users may discover the images in Joyner Library’s repository through an external search engine such as Google, which operates exclusively on a keyword basis. The value of specific subject headings, however, is increased by their linking potential. If the metadata contains a specific heading, once users view an image of St. Peter’s Episcopal Church within the repository, they are able to click on that heading to find all the pictures of that particular church in the repository, and not of any other church. If future links are to be made between the digital repository and the library catalog, the data will be consistent, and the user could find books about the church and pictures of the church in one search. Taylor emphasizes this superiority of access points in establishing explicit relationships between materials: “When relationships are merely described (e.g., mentioned in a note [or a title]) . . . the user is left with chance as the means for discerning related information packages that may be useful. Access points can make relationships explicit.” Any institution committing the time and effort to digitization projects such as this one should be concerned with providing quality metadata to make the resulting collection navigable by users. Minimization of the necessity of relying on chance for information discovery is the mark of quality metadata.

Compliances in Name Authority Work for Subjects of Local Images

While some complexities arise in determining the correct level of specificity to which to adhere in subject analysis, the real challenge comes with the name authority work involved in assigning specific headings for a project such as this one. These images are about a particular location, such as a building, street, beach, or waterfall. The local nature of these named entities means that few of them will be found already established in the LC authority files. This requires that the cataloger either determine the correct form of the heading according to complex rules, or else forgo assigning a specific heading for a named entity. Thus the very quality that makes these images valuable to the user—their unique representation of named entities not a focus of published works—increases their complexity from the perspective of the cataloger.

Choosing the correct form of name for these entities is made more complicated because many of the headings for buildings, structures, and various types of corporate bodies fall into an acknowledged group of ambiguous entities. According to the guidelines contained in the LC Subject Cataloging Manual instruction sheet H405, some of these named entities (e.g., Banks, Cemeteries, Churches) are established in the LCNAF following name heading conventions and others (e.g., Bridges, Courthouses, Dwellings) in the Subject Authority File (LCSAF) following subject heading conventions. Following one set of conventions rather than the other could result in a different heading. It has been argued that “the separation of controlled names and terms into a Name Authority File and a Subject Authority File is artificial” because it adds no value for the user and is ignored by many library systems. The policy of separation nevertheless remains codified, and debating the pros and cons of these rules is beyond the scope of this paper.

The process of creating headings was sometimes relatively straightforward. For example, the postcard with the caption “A. C. Monk Tobacco Company, Farmville, North Carolina” (figure 2) required the creation of a corporate name heading with no representation in the LCNAF. AACR2 directs the cataloger to enter a corporate body under the name by which it is commonly identified in items issued by the body, or lacking those, from reference sources. A search of OCLC's WorldCat revealed no items issued by the body, necessitating consultation of reference sources. Following the NACO practice of using the item itself as a reference source when no conflict is found in WorldCat, the cataloger created the name as found on the item itself: A. C. Monk Tobacco Company.

Sometimes significantly more work was necessary to determine the correct form of the name. Take, for example, the three postcards entitled St. Peter’s Church, Washington, N.C.; St. Peter’s Protestant Episcopal Church, Washington, N.C.; and St. Peter’s Episcopal Church, Washington, N.C. No heading exists in the LCNAF for this church, so the cataloger needed to make a decision about the correct form of the name to use. A search of WorldCat revealed three books issued by the church, with varying usage: Saint Peters Parish, St. Peter’s Episcopal Church, and St. Peter’s Church, the last with a variant usage on the cover, St. Peter’s Episcopal Church. Using the predominant form of the name found in works issued by the body, St. Peter’s Episcopal Church (Washington, N.C.) was chosen.

Frequently, variant names are used for the same structure on different postcards in the collection. For example, a particular pavilion in Wrightsville Beach called variously Lumina, Greater Lumina, or Lumina Dancing Pavilion, is the subject of a number of postcards (figure 3). No appropriate heading exists in the authority file. According to the Subject Cataloging Manual H405, pavilions are established in the LCSAF following instruction sheet H 1334, “Buildings and Other Structures.” This instruction sheet states, “Enter the heading for
a particular building or structure directly under its own name, in uninverted form, and qualify it by the name of the geographic entity in which the structure is located.26 But what is this structure’s “own name?” The conflict of the various names used was settled by a book about Wrightsville Beach that contained a chapter on Lumina.27 There the author states that Lumina was an entertainment center that opened in Wrightsville Beach in 1905. A new center containing a movie theater opened in 1909 and was called Greater Lumina.28 Following the instruction in the Subject Cataloging Manual H1334, the cataloger created the heading “Lumina (Pavilion: Wrightsville Beach, N.C.).”

The preceding examples give a sense of the complexity involved in assigning specific subject headings for named entities in a project such as this one. It could be argued that the library brought this challenge on itself by the choice of LCSH and LCNAF as the controlled vocabulary for the repository, saddling itself with requirements to follow complex rules of questionable applicability outside the context of NACO contribution. The choice of LCSH and LCNAF for items in the repository was made prior to undertaking the Eastern North Carolina Postcard Collection project and had to do with the fact that many of the first materials in the repository were digitized books. Perpetuating this choice came from a desire to make all metadata added to the repository compatible with each other in terms of controlled vocabulary. The choice of LCSH and LCNAF also makes the repository more compatible with the library catalog, increasing consistency for users and furthering the library’s goal to integrate digital collections more fully with the rest of the library collections. The use of such a widely used standard also increases potential for interoperability not only within the library’s collections but with other collections from other institutions, and makes possible the future sharing of authority data should such a step be deemed viable or useful. In fact, it is probable that, apart from a simplification of the rules for heading construction, the only solution to the challenge of complexity is found in sharing as much data as possible. If more institutions continue to undertake the digitization of material with a local focus, it is reasonable to expect a proliferation of geographic-based NACO and SACO funnels mirroring the proliferation of locally focused digitization projects.
Volume of Authority Work Created

The large number of named entities pictured in this collection presents an additional challenge. As noted above, the local nature of the named entities indicates that few of them will be found already established in the authority file. Cuccurullo warns of the impending flood of names to be established as a result of cataloging digitized collections at the image level: “The number of such headings [for buildings and structures] is likely to increase exponentially as libraries focus attention on cataloging of digital collections.”29 The Eastern North Carolina Postcard Collection of 404 postcards depicts approximately 429 named entities, with some entities appearing on more than one postcard and some single postcards depicting more than one entity. Of these, 113 were associated with authority records in the LC authority file; the remaining 316 were not.

Most institutions have only a limited amount of personnel time dedicated to doing subject analysis and authority work for digital projects. As noted previously, the work for the Eastern North Carolina Postcard Collection was limited to a portion of one staff member’s time. When time and personnel are limited, it is prudent to invoke the law of diminishing returns on that time investment, a concept Younger calls “utility” in authority control.30 By “utility,” Younger means that authority control efforts should be directed to those areas in which it has the most potential positive effect on user retrieval. “Categories,” she writes, “can be defined for names requiring more or less control.”31 Though Younger’s article is concerned mainly with personal names of authors, her thesis is applicable to named entities as subjects as well.

Despite generally espousing the principle of specificity, cataloging staff did not create all the specific headings possible for the postcard project. In an attempt to meet the challenge of high volume, a selection process was applied to pare down the number of specific headings created. This selection process was informed by Younger’s concept of utility. Those images not receiving a specific subject heading received only a generic category subject heading. The decision about how to treat subject categories was guided mainly by considerations of the effect on user retrieval. User retrieval is greatly improved by specific headings when that heading adds unique information to the subject file, when there are many similar names to keep organized, or when there are many potential links to other materials about the entity through specific subject analysis. When these conditions were met, the cataloger was more likely to create specific headings for that category of entity. Other considerations included practical concerns regarding the prohibitive amount of research involved in specific heading creation. By the end of the project, 126 unique new specific headings for proper named entities had been created. The table of generic category treatment (see appendix) shows the breakdown of how generic subject categories were treated.

To make a decision about how to treat each subject category, it was necessary to create a checklist of three questions. The first question on the checklist was whether assigning the specific names in the subject category added unique information to the subject file. A generic term plus geographic qualifier has a high likelihood of resulting in exactly the same words as a generic heading with geographic subdivision. For instance, specific headings were created for hotels because most of the hotels had nongeneric names (e.g., Hotel Kennon adds the unique word “Kennon” to the subject file). Courthouses, which have generic names like Pitt County Court House (figure 4), did not receive specific headings, rather only generic heading with the nearly identical words “Courthouses—North Carolina—Pitt County.” Assigning exclusively generic headings only for courthouses actually results in more consistency because
then “courthouse” is always entered as a single compound word in the subject file rather than as it appears on the postcard, where it is sometimes “courthouse” and sometimes “court house.” If it was judged that there was a positive effect for user searching through unique and more consistent information in the subject file, the cataloger was more likely to assign specific headings to a given subject category.

The second question on the checklist was whether this category was a focus of the postcard collection and of the larger library collection. That is, are there a significant number of images in this category, perhaps several images of each entity in the category, to keep organized? If so, this was a point in favor of assigning specific subject headings in that category. For example, the largest category of named entities is street names. Thirty-seven distinct named streets are depicted in the postcards, several streets featuring in as many as eleven different postcards. Specific street name headings were assigned because of the benefit perceived in linking directly to other images of the same street. Having only one image of a pier, however, the collection does not gain much in navigability by a specific name heading in this subject category. If the library owned other materials by or about the entities in that category, it was also a point in favor of specific heading assignment. For instance, because the library collection includes many histories of local churches, it was useful to assign specific headings for churches to integrate the postcard collection with the existing library collection.

Finally, were the names in this subject category actual proper names? Some names are clearly proper names (for example, St. Peter's Episcopal Church), but what about Old Tar River Bridge? Is that the name of a bridge, or simply a description of a bridge that goes over the Tar River? The “name” is capitalized on the postcard, but that does not necessarily signify a proper name. Subject Cataloging Manual H1334 instructs catalogers, “Do not formulate a heading for a named structure that consists solely of a generic term with a geographic qualifier unless there is evidence that this is also the proper name of the structure.” Being certain it was a proper name would probably require prohibitively extensive research into city records, and even then it may be difficult to be positive. CCO warns, “Catalogers should never use a specific term unless they have the research, documentation, or expertise to support that use.” This last item on the checklist shows how, in addition to considerations of effect on user retrieval, decisions about the treatment of particular subject categories must be guided by practical concerns regarding the amount of research involved in specific heading creation as well as a desire to avoid introducing misleading data into the repository.

When in doubt, the cataloger tended not to create specific headings because, should circumstances change (for instance, if the library should digitize a whole collection of images of university buildings), specific subject analysis could then be done on categories initially left generic. A vital complement to Younger's concept of utility is her assertion that cataloging of monographs should be viewed as more of a dynamic, iterative process than it traditionally has been. “Authority control,” Younger writes, “requires continual evaluation of how a name fits into the larger context of the catalog.” This iterative process is perhaps more compatible with digital repository metadata creation, in which standards are more flexible and policies more subject to continual revision than they have been in traditional monograph cataloging.

As an attempt to meet the challenge of the high volume of authority work associated with this digital project, a checklist of considerations was used to select various subject categories for which to create specific name subject headings. Nevertheless, the volume of authority work produced by such a relatively small project was significant. The exact approach would probably not be scalable to larger projects, at least not without substantial increases in committed personnel. While the use made of the checklist may differ from project to project, the process of separating the images into generic subject categories and the checklist itself remain valuable tools in meeting the challenge of the high ratio of new headings to image descriptions that is typical for these types of projects.

Inefficiency Caused by Lack of Authority Data in the Repository Database

Though many new headings were created for named entities, no actual authority records were created because there was no structure to accommodate them in the repository database. While initially a time saver, this omission ultimately results in inefficiencies that constitute an additional challenge for the cataloger. A lack of structure for authority data is not atypical for metadata projects, where most of the emphasis is on resource description. In the non—MARC metadata context, “doing authority control” is usually used to mean merely “using controlled vocabulary.” However, this is akin to doing authority work without the authority record. In traditional bibliographic databases with authority control, the data in an authority record includes not only the authorized form of the heading but also cross-references to variants of the name—in the case of corporate bodies to earlier and later names and in the case of headings established under subject conventions—to broader or narrower terms. It also includes additional information about the entity represented by the heading, useful when determining
the appropriateness of a heading to a given bibliographic record, and references to the sources of information used when establishing the heading. Lacking authority records, the library’s repository lacks these data.

According to FRAD, the conceptual model developed to accompany the Functional Requirements for Bibliographic Records (FRBR), authority data have five functions, some aiding the cataloger and some the user. Authority data should

1. document decisions for the cataloger;
2. serve as a reference tool for the cataloger creating more descriptions;
3. control the form of access points so that a user may find all relevant items under a certain access point;
4. support access to the bibliographic file by the user, e.g., through cross-references and additional information; and
5. link bibliographic and authority records for automatic bibliographic file maintenance.36

In the metadata implementation of the Eastern North Carolina Postcard Collection, only the third function listed above is fully executed. Though some workarounds partially fulfill the other four functions and mitigate the effect of the lack of an authority file, inefficiencies remain that could be eliminated by the introduction of an actual authority file. These inefficiencies are a major source of challenges for the user as well as the cataloger.

One example of a workaround addresses the functions of documenting cataloging decisions and serving as a reference tool for future cataloging. In the absence of MARC authority field 670, records in the repository include an additional note field that cites outside sources consulted in creating the description and access points for each image. For instance, in the case of the image of the Lumina Pavilion, this note field contains a citation to the history of Wrightsville Beach consulted to confirm the name of the pavilion. This note is only used for citations of outside reference sources, not simply to justify the form of the name, as would be the case for MARC field 670. Though not visible to users, these data, which could be useful to a future cataloger adding records to the repository, will not be lost. Tying this information to the image description rather than to the named entity itself, as it would be in an authority record, is not ideal. The future cataloger would have to locate that particular image and its description to use the information in the note unless the note were repeated in each description with an access point for that named entity.

FRAD states that authority data also support access to the bibliographic file by the user through cross-references and additional information. The lack of these data in digital repositories is a clear disadvantage to the user, who may not know the exact name of an entity for which to search. A portion of this problem has been addressed by adding headings for generic subject categories in the subject analysis for each image, hopefully helping more users find what they are looking for. The inability to navigate through cross-reference structures and broader and narrower trees is a detriment, as is the inability to view additional identifying information to help the user determine whether a named entity is actually the intent of their search. These shortcomings, however, are frequently found even in databases with authority files if they are implemented imperfectly.

Automatic maintenance of headings in the bibliographic file, the final FRAD function of authority data, is impossible without linked authority records, of course. Without the ability to effect a global change by changing one authority record, the cataloger must manually update each affected bibliographic record if it is determined that a heading needs to change. There is no workaround for this. The change process can be made as easy as possible with the inclusion of a good search function that identifies all the records that need to be changed and with the ability to cut and paste the updated headings into each record, but nevertheless the process is inefficient and prone to human error.

There is no doubt that workarounds, when they are even a possibility, are responses to the limitations of the current system. From the cataloger’s and presumably the user’s perspectives, the addition of authority file functionality to the repository would be a welcome development, aiding information retrieval and making maintenance more efficient. Such functionality could be accomplished in a variety of ways, whether by the addition of an actual authority file to the database or through links to an external authority file. The latter may be preferable, since it would eliminate the need to maintain a separate authority file just for the repository. Regardless of how it is done, programming complexities would ensue. Whether the investment of time and effort would result in overall savings depends on projections for the future growth of digitization efforts at a particular institution. For a small project such as the Eastern North Carolina Postcard Collection, success in maintaining a certain level of consistency in subject analysis despite the lack of an authority file was due in major part to the concentration of subject heading assignment responsibility in one person. Success may not be scalable to larger projects, however. If digitization of local materials is a growth area for an individual library, new solutions will need to be found.

Fortunately, progress toward these new solutions is being made. While authority control has frequently been an afterthought to metadata...
creation, some evidence exists that this is changing. One sees increasing interest in authority data in the metadata environment. Metadata Authority Description Schema (MADS) was developed as a counterpart to MODS by the LC.38 Derived from the MARC 21 authority format, MADS records could satisfy the five functions of authority data listed in FRAD.39 Although it has been available since 2005, MADS has not been widely implemented nor experience with it broadly addressed in the professional literature. Practical discussions of MADS have started to appear in blogs, however.40 Other metadata communities besides the library cataloging community also have begun to recognize the importance of authority data. The archival community, for example, has developed Encoded Archival Context (EAC) to complement the more established Encoded Archival Description (EAD) by housing authoritative data about the creators of archival collections separately from but linked to the descriptions of the collections.41 The implementation of EAC, according to Pitti, would not only enable easier collocation of materials with a particular provenance, but also facilitate the sharing of archival authority data across institutions, enable the expression of relationships between different creators, and take advantage of the unique source material held in archives to make this contextual information available.42 Whether use of schemas such as MADS and EAC will become widespread remains to be seen, although it seems clear that their use has the potential to address the challenge of inefficiencies created by the lack of authority data in digitization project repositories.

**Topics for Further Research**

As is the case with much of the professional literature on metadata and their application to digitized collections during this time of intense and widespread development, this paper identifies more problems than it solves. These problems are in serious need of attention by the metadata community. They include the question of whether there is a continued need in LC practice to separate the Name Authority File and the Subject Authority File in an increasingly digital, metadata context. As noted above, this separation into two files with separate sets of rules for heading creation gives rise to much complexity in the creation of headings for named entities such as buildings and other structures, and now is the time to ask whether such complexity is worthwhile. Also worthy of investigation is the problem of how to apply authority control on a selective basis to larger and larger bodies of digitized materials. The applicability of Younger's utility principle to this problem remains to be tested. Also at issue is the best way for institutions to share the results of the time and effort that goes into the subject analysis of digital projects such as the Eastern North Carolina Postcard Collection. Institutions undertaking the digitization of local materials have widely varying resources, and one method of sharing (e.g., NACO) may not fit all. Nevertheless, the sharing of data is the only way to free it from local silos and thus increase the potential benefit in return for work expenses incurred. Lastly, but in the author's opinion most importantly, the problem of including authority data in digital repositories must be tackled. Implementations of schema such as MADS and EAC must be undertaken and reported upon, and pressure exerted on database vendors to incorporate such functionality, much as ILS vendors have been gradually pressured to include authority control functionality in their systems.

**Conclusion**

Authority control is a part of metadata creation for local digitization projects that has received insufficient attention. By examining the case of the Eastern North Carolina Postcard Collection (a small image collection), this paper discusses the particular challenges involved in the authority control of named entities used as subject headings for such projects. These challenges include (1) the complexity of work arising from the form and subject matter of the materials digitized, (2) the volume of work created by a high ratio of new authorized headings per bibliographic description, and (3) the inefficiency perpetuated by the lack of actual authority data in the repository database. How these challenges were addressed should be of interest to many institutions undertaking similar projects if they are concerned with the visibility and usability of their digitized collections. The use of widely applied vocabularies and their rules such as LCSH and LNCAIF in digital collections metadata enables the closer integration of digitized collections into the traditional collections of the library, collections whose metadata are privileged to reside in the library catalog. By ensuring name consistency, the cataloger is creating the potential for heading links across discovery tools and setting the stage for the implementation of a federated search function that would enable users to discover traditional library materials as well as digital projects in the same search. Authority control is a large part of what makes the difference between low- and high-quality metadata, and high-quality metadata improve the usability of digital repositories. By taking the time to determine which structure a particular image depicts, and by differentiating it from other similar structures, libraries avoid pushing that challenge off onto the user, as would be the case if they were to rely on keyword access or a generic subject heading only. The added value that authority control brings to traditional bibliographic databases should also, and perhaps even more urgently given the uniqueness of the subject
matter, be applied in local digitization projects. Establishing best practices for doing so is a major problem facing catalogers and digitization librarians in the near term.

References

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5. Ibid., 52.
6. Ibid., 52-53.
9. Ibid., 39.
15. Ibid., 137.
17. Ibid., 56–59.
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25. Anglo-American Cataloguing Rules, 24.1A.
28. Ibid., 49.
31. Ibid., 137.
33. Baca et al., Cataloging Cultural Objects, 9.
37. Ibid., 59.
## Appendix. Table of Generic Category Treatment

<table>
<thead>
<tr>
<th>Generic Category</th>
<th>Establishment Conventions</th>
<th>Number of Occurrences</th>
<th>Treatment Decision</th>
<th>Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>Name</td>
<td>9</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>[University]—Buildings</td>
<td>Subject</td>
<td>5</td>
<td>Do not create specific</td>
<td>Many not sure if proper names. Have very few of these.</td>
</tr>
<tr>
<td>Bridges</td>
<td>Subject</td>
<td>20</td>
<td>Do not create specific</td>
<td>Have generic names.</td>
</tr>
<tr>
<td>Boats</td>
<td>Subject</td>
<td>2</td>
<td>Do not create specific</td>
<td>Have very few of these and no other materials about.</td>
</tr>
<tr>
<td>Bodies of water (rivers, lakes, etc.)</td>
<td>Subject</td>
<td>26</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Cemeteries</td>
<td>Name</td>
<td>3</td>
<td>Create specific</td>
<td>Own other materials by/about</td>
</tr>
<tr>
<td>Churches</td>
<td>Name</td>
<td>36</td>
<td>Create specific</td>
<td>Own other materials by/about.</td>
</tr>
<tr>
<td>Corporations</td>
<td>Name</td>
<td>17</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Country clubs</td>
<td>Name</td>
<td>2</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Courthouses</td>
<td>Subject</td>
<td>26</td>
<td>Do not create specific</td>
<td>Have generic names. Creating adds little unique information to subject file.</td>
</tr>
<tr>
<td>Grade schools</td>
<td>Name</td>
<td>18</td>
<td>Do not create specific</td>
<td>Have generic names (school plus location). Do not own other materials by/about.</td>
</tr>
<tr>
<td>High schools</td>
<td>Name</td>
<td>4</td>
<td>Create specific</td>
<td>Own other materials by/about (e.g., yearbooks).</td>
</tr>
<tr>
<td>Historic homes</td>
<td>Subject</td>
<td>13</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Hospitals and institutions</td>
<td>Name</td>
<td>12</td>
<td>Create specific</td>
<td>Own other things by/about.</td>
</tr>
<tr>
<td>Hotels and motels</td>
<td>Name</td>
<td>34</td>
<td>Create specific</td>
<td>Have proper names. Own other things by/about.</td>
</tr>
<tr>
<td>Islands</td>
<td>Subject</td>
<td>1</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Libraries</td>
<td>Name</td>
<td>1</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Lighthouses</td>
<td>Subject</td>
<td>3</td>
<td>Create specific</td>
<td>Have proper names. Have other things by/about.</td>
</tr>
<tr>
<td>Military bases</td>
<td>Name</td>
<td>10</td>
<td>Create specific</td>
<td>All were already established in LCNAF.</td>
</tr>
<tr>
<td>Monuments</td>
<td>Subject</td>
<td>18</td>
<td>Do not create specific</td>
<td>Have generic names. Creating adds little unique information to subject file.</td>
</tr>
<tr>
<td>Parks</td>
<td>Subject</td>
<td>2</td>
<td>Create specific</td>
<td>Unclear whether proper names. Do not own other materials by/about.</td>
</tr>
<tr>
<td>Pavilions</td>
<td>Subject</td>
<td>5</td>
<td>Create specific</td>
<td>If it has a proper name.</td>
</tr>
<tr>
<td>Personal and family names</td>
<td>Name</td>
<td>24</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Piers and docks</td>
<td>Subject</td>
<td>1</td>
<td>Do not create specific</td>
<td>Unclear whether proper names. Do not own other materials by/about.</td>
</tr>
<tr>
<td>Plantations</td>
<td>Subject</td>
<td>1</td>
<td>Create specific</td>
<td>Have proper names. Own other materials by/about.</td>
</tr>
<tr>
<td>Public buildings</td>
<td>Subject</td>
<td>4</td>
<td>Do not create specific</td>
<td>Have generic names. Creating adds little unique information to subject file.</td>
</tr>
<tr>
<td>Railroad stations</td>
<td>Subject</td>
<td>8</td>
<td>Do not create specific</td>
<td>Have generic names (name of railroad company + depot)</td>
</tr>
<tr>
<td>Restaurants</td>
<td>Name</td>
<td>4</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Ships</td>
<td>Subject</td>
<td>2</td>
<td>Create specific</td>
<td>Were established already.</td>
</tr>
<tr>
<td>Singing groups</td>
<td>Name</td>
<td>1</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Stores (retail)</td>
<td>Name</td>
<td>8</td>
<td>Do not create specific</td>
<td>Difficult to determine actual proper name.</td>
</tr>
<tr>
<td>Streets</td>
<td>Subject</td>
<td>75</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Theaters</td>
<td>Subject</td>
<td>2</td>
<td>Create specific</td>
<td>Have proper names.</td>
</tr>
<tr>
<td>Universities and colleges</td>
<td>Name</td>
<td>25</td>
<td>Create specific</td>
<td>Most were already established. Have proper names. Own other materials by/about.</td>
</tr>
</tbody>
</table>
Idaho Participation in NACO: The Effect on Idaho Corporate Name Authority Control

By Cheri A. Folkner and Barbara C. Giackin

In 2005 five Idaho institutions joined the Name Authority Cooperative Program (NACO) of the Program for Cooperative Cataloging in order to expand the underlying data that help library users find and identify resources and to improve cataloging efficiencies within the state. The objective of this study was to determine what effect this participation by Idaho institutions in the NACO program had on the authority control of Idaho agencies and other Idaho corporate entities. Data analysis of Idaho corporate name authority records showed this participation significantly increased authority control for these entities. In less than three years, Idaho institutions created more than 12 percent of the 1,763 Idaho corporate name authority records identified in the Library of Congress NACO Authority File.

Authority control in library catalogs has been described as “a traffic-direction system, gathering information under authorized headings and steering patrons away from dead-end searches.” Name authority records in the library catalog contain information on people, companies, and places that tell the catalog user what form of a name is used in the catalog regardless of other names that the entity may use or have used in other contexts. This authorized name provides consistency for searching within the local library catalog or a larger shared catalog and enhances the ability of catalog users to find and identify resources in a library’s collection. In an effort to help catalog users find and identify information on or by Idaho people, companies, or jurisdictions, several Idaho institutions joined the Name Authority Cooperative Program (NACO) of the Program for Cooperative Cataloging (PCC), an international cooperative cataloging effort to create and maintain the underlying data for name authority control. NACO (www.loc.gov/catdir/pcc/naco) allows individual institutions and groups of institutions, following a common set of standards and guidelines, to create and maintain (i.e., modify) authority records in the Library of Congress/NACO Authority File (LC/NAF). Institutions that complete basic NACO training and achieve independent NACO status are authorized to create and maintain name authority records in the LC/NAF for persons, corporate bodies (including jurisdictional areas), and uniform titles. Authorization to create and maintain series and music uniform title authority records requires additional training. The current study investigates what effect this participation by Idaho institutions in the NACO program had on the authority control of Idaho agencies and other Idaho corporate entities. An analysis of the 1,763 Idaho corporate name authority records identified in the LC/NAF showed that Idaho institutions created 213 of those records.

The importance of authority record creation and maintenance has recently been reaffirmed in the final report of the Library of Congress Working Group on the Future of Bibliographic Control. The Working Group was convened and
charged by the Associate Librarian for Library Services at the Library of Congress (LC) to look at the future of bibliographic control in the twenty-first century. In its report, issued in early 2008, the Working Group noted speculation from many members and clients of the library community that improvements in machine-searching capabilities would eliminate the need for authority control. The group concluded, “While such mechanisms as keyword searching provide extremely useful additions to the arsenal of searching capabilities available to users, they are not a satisfactory substitute for controlled vocabularies. Indeed, many machine-searching techniques rely on the existence of authoritative headings even if they do not explicitly display them.” The Working Group recommended that the LC and the library community increase collaboration on authority record creation and maintenance as part of a strategy to continue to provide effective authority control and help manage the associated costs.

Idaho’s NACO Participation

Prior to 2005, no Idaho institutions participated in the NACO program. Idaho State University was the first Idaho institution to participate when it joined the now defunct Utah-based Mountain West NACO Funnel Project in February 2005. Other Idaho institutions followed when the Idaho NACO Funnel Project was established in July 2005. A funnel project is “a group of libraries [that] join together to contribute name authority records to the master database” where “funnel members which create records in modest numbers are able to consolidate their efforts to make a larger contribution as a group.” In fiscal year 2006, the PCC reported that nearly two-thirds of its members participated through funnel projects.

Training for the Idaho NACO Funnel Project was held July 11–15, 2005, in Boise. The training was jointly funded by a Library Services and Technology Act grant administered by the Idaho State Library and matching funds provided by the libraries at Boise State University and the University of Idaho. Idaho NACO Funnel Project coordinator Linnea Marshall outlined the benefits of the NACO training:

Trainees who achieve the learning objectives of the NACO workshop will begin to create new and update existing authority records for Idaho names in the national name authority file. As these records become available, catalog librarians in Idaho (as well as in other states) will be able to refer to them when they are creating bibliographic records for their libraries’ Idaho materials. This will save each cataloger time by not having to research a name or consult various rules to devise the correct form for a name. Cataloging will be more efficient and functional. Idaho catalog librarians will also benefit when they add bibliographic records to their catalogs created by other librarians who have access to accurate Idaho names through the name authority records created by Idaho libraries. As bibliographic records with uniform headings for Idaho agencies, organizations, and individuals are entered into the catalogs of Idaho libraries, reference librarians will find their work at helping patrons made easier by having consistent and reliable access to Idaho materials when the search term is a name. These benefits will extend to all Idaho libraries, not just those contributing to the Idaho NACO funnel project.

Twelve trainees from six institutions participated in the Idaho NACO training. Attendees included staff members from the institutions of the newly formed Idaho NACO Funnel Project: Boise Public Library, Boise State University, Idaho State Library (now the Idaho Commission for Libraries), University of Idaho, and Washington State’s Highline Community College. Two participants from Idaho State University also attended the workshop. While Idaho State University was not a member of the Idaho NACO Funnel Project, attendance by its catalogers at the training workshop allowed staff from all Idaho NACO institutions to meet, interact, and discuss issues relevant to the state.

After the institutions from Idaho had been participating in NACO for more than two years, the authors investigated the level of that participation. Prior to training and approval as a funnel project, the institutions contributed no new records and modified no records; in the first full year following training (federal fiscal year 2006), the participating institutions contributed 349 new records and modified 88. This moderated slightly in federal fiscal year 2007, when 253 new records were created and 70 were modified. Highline Community College has been an inactive member of the Idaho Funnel Project since September 2005, when it contributed two personal name authority records; it has not contributed any name authority records since that time.

Literature Review

The history, purpose, and benefits of authority control have been discussed extensively in the literature, including Auld’s and Woverton’s general literature surveys and the published
proceedings of a 2003 international conference in Florence, Italy, which covered theoretical and practical aspects of authority control. Maxwell provided a detailed guide to authority work and how authority records are created. The collaboration of cataloging agencies in creating and maintaining authority records has been well documented. In 2004, Wolverton conducted a survey to ascertain the authority control practices of 258 institutions designated by the year 2000 Carnegie Classification as Doctoral/Research Universities at either the Extensive or Intensive Level. Of the 192 universities that responded to the question “does your library create original authority records that are added to the national authority file?” 41 percent indicated they were contributing to the authority records that are added to the national authority file. In 2004, Wolverton conducted a survey to ascertain the authority control practices of 258 institutions designated by the year 2000 Carnegie Classification as Doctoral/Research Universities at either the Extensive or Intensive Level. Of the 192 universities that responded to the question “does your library create original authority records that are added to the national authority file?” 41 percent indicated they were contributing to the authority records that are added to the national authority file. Maxwell provided a detailed guide to authority work and how authority records are created.10

Idaho Study

Objectives

The benefits of NACO to authority control via the LC/NAF are well established, and regional funnel projects play an important role, allowing the participation of institutions that, on their own, would not be able to meet the program’s annual submission requirements. Idaho institutions joined as a NACO funnel project to help catalog users find and identify the many unique resources they hold and to improve cataloging efficiencies within the state. The objective of this study was to determine what effect Idaho NACO participation had on authority control for Idaho agencies and other Idaho corporate entities. Results were measured by:

- the number of Idaho corporate name authority records created by Idaho institutions in the LC/NAF; and
- the number of modifications made to existing Idaho corporate name authority records by Idaho institutions in the LC/NAF.

The study was limited to corporate entities because of the relative ease in identifying those entities in the LC/NAF. The authors could not determine a way to identify name authority records for persons related to Idaho.

The study had several secondary objectives. One was to test the assumption that, prior to Idaho institutions participating in NACO, the majority of Idaho corporate name authority records in the LC/NAF were created by the LC and NACO institutions in states either adjacent to Idaho or in other parts of the western United States. While the authors assumed that institutions in states adjacent to Idaho would have the most Idaho-related material in their collections, the number of NACO institutions in those states is quite small. Therefore the authors further hypothesized that NACO institutions in nonadjacent western states may have created more Idaho corporate name authority records than NACO institutions in adjacent states. Another secondary objective was to examine the types of modifications made to Idaho corporate name authority records and to identify which institutions were modifying those records. Lastly, the study sought to identify and categorize major errors in Idaho corporate name authority records.

Research Method

To gather the data necessary for the study, two sets of Idaho corporate name authority records were retrieved from OCLC’s authority files using the OCLC Connexion Cataloging Client:

- a set resulting from a search of the OCLC Authority File
- a set resulting from a series of searches of OCLC’s LC Authority History File

Each OCLC authority file contains both the name authority records and subject authority records distributed by the LC. Only the current version of an authority record is contained in the OCLC Authority File. From this authority file, current versions
of Idaho corporate name authority records were retrieved and analyzed. Using the creation date retained in each record, these records provided an overview of existing Idaho corporate name authority records from the earliest creation date in the record set (May 9, 1977) through December 31, 2007.

OCLC’s LC Authority History File contains all versions of an authority record. It tracks the evolution of each authority record, including superseded versions and versions sent from OCLC to the LC and then distributed back to OCLC. It also includes records deleted from the authority file. The record set drawn from this authority file provided data for determining the number and types of modifications made to existing Idaho corporate name authority records.

The authors developed search strategies to retrieve the Idaho corporate name authority record sets that worked within the interactive searching capabilities of OCLC’s Connexion Client and overcame the limitations of the data encoded in the records. They also accounted for the fact that OCLC’s authority files include name authority records and subject authority records in a single file. To determine the number of Idaho corporate name authority records, retrieving as many relevant authority records as possible was important. Consequently, the authors structured the searches to maximize recall rather than precision. The number of irrelevant authority records retrieved was less important because those records were identified post-search and removed from the record sets. Relevant records were defined as Idaho corporate name authority records created before January 1, 2008. For this study, the working definition of an Idaho corporate name authority record was an authority record following descriptive rather than subject cataloging conventions for a corporate body located in Idaho. The Anglo-American Cataloguing Rules, 2nd ed., rev., which is NACO’s descriptive cataloging standard, defines a corporate body as an “organization or group of persons that is identified by a particular name and that acts, or may act, as an entity. Typical examples of corporate bodies are associations, institutions, business firms, nonprofit enterprises, governments, government agencies, religious bodies, local churches, and conferences.” Although the definition is relatively clear, in some cases determining when an authority record for an entity should be created using descriptive cataloging conventions can be ambiguous. NACO uses the LC’s Subject Cataloging Manual for guidance on whether to use descriptive cataloging conventions or subject cataloging conventions when creating an authority record.

This study used the prefixes in valid LC control numbers (LCCNs) in the authority records to quickly ascertain which cataloging conventions were used. The authors retained authority records with LCCN prefixes beginning with the letter n, which indicates they were created using descriptive cataloging conventions, in the records sets; authority records with LCCN prefixes starting with an s, which indicates they were created using subject cataloging conventions, were removed. Other types of name authority records removed were those for persons, series, uniform titles, and name-titles. The authors extracted as much information as possible from the authority records to minimize manual review and data entry. Throughout this paper, the parts of the record from which data were pulled will be discussed and reported in terms of “MARC 21 Format for Authority Data.”

Overview Record Set from the OCLC Authority File

Records from the OCLC Authority File provided an overview of existing Idaho corporate name authority records created before January 1, 2008. On May 1, 2008, the authors retrieved a set of 2,432 name authority records by searching the corporate/conference name index for the words “Idaho” or “Boise.” These two search terms were used because they are mostly unique to Idaho and most corporate entities would be state agencies, related to a state institution of higher learning, or related to Boise, the major population center of Idaho. A total of 669 records were deemed irrelevant and removed. More than 85 percent of the records deemed irrelevant were created using subject cataloging conventions or were series authority records. The other irrelevant records were created in 2008, determined not to be entities located in Idaho, name-title authority records, or personal name authority records. The authors named the remaining set of 1,763 relevant records the “overview record set.”

The effectiveness of this method—retrieving a broad set of authority records and removing irrelevant ones—was measured by determining how many records from a set of known relevant authority records were captured and retained. Determining method effectiveness was particularly important because the authors limited the search to the terms “Idaho” or “Boise” and did not include other Idaho municipality or county names. From July 18, 2005, through December 31, 2007, Idaho NACO Funnel Project participants created 161 Idaho corporate name authority records and modified 39 Idaho corporate name authority records as tracked by the Idaho NACO Funnel Project coordinator. Of the 200 records created or modified by the Idaho NACO Funnel Project participants, the authors captured 180 and retained them in the overview record set. Those not captured were for entities whose names did not include either “Idaho” or “Boise,” and descriptive cataloging conventions did not require the addition of a place qualifier to the
authorized name. Although ideally all of the relevant records would have been retrieved and retained, the 90 percent recall rate gave the authors confidence that the method was effective enough to make conclusions from the data.

The authors analyzed data in the overview record set to identify the institutions that created the records, the records’ creation dates, and the institutions that had modified the records. The following information was used in this analysis:

- original cataloging agency from the cataloging source field (subfield code “a” in field 040)
- date created from the “date entered on file” character positions in the fixed-length data elements field (character positions 00–05 in field 008)
- modifying agency or agencies from the cataloging source field (subfield code “d” in field 040)
- source citation from the “source data found” field (subfield code “a” in field 670)

The institutions that created or modified the authority records were divided into the following categories: Idaho institutions (the four active Idaho NACO Funnel Project member institutions plus Idaho State University), regional institutions (ten institutions in states adjacent to Idaho), western institutions (nine institutions in states not adjacent to Idaho, but considered part of the western United States), LC (two divisions); and other institutions (forty institutions not part of the other categories).

2003–7 Record Set from OCLC’s LC Authority History File

The second set of records used in this study, called the “2003–7 record set,” was based on records retrieved from a series of searches in OCLC’s LC Authority History File. This set provided data for determining the number and types of modifications made to existing Idaho corporate name authority records. The authors conducted five searches, one for each year from 2003 through 2007, to cover the 2½ years prior to the Idaho NACO Funnel Project training and establishment and the 2½ years following. Of the four search indexes available in OCLC’s LC Authority History File, two were used to construct the search queries: the heading word index, which indexes all 1xx fields and 4xx fields in an authority record except the 148 and 448 chronological terms fields, and the LCCN word index, which indexes the 010 field.24 The constant elements in each search were the words “Idaho” or “Boise” in the file’s heading word search index. The authors used the year element in the LCCN word search index to limit records to the five years of interest because OCLC’s LC Authority History File has no date index. The year element corresponds to the year in which the LCCN was assigned. The system automatically assigns the LCCN to each newly created record at the time the record is added to the OCLC Authority File. In rare cases, however, the year element in the LCCN does not correspond to the year a record was created. When a record is created in a local file in one year and then added to the OCLC Authority File in another, the year of creation in the fixed-length data elements field will differ from the year element in the LCCN. This did not affect the study because, until the record is actually added to the OCLC Authority File and distributed to the LC/NAF, it is not available for authority control beyond that local file. “MARC 21 Format for Authority Data” notes another case where the year element in the LCCN does not correspond to the year the record was created: “In name authority records that were converted retrospectively by an agency under contract to LC, the digits 50 were used for the year for name authority records.”25 That retrospective conversion took place in 1979, which is prior to the years of interest for this record set.26

The authors searched OCLC’s LC Authority History File, incorporating both the constant search elements and a LCCN year search element for each year of interest. For example, to retrieve the Idaho corporate name authority records for 2003, the following search string was used:

me: idaho or me: Boise and lccn: 2003-^a

The OCLC system converted that string to:

((me:“idaho”) or me:“boise”) and lccn:“2003-^a"

The authors manually removed irrelevant records from the 892 authority records retrieved. A total of 612 authority records remained in the 2003–7 record set. As in the case of the overview record set, the effectiveness of this method to retrieve relevant authority records was measured. Of the 161 Idaho corporate name authority records created by Idaho NACO Funnel Project participants from 2005 through 2007, 141 records, or 88 percent, were captured and retained. Again, the effectiveness of the method was deemed sufficient to draw conclusions using the data obtained.

During the manual review, the authors tracked the history of each relevant authority record in this record set and recorded the following data: type of government agency, the number of modifying agency subfields, “modification instance” characterization, and existing errors in the current version of the authority record. A “modification instance” was defined as an instance when a change occurred between versions of an authority record, excluding changes in either the date of the last
replace field or the authority history timestamp. These excluded changes were not considered modifications to the records because they occurred automatically during the authority record distribution cycle to and from the LC. The authors recorded several characteristics for each modification instance:

- the modifying agency
- the type of modification
- whether there were multiple major modifications made during the modification instance
- the date of the modification instance

Initially, the intent was to count the number of modifying agency subfields to determine the number of modification instances for each authority record. But, like bibliographic records in OCLC, modification transactions are not always reflected with an addition of a modifying agency subfield. Hence, no one-to-one correspondence exists between the number of modifying agency subfields and the number of modification instances. Of the 198 name authority records that had modification instances, 81 had more modification instances than the number of modifying agency subfields reflected in the 040 field. For the majority of those (96 percent), there was a difference of 1 between the number of modification instances and the number of modifying agency subfields. While the number of modifying agency subfields gives an indication of modification frequency, it does not provide complete information.

Recording modification instance characterization required additional operating assumptions and definitions. As noted, a modifying agency subfield is not always added to the 040 field when a record is modified. If a modification instance occurred and no modifying agency subfield was added to the 040 field, the authors made the following assumptions:

- If a system control number (field 035) was added or removed, OCLC was assumed to be the modifying agency.
- If a record was deleted because it was wrongly in the LC/NAF, it was a duplicate of another authority record, or for an indeterminable reason, the LC was assumed to be the modifying agency.
- For all other cases, the preceding modifying agency was assumed to be the subsequent modifying agency.

Although multiple modifications may have been made in each modification instance, the authors used a controlled vocabulary to determine and record the most significant modification in a modification instance. As part of the controlled vocabulary development, each modification was ranked in order of significance and categorized as either a major or minor modification. Modifications that affected either an access point (the authorized form of the name or its cross-references) or the retrieval of the authority record during a search of the authority file were defined as major modifications. This definition is similar to that of errors in “critical areas” within an authority record used by past NACO quality review processes.27 Riemer and Morgenroth reported those critical areas to be “headings, references, and MARC tagging” and noted that errors “would no longer be tallied for incorrect diacritics or capitalization.”28 The difference in the study reported here is that the authors categorized modifications in the capitalization or diacritics of an access point as major modifications. The controlled vocabulary used and the major or minor category of each is shown in the appendix.

The authors assumed some modifications to be algorithmic modifications performed by the system at OCLC. These included the addition and removal of system control numbers and the addition of both a geographic area code (043 field) and a geographic subdivision linking field (781 field). These algorithm modifications were excluded from the data analysis because they were not the result of direct action by a NACO institution.

Errors in the current version of an authority record were recorded following a similar method to that used for recording type of modification. The controlled vocabulary for error recording was based on the vocabulary used for recording type of modification.

Findings and Discussion

The major focus of this study was to determine what effect the participation of Idaho institutions in the NACO program had on the authority control of Idaho corporate names. Specifically, did the number of Idaho corporate name authority records in the LC/NAF significantly increase after the Idaho NACO institutions began contributing authority records in late July 2005? Figure 1 shows that Idaho institutions have significantly increased the number of Idaho corporate name authority records. Data from the overview record set show that during the time Idaho institutions have been contributing authority records, they created an average of 85 Idaho corporate name authority records per year while, all other institutions combined created an average of fifty Idaho corporate name authority records per year. Together, Idaho institutions are creating Idaho corporate name authority records at a 70 percent greater rate than that of other institutions combined.

This simple average does not take into account whether there are trends over time. If trends exist and they are taken into account, is the effect of Idaho institutions on the authority control of Idaho corporate names still
significant? An analysis of the data over time supports the conclusion that it is. While figure 1 does show a dramatic jump in the number of Idaho corporate name authority records created, the jump occurred in 2004, which is before the Idaho institutions began participating in NACO. The LC created 110 and 106 Idaho corporate name authority records in 2004 and 2005 respectively. A further investigation of these 216 name authority records showed that 186 of the records, 93 in each 2004 and 2005, were created by the National Union Catalog of Manuscript Collections for oral histories at the Idaho State Historical Society. The specific number of Idaho State Historical Society oral histories cataloged by the National Union Catalog of Manuscript Collections during 2004 and 2005 could not be readily determined; information was not available on whether that rate of cataloging for Idaho State Historical Society materials would be sustained. To compensate for the possibility that this rate would continue, the authors calculated a two-year moving average for the number of Idaho corporate name authority records created, excluding those contributed by Idaho institutions. This moving average can be used to predict the number of Idaho corporate name authority records that would have been created without the participation of Idaho institutions. Figure 2 shows that without the contributions of Idaho institutions, the predicted number of Idaho corporate name authority records would have been much lower than the actual number created in 2005, 2006, and 2007, a difference of 63, 40, and 60 respectively. Regardless of whether a simple yearly average or a two-year moving average is used to analyze the number of Idaho corporate name authority records created, the effect of Idaho institutions on those numbers is significant.

Participation of Idaho institutions in the NACO program has significantly increased the number of Idaho corporate name authority records created, but has that participation similarly affected the maintenance of Idaho corporate name authority records? As Auld noted, authority control “is based on the maintenance of a file in which headings, variant forms of headings, sources, and other related data are recorded.”29 So, to the extent that effective authority control depends on the creation of authority records, it also depends on the maintenance or modification of those records to reflect the earlier, later, and variant names of an entity. As an indicator of the level of maintenance activity for Idaho corporate name authority records, did the number of modification instances increase during the time that Idaho institutions have participated in NACO? The answer is a qualified no, but not definitively so because of the limitations of the longitudinal data available in this study.

The 2003–7 record set data analysis
showed that the number of modification instances per month, excluding modification instances performed algorithmically by OCLC, averaged 1.7 from January 2003 through July 2005 while the average for the period of August 2005 through December 2007 was 1.3. A two-sample unequal variance t-test shows that there is no statistical difference between the averages ($t(52) = 0.90, p < 0.01$), and this seems to indicate that the number of modification instances has stayed constant since Idaho institutions have participated in NACO. However, modification of a name authority record generally occurs when a name changes or variants of the name are used; these instances occur over time. The 2003–7 record set was limited to Idaho corporate name authority records created from 2003 through 2007, and this five-year snapshot may not have been long enough for those name changes and variants to occur, be discovered during the cataloging process, and then be reflected in the name authority records.

Secondary Results

The authors went into the study with the assumption that the LC or regional institutions created the majority of the Idaho corporate name authority records in the LC/NAF. Figure 3 shows that this assumption is correct; the LC created 61 percent of the Idaho corporate name authority records, and regional institutions created 6 percent. The fact that western institutions accounted for the creation of only 4 percent of the Idaho corporate name authority records was unexpected. Institutions (other than the LC) outside of the western United States created 17 percent of the records. Institutions in twenty-nine states have created at least one Idaho corporate name authority record. That Idaho-related materials are being cataloged for collections located across such a broad geographic area was also unexpected. The major effect Idaho institutions have had on the creation of Idaho corporate name authority records is reflected in figure 3. It shows that Idaho institutions created 12 percent of the total number of Idaho corporate name authority records from 1977 to 2007. Idaho institutions participated in NACO for only 8 percent of that time.

To determine what modifications were made most frequently, the authors analyzed the types of modifications made to Idaho corporate name authority records in the 2003–7 record set. They found 235 modification instances in the 612 records examined. Direct action by a NACO institution, not an algorithmic action, accounted for 92 modification instances. Of those, 64 percent were determined to be major modifications. Table 1 shows the breakdown of modifications by major or minor category and the type of modification. Modification of the form of an access point accounted for 24 of the modifications, and 24 modifications were made to the cross-reference structure of the records. If the authors had used the critical error criteria reported by Riemer and Morgenroth, they would have categorized 4 modifications as minor, and they would have reduced major modifications from 64 to 60 percent of the modification instances.

Of the 612 records in the 2003–7 record set, only 5 records, or 0.8 percent, contained a major error in the current version. Those errors were of the following types:
the form in the 1xx field was wrong
• the form in the 4xx field was wrong
• a duplicate name authority record already existed
• the fixed field code for reference status was wrong
• the fixed field code for subject use was wrong

While 0.8 percent is a low percentage of major errors, these errors do affect the ability of catalog users to find and identify information. The errors have since been corrected in the LC/NAF.

Conclusion

Through the participation of Idaho institutions in the NACO program, authority control of Idaho agencies and other Idaho corporate entities has significantly increased when measured by the number of name authority records created for Idaho corporate bodies. From July 2005 through December 2007, Idaho institutions created more than 12 percent of the Idaho corporate name authority records identified in the LC/NAF, which includes Idaho corporate name authority records created as far back as 1977. The effect Idaho institutions have had on the maintenance of Idaho corporate name authority records is more nebulous because of limitations of the longitudinal data available. Further investigation is required to determine what effect Idaho NACO institutions have had on that maintenance over a longer, more representative period of time.

This study was undertaken to determine whether the Idaho NACO funnel project was meeting its objective to create new and update existing authority records for Idaho names. Additional research is needed to determine if other NACO libraries or funnel projects established for the purpose of creating and maintaining authority records associated with their surrounding geographic areas have a comparable effect.

References and Note

3. Ibid., 19.

<table>
<thead>
<tr>
<th>Type of Modification</th>
<th>Modification Instances</th>
</tr>
</thead>
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<tr>
<td>Major</td>
<td></td>
</tr>
<tr>
<td>1xx form changed[a]</td>
<td>15</td>
</tr>
<tr>
<td>4xx added[b]</td>
<td>13</td>
</tr>
<tr>
<td>4xx form changed[a]</td>
<td>8</td>
</tr>
<tr>
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</tr>
<tr>
<td>record deleted - duplicate</td>
<td>3</td>
</tr>
<tr>
<td>010 $z added</td>
<td>3</td>
</tr>
<tr>
<td>record deleted - SH</td>
<td>3</td>
</tr>
<tr>
<td>subject use changed</td>
<td>1</td>
</tr>
<tr>
<td>5xx form changed[a]</td>
<td>1</td>
</tr>
<tr>
<td>earlier/later $w</td>
<td>1</td>
</tr>
<tr>
<td>removed[b]</td>
<td>1</td>
</tr>
<tr>
<td>4xx changed to 5xx[b]</td>
<td>1</td>
</tr>
<tr>
<td>5xx added[b]</td>
<td>1</td>
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<tr>
<td>record deleted - unknown reason</td>
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<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
</tr>
<tr>
<td>Minor</td>
<td></td>
</tr>
<tr>
<td>670 modified</td>
<td>13</td>
</tr>
<tr>
<td>none determined</td>
<td>6</td>
</tr>
<tr>
<td>670 added</td>
<td>4</td>
</tr>
<tr>
<td>781/043 added</td>
<td>3</td>
</tr>
<tr>
<td>675 added</td>
<td>2</td>
</tr>
<tr>
<td>source fixed field changed</td>
<td>1</td>
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<tr>
<td>675 modified</td>
<td>1</td>
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<tr>
<td>781 added</td>
<td>1</td>
</tr>
<tr>
<td>010 $z removed</td>
<td>1</td>
</tr>
<tr>
<td>667 removed</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
</tr>
<tr>
<td>Grand Total</td>
<td>92</td>
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</tbody>
</table>

[a] access point form modification
[b] cross reference structure modification


12. Ibid., 119.


28. Ibid.


### Appendix. Controlled Vocabulary Used and Major and Minor Category of Each

<table>
<thead>
<tr>
<th>Significance Rank</th>
<th>Vocabulary</th>
<th>Definition</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>record deleted - duplicate</td>
<td>record was deleted because there was a duplicate NAR</td>
<td>major</td>
</tr>
<tr>
<td>2</td>
<td>record deleted - SH</td>
<td>record was deleted and replaced by a subject authority record</td>
<td>major</td>
</tr>
<tr>
<td>3</td>
<td>record deleted - unknown reason</td>
<td>record was deleted for an indeterminate reason</td>
<td>major</td>
</tr>
<tr>
<td>4</td>
<td>1xx form changed</td>
<td>form of 1xx changed and/or 1xx tag type changed (includes data entry corrections)</td>
<td>major</td>
</tr>
<tr>
<td>5</td>
<td>earlier/later 5xx added</td>
<td>addition of 5xx including $w for an earlier or later heading</td>
<td>major</td>
</tr>
<tr>
<td>6</td>
<td>earlier/later 5xx removed</td>
<td>removal of 5xx including $w for an earlier or later heading</td>
<td>major</td>
</tr>
<tr>
<td>7</td>
<td>4xx changed to 5xx</td>
<td>4xx changed to 5xx</td>
<td>major</td>
</tr>
<tr>
<td>8</td>
<td>5xx added</td>
<td>addition of 5xx that does not include a $w for an earlier or later heading</td>
<td>major</td>
</tr>
<tr>
<td>9</td>
<td>5xx removed</td>
<td>removal of 5xx that does not include a $w for an earlier or later heading</td>
<td>major</td>
</tr>
<tr>
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<td>5xx form changed</td>
<td>form of 5xx changed and/or 5xx tag type changed (includes data entry corrections)</td>
<td>major</td>
</tr>
<tr>
<td>11</td>
<td>5xx changed to 4xx</td>
<td>5xx changed to 4xx</td>
<td>major</td>
</tr>
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<td>addition of 4xx</td>
<td>major</td>
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<td>4xx removed</td>
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<td>Description</td>
<td>Category</td>
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<td></td>
</tr>
<tr>
<td>earlier/later $w added</td>
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<td>major</td>
<td></td>
</tr>
<tr>
<td>earlier/later $w removed</td>
<td>$w$ for earlier or later heading is removed from an existing 5xx major</td>
<td>major</td>
<td></td>
</tr>
<tr>
<td>earlier/later $w changed</td>
<td>$w$ for earlier or later heading is changed but not removed from an existing 5xx major</td>
<td>major</td>
<td></td>
</tr>
<tr>
<td>subject use changed</td>
<td>fixed field for subject use changed</td>
<td>major</td>
<td></td>
</tr>
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<td>010 $z$ added</td>
<td>addition of $z$ for the deleted record to the “kept” record</td>
<td>major</td>
<td></td>
</tr>
<tr>
<td>010 $z$ removed</td>
<td>removal of $z$ for any reason</td>
<td>minor</td>
<td></td>
</tr>
<tr>
<td>670 added</td>
<td>670 added</td>
<td>minor</td>
<td></td>
</tr>
<tr>
<td>670 removed</td>
<td>670 removed</td>
<td>minor</td>
<td></td>
</tr>
<tr>
<td>670 modified</td>
<td>670 modified</td>
<td>minor</td>
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</tr>
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<td>675 added</td>
<td>675 added</td>
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<td></td>
</tr>
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</tr>
<tr>
<td>675 modified</td>
<td>675 modified</td>
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<td>667 added</td>
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<tr>
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<tr>
<td>source fixed field changed</td>
<td>source fixed field changed</td>
<td>minor</td>
<td></td>
</tr>
</tbody>
</table>


This review is really four reviews because each book is a revision of a previous edition. There are reviews for those people who have used these earlier editions of the works and reviews for those that have little knowledge about the earlier editions.

How does the fifth edition of Cataloging of Audiovisual Materials and Other Special Materials differ from the fourth edition? Olson’s “assistants” have changed: Robert Bothmann and Jessica Schomberg both work at Minnesota State University, much closer to Nancy’s home than her fourth-edition assistants. There are fewer examples in almost all chapters, which accounts for the fifth edition being fourteen pages shorter than the fourth edition even though the text has been enlarged in many places.

Much of the text from the fourth edition remains. The most important changes are the result of the revisions in AACR2 and the merging of USMARC, CANMARC, and UKMARC into MARC 21 in the ten years since the fourth edition was published. In the intervening years, the emergence of various types of DVDs has brought changes to the chapter on motion pictures and video recordings, which is ten pages longer in the fifth edition. In the fourth edition, the chapter on computer files was divided into three subchapters: “Computer Files,” “Internet Resources,” and “Interactive Multimedia.” The Joint Steering Committee for Revision of AACR rejected the proposal for interactive multimedia as a distinct medium during the last decade, and the cataloging of this type of material was subsumed under “electronic resource.” This chapter, formerly titled “Computer Files,” has been rewritten for electronic resources with no subdivision for particular types and enlarged from thirty-one pages to fifty-four pages. The fourth edition’s chapter “Serials (Other than Print)” has been rewritten as “Continuing Resources.” This chapter has had the biggest growth from eighteen pages in the fourth edition to thirty-six pages in the fifth edition.

A review for those that have never used any editions of this work follows. In her preface to the fifth edition, Olson states that this edition “attempts to cover the cataloging of the newest types of materials owned by libraries as well as many older types of materials still found in libraries” (xv). As the title states, this is a manual that tells the reader how to catalog nonbook materials by the rules found in AACR2, with the chapters in the book for the most part following the order of the chapters in AACR2. The MARC coding for these materials is the MARC 21 version used by members of OCLC. The text is very accessible, written in an informal style as though Olson is talking to the reader about her personal observations and memories. She often provides background to particular points by quotations from various authorities. There are seventy-four bibliographic record examples in the book, some of which are included in each chapter, except the introductory chapter. Most of the bibliographic records are followed by a comments section that might include notes about subject heading or classification access and processing. There is a good index as well as an index to the titles of the items used as examples.

The second edition of Organizing Audiovisual and Electronic Resources for Access: A Cataloging Guide by Ingrid Hsieh-Yee is much larger than the first edition (375 pages compared to 285 pages). She has also updated its content with the changes that have occurred in AACR2 and MARC up to its 2006 publishing date. The first four chapters have the same titles and set-up as the first edition with increased discussion in many of the sections. Chapter 5, “Computer Files” in the first edition, has become “Electronic
Resources” in the second edition. Chapter 6, “Interactive Multimedia” in the first edition, has been replaced by “Integrating Resources.” Chapter 7, “Internet Resources,” has been replaced by “Remote Access Electronic Serials.” Chapter 8, “Cataloging and the Changing Information Environment,” has been changed to “Organizing Information in the Digital Age” with up-to-date content. The design of the second edition is better than the first edition, making it easier to use.

The following is a review for those that have never used the first edition of Organizing Audiovisual and Electronic Resources for Access. In her preface to the second edition, Ingrid Hsieh-Yee states that “this book draws on rule interpretations, guidelines, the literature, and the author’s teaching experience to clarify the treatment of CDs, DVDs, MP3s, streaming videos, electronic books, and other files. . . . The book is designed for self-study and classroom use” (xv). While this is principally a book about descriptive cataloging, it provides information about the theory of cataloging, subject analysis, and metadata. Eight to eleven full bibliographic records in OCLC format accompany each of the chapters that deal with these materials, and the cataloging examples are accompanied by a discussion that includes classification numbers and subject headings where appropriate. The physical arrangement for a particular type of resource is also discussed in some chapters. There are lists of references at the end of chapters and many helpful tables, such as charts of MARC fields for certain types of resources. There is a good index and a list of illustrations.

Both these books are highly recommended. Both should be purchased for a full understanding of this sometimes complicated subject. The topic of Hsieh-Yee’s book is much broader than that of Olson’s in that it includes information about the theory of cataloging, subject analysis, and metadata, and it has lists of references at the end of its chapters. However, it deals only with sound recordings, video recordings, electronic resources, integrating resources, and remote access electronic serials. A cataloger needs to turn to Olson’s book to learn how to catalog graphic materials, maps, kits, models, realia, and other items found in a typical multimedia library. I recommend purchasing the Hsieh-Yee book as a classroom text suitable for teaching the fundamentals of cataloging nonbook materials and Olson’s book to sit on a cataloger’s desk as a helpful guide to dealing with tricky cataloging problems—and there will be many problems with these types of materials. There is no price advantage to one or the other; each costs $45.

Some caveats: Because Olson cataloged nonbook materials for an academic library and the content of this book reflects her long experience in this field, the book is highly recommended for all academic libraries that are members of OCLC. It is also recommended for other types of libraries that are aware of the book’s orientation. The Dewey Decimal Classification and Sears List of Subject Headings are only mentioned in passing, and this deficiency makes the book just slightly less useful for libraries that apply either of these methods of access to their collections. A bigger problem with both books for libraries that are not part of the OCLC community is the coding for some fixed fields that is peculiar to OCLC’s application of MARC 21. Catalogers in these libraries will have to ignore this coding and substitute the coding prescribed in the text of MARC 21. Neither book draws to any extent on RDA: Resource Description and Access.—Jean Weihls, (jean.weihls@rogers.com), Technical Services Group, Toronto, Canada.


As the authors note in the preface, “Any method of collection analysis that doesn’t include how the patrons use the collection provides incomplete, and perhaps misleading, data” (v). Collection analysis has been a hot topic in recent years, as librarians have struggled to evaluate both print and electronic collections. New products such as WorldCat Collection Analysis and Follett’s Titlewise have been developed to help with analysis, but these products can be costly and may not include use data. The integrated library system (ILS) is a rich source of data for collection analysis, but ILS reports generally provide statistical data in broad categories instead of with the granularity needed for collection analysis.

The goal of this book is to teach librarians how to analyze print collection-use data with spreadsheet software. Books that teach how to use software inevitably become dated as software versions change; the examples in this book are from Microsoft Excel, and the screenshots appear to use Excel 2000 or Excel 2003. However, the authors made a valiant and largely successful attempt to ensure that this book will be useful to librarians who use other spreadsheet software, so the book remains useful despite changing software versions.

Chapter 1 outlines the value of collection-use studies and discusses their limitations. Greiner, a community college librarian, and Cooper, who has worked in both special and public libraries, consider collection-use analysis a valuable tool for all types of libraries. Use studies provide objective data for collection management, which can help in making budget, selection, weeding, and storage decisions. Readers may disagree with some of the authors’ recommendations, such as using only circulation data because in-house use data is difficult to collect reliably, but they should appreciate the authors’ care to explain their
reasoning and their encouragement to make different decisions on the basis of local needs.

Chapters 1–5 include step-by-step instructions for many Excel tasks. Readers with minimal Excel skills will benefit from explanations of cell addresses, simple sorting, inserting formulas, and using the text import wizard, although novice Excel users may find the differences between the screen-shot menus and the ribbon menus in current versions of Excel confusing. Although the detailed Excel instructions may be tedious for experienced Excel users, these chapters also discuss items to consider when downloading data, cleaning up data for analysis, and creating data summaries. Librarians who rely on others to download data should find the section on decisions to make before downloading helpful in clarifying the data needed. Data cleanup suggestions range from ways to handle records with open publication dates to avoid skewing the collection age analysis to a Visual Basic script for removing non-numeric characters from date fields. The authors’ experience in working with large data files is obvious in practical tips such as advice on saving raw, clean, and working data files so that data deleted for one analysis is still available for other analyses. While the detailed instructions and copious screen shots are essential for librarians who do not use spreadsheets on a regular basis, they will also cause the book to become dated quickly.

Chapters 6–8 suggest a variety of analyses that librarians can do once the data are downloaded and cleaned up. In most cases, the Excel techniques needed are discussed only briefly, since they have been introduced in previous chapters. Suggestions include analyzing the number and percent of the collection used during the previous year, determining the percent of items unavailable for use because they are in the bindery or missing, and calculating the circulation to acquisitions ratio. Chapter 7 is my favorite part of the book because it explains the statistical concept of correlation clearly and without intimidating formulas. The authors explain how to interpret correlation coefficients, discuss how correlation coefficients can be used to learn whether collection age affects circulation, show how to have Excel calculate correlation, and suggest using correlation coefficients to help allocate budgets. Chapter 8, which discusses some sample data summaries, emphasizes the need for librarians to use professional judgment in interpreting data and making decisions.

The final two chapters focus on presenting findings and on other uses for Excel. In addition to giving step-by-step instructions for highlighting findings with color and graphs, the authors mention the importance of approaching subject selectors diplomatically when the findings suggest that parts of the collection are underutilized. They also suggest other ways to use Excel, discuss comparing public library collections, and suggest some collection analysis research needs.

This book is a practical guide to the process of conducting a collection-use study. Its strengths are detailed instructions with screenshots for manipulating spreadsheets, examples of data with brief discussions of how the data are useful, explanations of why the authors recommend strategies such as focusing on circulation instead of use, and suggestions of reasons that librarians might prefer not to follow the authors’ recommendations. As with all books that give detailed instructions on how to use a specific software application, some portions will become dated quickly. The book’s organization will be frustrating to some readers; three chapters of detailed instructions on manipulating spreadsheet data precede the chapters explaining how all this effort will be used to answer specific questions. A minor flaw is the book’s failure to remind readers to record each decision made so that comparable data can be collected from year to year.

The bibliography and index are well done. The bibliography reflects Greiner and Cooper’s contention that collection-use analysis is relevant for all types of libraries; they cite studies and manuals for school, public, and academic libraries. The index includes Excel techniques and collection issues. Another useful feature is a wiki with sample data files and ILS–specific instructions for downloading data. An appendix listing the various analyses described would have been a useful addition.

Greiner and Cooper briefly mention, but do not discuss, other types of collection analysis. Readers desiring an overview of other collection measures should consult the relevant chapters in Peggy Johnson’s Fundamentals of Collection Development and Management or Peter Clayton and G. E. Gorman’s Managing Information Resources in Libraries: Collection Management in Theory and Practice.1 I recommend Greiner and Cooper’s book to librarians who need practical guidance in conducting a collection-use analysis.—Ginger Williams, (ginger.williams@wichita.edu), Wichita State University, Wichita, Kan.

Reference


The cataloger stereotype does not include the term radical, so what is a radical cataloger? The editor replies that the radical cataloger is first of all user-centered while rejecting the
Gross then turns to Karen Calhoun’s report to the LC and shows through quotations that one of the unsaid assumptions underlying the report is that change is in and of itself is good.2 However, catalogers do not resist change per se. We resist “the notion that the conceptual categorization and collocation of works made possible by catalogers are unnecessary and expendable. . . . We resist the forestalling of future search and retrieval improvements that depend on controlled vocabulary and classification” (145).

Another essay I found particularly compelling was Jeffrey Beall’s review of OCLC Online Computer Library Center. My first job was in a library that could not afford OCLC, and I was delighted when I was able to move to one that could. For years I have argued against colleagues who criticized OCLC—I remember the bad old days. Beall has tipped the balance. I may not be ready to go quite so far as to call OCLC “a profit-hungry leech on libraries” (56), but I do agree that OCLC “buys bibliographic data from libraries at exploitative low rates, and then sells that data back to libraries at exorbitantly high rates” (88). Because OCLC does not provide fair market value for upgrading the millions of subminimal-level vendor records dumped into the database, managers are directing their catalogers to accept whatever happens to be found in OCLC. OCLC’s monopolistic greed, combined with the ill-informed directives of library administrators, is killing the ideal of cooperative cataloging envisaged by Frederick G. Kilgour, OCLC’s founder.

The third section of the book moves away from the cataloging wars into the positive area of innovative practices. I particularly appreciated the essay by Jennifer Erica Sweda on the PennTags project at the University of Pennsylvania. The software allows library users to bookmark not only webpages but also journal articles and library records in the catalog. Sweda emphasizes that subject cataloging and tagging serve different purposes. The controlled vocabulary of LC subject headings helps users find broader, narrower, and related terms. Tagging, on the other hand, facilitates the organization of a user’s own work and allows for the sharing of personal and research interests. Hence one of the benefits may be the creation of user communities by patrons who share similar interests. Another is the information the tags provide librarians about the library’s various user communities.

These are just a sampling of the thirty-five essays in this book. As befits a book introduced by Sanford Berman, there are many chapters on the inappropriateness or inconsistency of the LC subject headings in various subject categories and on the way particular libraries have adapted subject headings, cross-references, and areas of the classification schedules to meet local needs. While several essays detail the attempts of librarians to persuade the LC to accept new subject heading proposals, another decries the amount of database maintenance work caused by the frequent microchanges made in subject headings.

However, all of these user-centered efforts by catalogers play out against the background of the push at many libraries—including the LC—to cut costs by reducing the effort that goes into authority controlled name headings and subject headings. I will let Tina Gross have the last word: “What has yet to be resolved is whether these changes will actually mean progress and improvement or the gutting of our mission. Against the latter, recalcitrance, opposition, and resistance are desperately needed” (146).—Sue Wartzok, (swartzok@fiu.edu), Florida International University, Miami.

References


Building Digital Libraries: A How-To-Do-It Manual is a departure from other literature dealing with local digital repository building, which has been written primarily with archivists’ interests in mind. The aim of Building Digital Libraries is to appeal to the “full range of librarians involved in digital projects: systems librarians, project managers, and students, many of whom will find themselves starting, updating, or maintaining digital collections in years to come” (xiii).

Terry Reese, head of the Digital Production Unit at Oregon State University Libraries and creator of MarcEdit, and Kyle Banerjee, manager of the Digital Services Program at Orbis Cascade Alliance in Eugene, Oregon, and a designer of Oregon State’s electronic documents repository, draw on their vast experience to present a concise, detailed, and accessible manual that addresses the fundamental principles of digital librarianship and provides practical information about how to build a scalable digital repository.

Throughout the book, readers are reminded that digital libraries are still in their infancy. Like any new archives, a sustainable digital repository depends on adequate funding, realistic collection development policies, and well-conceived workflows. Yet, as the authors point out, “The issues associated with increasingly common interactive information resources are more complex by orders of magnitude” (7). Digital library tools and methods cannot yet be considered stable. Processing and access mechanisms are still new. It is difficult to describe and store varied digital objects in a way that makes them easy to find and use. With so many emerging technologies and standards, it is a wonder that this how-to manual provides such sound guidance, but it does.

Each chapter focuses on a step in the library-building process. Early sections provide broad overviews of startup considerations and fundamentals of images and text processing, rights management, and data migration. Chapter 3, “Choosing a Repository Architecture,” provides a useful assessment of the leading digital repository platforms and outlines the required and desired architectural features for any digital repository infrastructure. The content gets progressively more technical as the authors examine useful general-purpose technologies, such as Extensible Markup Language (XML), Simple Object Access Protocol (SOAP), metadata formats and harvesting, and federated searching.

To help those unfamiliar with XML understand how and why it is used in digital libraries, ample examples of XML display are shown along with an explanation of the various technologies that sprang from the XML specification (XPATH, XSLT, XPointer, etc.). The authors’ five-point treatise on why libraries should adopt this way of managing bibliographic description is well stated and worth sharing with those unconvinced of XML’s many advantages.

The authors rightly situate metadata—and the ability to share it—at the hub of a successful digital repository. Being able to bring the desired information object to the surface is crucial to success. They cover the history, strengths, and challenges of metadata standards, such as Dublin Core, Metadata Object Description Schema (MODS), Metadata Encoding and Transmission Standard (METS), as well as efforts to enable the interoperability of data across the Semantic Web.

Demand only continues to grow for access to local repository content outside the traditional user interface, and the authors provide instruction on many of the technologies that make that possible. Beyond a relatively detailed explanation of Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH), chapter 6 provides an overview of microformats, a relatively new phenomenon in digital computing that enables better structured Web publishing.

Conceptual aspects of building digital libraries and technical details of the book are, for the most part, equally weighed, but the emphasis is squarely on the technologies that enable a dynamic repository. Readers looking for collection policy guidance, sample copyright clearance, or production workflows will not find them here. The need for good workflows and sound collection and copyright policies is endorsed, but not explored.

Building Digital Libraries is a desk reference for those directly involved in building digital libraries as well as a robust introduction for any library worker interested in the concepts and technologies that enable digital libraries to function. As the authors aptly point out, “It is not necessary to learn the technical details of the myriad of technologies that libraries depend on. However, it is essential to understand the purpose, advantages, and major limitations of technologies to get the most benefit from them” (263).—Nicole Saylor (nicole-saylor@uiowa.edu), University of Iowa, Iowa City.
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