### Articles

Lori Franz, John Powell, Suzann Jude, and Karen M. Drabenstott  
End-User Understanding of Subdivided Subject Headings

Martha M. Yee  
Manifestations and Near-Equivalents: Theory, with Special Attention to Moving Image Materials

Anita Schuneman and Deborah A. Mohr  
Team Cataloging in Academic Libraries: An Exploratory Survey

### Notes on Operations

Joan B. Fiscella and Nancy Sack  
The Evolving Role of Academic Librarians

Viveca S. Seymour  
A Survey of East European Monographic Records in the OCLC Database

Maria Grandinette and Randy Silverman  
The Library Collections Conservation Discussion Group: A Comprehensive Look at Book Repair

Subcommittee on Preservation Photocopying  
Guidelines for Preservation Photocopying

Terry Ballard  
Comparative Searching Styles

Jean Weihl and Lynne C. Howarth  
AACR2R Format Preferences in Canadian Libraries

### Features

Lawrence W. S. Auld, Editor  
Book Reviews

Ron Sigler  
Audio Book Breakthrough

Pearl Berger  
The Evolving National Information Network

Diane Dates Casey  
Hiring Library Employees

Margie Epple Fiels  
Libraries and the Future

Thomas E. Nisonger  
Multicultural Acquisitions

Margaret E. Doultt  
The Nation's Great Library

William T. Henderson  
Preservation in Libraries

Arthur P. Young  
Research Libraries

Bella Hass Weinberg  
Subject Analysis and Indexing

In Memoriam: Donald C. Cook

Index to Advertisers
EDITORIAL BOARD

Editor and Chair of the Editorial Board ........................................ RICHARD P. SMIRAGLIA
Editorial Assistant ................................................................. ROB RUCKER
Assistant Editors:
   KAREN A. SCHMIDT ......................................................... for Acquisitions Section
   CHARLES SIMPSON .......................................................... for Cataloging and Classification Section
   EUGENE L. WIEMERS ....................................................... for Collection Management and Development Section
   LORRAINE OLLIE ........................................................... for Preservation of Library Materials Section
   REGINA SINCLAIR .......................................................... for Reproduction of Library Materials Section
   JOHN J. Riemer .............................................................. for Serials Section
   D. Kathryn Weintrob ..................................................... Special Editor
   CAROIJ. MANDEL ............................................................ Special Editor
   LAWRENCE W. S. AUDL .................................................... Book Review Editor
   TAMARA WEINTROB FROUIN ............................................. Intern

Ex-Officio Members:
   LAVERN A. SAUNDERS, Chair, Council of Regional Groups
   KAREN MULLER, Executive Director, ALCTS
   EDWARD SWANSON, Interim Editor, ALCTS Newsletter

Library Resources & Technical Services (ISSN 0024-2527), the quarterly official publication of the Association for Library Collections & Technical Services, a division of the American Library Association, is published at ALA Headquarters, 50 E. Huron St., Chicago, IL 60611. Business Manager: Karen Muller, Executive Director, Association for Library Collections & Technical Services, a division of the American Library Association. Send manuscripts to the Editorial Office: Richard P. Smiraglia, Editor, Library Resources & Technical Services, Palmer School of Library and Information Science, Long Island University, Brookville, NY 11548; (516) 299-2174; fax (516) 626-2665; Internet: smiraglia@hornet.liunet.edu. Advertising Sales Manager, Stuart M. Foster; Advertising Coordinator, Dolores L. LaPointe, c/o Choice, 100 Riverview Center, Middle-town, CT 06457, phone (203) 347-6933. ALA Production Services: Eileen Mahoney, Dianne M. Rooney, Bruce Frausto, and Donavan Vicha. Subscription Price: to members of the Association for Library Collections & Technical Services, $37.50 per year, included in the membership dues; to nonmembers, $55 per year in U.S., Canada, and Mexico, and $55 per year in other foreign countries. Single copies, $15. Members: Address changes and inquiries should be sent to Membership Department—Library Resources & Technical Services, 50 E. Huron St., Chicago, IL 60611. Nonmember subscribers: Subscriptions, orders, changes of address, and inquiries should be sent to Library Resources & Technical Services, S & S Computer Services, Inc., 434 W. Downer, Aurora, IL 60506.

Second-class postage paid at Chicago, IL, and at additional mailing offices. POSTMASTER: Send address changes to Library Resources & Technical Services, 50 E. Huron St., Chicago, IL 60611.

Library Resources & Technical Services is indexed in Library Literature, Library & Information Science Abstracts, Current Index to Journals in Education, Science Citation Index, and Information Science Abstracts. Contents are listed in CALL (Current American—Library Literature). Its reviews are included in Book Review Digest, Book Review Index, and Review of Reviews.

Instructions for authors appear on p. 111–12 of the January 1994 issue. Copies of books for review should be addressed to book review editor, Lawrence W. S. Auld, Department of Library and Educational Technology Studies, 215 Joyner Library, East Carolina University, Greenville, NC 27858-4353; Internet lsauld@ecuvm.cis.ecu.edu.

© American Library Association 1994

All materials in this journal subject to copyright by the American Library Association may be photocopied for the noncommercial purpose of scientific or educational advancement granted by Sections 107 and 108 of the Copyright Revision Act of 1976. For other reprinting, photocopying, or translating, address requests to the ALA Office of Rights and Permissions, 50 E. Huron St., Chicago, IL 60611.


Publication in Library Resources & Technical Services does not imply official endorsement by the Association for Library Collections & Technical Services nor by ALA, and the assumption of editorial responsibility is not to be construed as endorsement of the opinions expressed by the editor or individual contributors.
End-User Understanding of Subdivided Subject Headings

Lori Franz, John Powell, Suzann Jude, and Karen M. Drabenstott

The purpose of the study described in this paper is to investigate end-user understanding of subdivided subject headings in their current form and in the form proposed by the first recommendation of the Library of Congress (LC) Subject Subdivisions Conference. The impetus for this study was a charge to the Subcommittee on the Order of LCSH Subdivisions by the Subject Analysis Committee of the American Library Association to respond to the first recommendation of the LC Subject Subdivisions Conference that proposed standardizing the order of subject subdivisions. The authors composed self-administered questionnaires bearing subdivided subject headings in the "current" form and in the form proposed in the first recommendation of the LC conference. The authors recruited end users and professional catalogers to complete questionnaires that asked for the meaning of individual headings. The authors then compared end users' responses to catalogers' responses to determine end users' level of understanding of subdivided subject headings. An analysis of end-user interpretations demonstrated that end users interpreted the meaning of subject headings in the same manner as catalogers about 40% of the time for "current" forms of subject headings and about 32% of the time for "proposed" forms of subject headings. The paper concludes with specific recommendations about the first recommendation of the LC Subject Subdivisions Conference and general recommendations about increasing end-user understanding of subdivided subject headings.

Calls to simplify subject cataloging have become frequent in recent years due to the complexity of the Library of Congress Subject Headings (LCSH) (Gregor and Mandel 1991; Mandel 1988; Knutson 1993). Simplification was on the mind of the conveners of a conference sponsored by the Library of Congress (LC) on May 9–12, 1991, that focused on subject subdivisions in the LCSH system. The purpose of the conference was threefold (Conway 1992, 1):

To make the assignment of subject headings more efficient.
To enhance and encourage cooperative cataloging efforts.

LORI FRANZ, JOHN POWELL, and SUZANN JUDE are masters students, and KAREN M. DRABENSTOTT is Associate Professor, School of Library and Information Studies, University of Michigan. The authors acknowledge Diane Vizine-Goetz and Karen Calhoun of the OCLC Online Computer Library Center, Inc., who provided the subdivided subject headings used in this study. Manuscript received February 1, 1994; accepted for publication March 8, 1994; revised March 18, 1994.
To improve subject access for online public access catalog (OPAC) users.

Four proposals provided the basis for discussions among conference participants. Proposal four of the LC Subject Subdivisions Conference suggested changing the current LCSH subdivision formulas (Leighton, Mandel, and Wolven 1992, 70-71) from:

Topic—Place—Subdivision(s)
Topic—Subdivision(s)—Place
Place—Subdivision(s)

to:

Topic—Place—Subdivision—Subdivision
Place—Subdivision—Subdivision—Subdivision.

Leighton, Mandel, and Wolven acknowledged that with only these two formulas, some concept strings would be eliminated, but they did not elaborate on this idea. In the "cons" paper to proposal four, Peter Lisbon suggested an alternative. He called for "placing the geographic element at the end of the string in every case absolutely, or else at the end except for form subdivisions that would follow" (Lisbon 1992, 83). Thus, Lisbon's suggestion would make "Topic—Subdivision(s)—Place" the standard form.

The implications for end users of implementing a change in the order of subdivisions are unknown. One possible implication is change in the meaning of subject headings. That is, when subdivision order changes, the meaning of the subject heading might also change.

Highly undesirable results are obtained if a system displays the subdivisions attached to a single heading in an order based on the MARC subfield code; an example of such mechanically defined order might be $x$ subfields always precede $y$ subfields, which always precede $z$ subfields. The subcommittee recommends that no system follow this practice, because it changes the meaning of headings (Subcommittee on the Display of Subject Headings 1992, 14).

Schuyler, Sinn, and Weiss (1992, 75-76), and Lisbon (1992, 81-83) acknowledge that a particular order of subdivisions might provide an increased level of consistency in the formulation of headings. The price for a particular order could be a loss in the specificity of meaning. For example, the two subject headings with transposed subdivisions, Railroads—Study and teaching—France and Railroads—France—Study and teaching, describe two different concepts (Leighton, Mandel, and Wolven 1992, 71 and Schuyler, Sinn, and Weiss 1992, 78). The meaning of the first subject heading is "French study and teaching of railroads," while the meaning of the second is "the study and teaching of French railroads." The first concept would be lost with the recommended change.

The result of the LC Subject Subdivisions Conference was a list of six recommendations. The first recommendation specifically was designed to address the order of subdivisions, viz., "If the cataloger chooses to apply subdivisions, the subdivisions should always appear in the following order: topical, geographic, chronological, form" (Conway 1992, 6). Despite warnings about the potential for loss of specificity, LC Subject Subdivisions Conference participants still believed establishing a consistent order of subdivisions would be worthwhile and made this a priority in the first conference recommendation.

The purpose of the study described in this paper is to investigate end-user understanding of subdivided subject headings in their current form and in the form proposed by the first recommendation of the LC Subject Subdivisions Conference. The impetus for this study was a charge to the Subcommittee on the Order of LCSH Subdivisions by the Subject Analysis Committee (SAC) of the American Library Association (ALA) to respond to the recommendations of the LC Subject Subdivisions Conference. The Subcommittee undertook a multifaceted study of subject subdivisions to ensure an informed decision regarding the future of subject subdivisions. One facet of the Subcommittee's study was the present study of end-user understanding of subdivided subject headings. To the authors' knowledge, the study in this paper is the first to investigate end-user understanding of subdivided subject headings in the LCSH system.
DEVELOPMENT OF THE QUESTIONNAIRES

To test whether end users understand the meaning of subdivided subject headings, the authors composed a self-administered questionnaire bearing a combination of subdivided subject headings that asked typical end users and professional catalogers to briefly state the meaning of individual headings and requested demographic information from them. The authors then compared end users’ responses to catalogers’ responses to determine end users’ level of understanding of subdivided subject headings.

Respondents saw only the “current” or “proposed” form of any given subject heading to eliminate the “carryover effect,” that is, the possibility of the respondent carrying over the perceived meaning of a subject heading to its reordered counterpart. For example, a person who sees both “current” and “proposed” headings might try to guess at the intent of the study, and might, consciously or not, discern a difference in meaning in order to “cooperate” by providing the results it is thought the researchers want to obtain.

OCLC Online Computer Library Center, Inc., staff provided the authors with a list of thirty-six subdivided subject headings from the OCLC Online Union Catalog (OLUC) that stem from four frequently subdivided main headings, viz., English poetry, Jews, Music, and Art, Modern. OCLC staff believed that reordering the subdivisions in these subject headings was likely to shift the position of subject headings in an alphabetical list or change their meaning. OCLC staff also provided the authors with a list of nine subdivided subject headings that were chosen randomly from the OLUC. Thus, a total of forty-five unique subdivided subject headings were used in this study. This number expanded to ninety subject headings because there were forty-five subdivided subject headings in the “current” order, and forty-five subdivided subject headings in the “proposed” order of subdivisions. (The ninety subject headings used in this study are listed in the appendix.)

Subdivided subject headings varied in length from as few as two elements (main heading and one subdivision) to as many as five elements (main heading and four subdivisions). Examples of short and long headings were Music—19th century, and Jews—Colonization—Palestine—History—19th century. They also varied in the number of words per subfield; examples of terse and wordy subject headings are Jews—Brazil—History—Manuscripts—Catalogs and English poetry—Old English, ca. 450-1100—History and criticism—Bibliography, respectively.

Two subdivided subject headings were eliminated because the “proposed” form did not differ from the “current” form. From the remaining forty-three pairs of subdivided subject headings, the authors chose thirty pairs to list on questionnaires. The authors randomly chose two subject headings from each of the five categories of nine “current” subject headings. For example, from the “current” list of Jews subject headings, one author chose the first and the ninth headings, from the Art, Modern subject headings, one author chose the fourth and the seventh, and so on (see the appendix).

The authors prepared three pairs of questionnaires. Questionnaires were paired to ensure that the first member of the pair contained a mixture of ten subdivided subject headings in “current” order and in “proposed” order of subdivisions. The second member of the pair contained a mixture of ten subdivided subject headings but the forms of subject headings were the opposite of the first pair member. No questionnaire contained a subdivided subject heading in both “current” and “proposed” order. The authors distributed each questionnaire to at least nine people who did not work in libraries or who were not enrolled in library studies programs. They also distributed a questionnaire to one professional cataloger and one reference librarian.

Self-administered questionnaires instructed respondents to read each phrase, write down their first impression of what
the phrase meant, and then answer seven questions about themselves and their use of libraries. After reviewing respondents' answers to questionnaires, the authors determined that the instructions were too brief, expanded them, and included an example in the expanded version. Thus, the questionnaires contained one of the following two versions of instructions:

**Version 1:**
You will find listed 10 subject phrases. Please read each of the phrases and write down your first impression of what the phrase means. Then answer 7 questions about yourself and use of libraries. Your responses will help improve access to library materials.

**Version 2:**
On page 1 of this survey, 10 subject phrases are listed. Please read each phrase and write down your first impression of what kind of book you would expect to find under that phrase. For example, if the phrase were: Television—History—Mexico, one might expect to find materials about the “History of televisions in Mexico.” On page 2 of this survey, 7 questions are listed. Please answer these seven questions that ask about yourself and your use of libraries. Your responses will help improve access to library materials.

The authors also found that they sometimes had to assist respondents by giving instructions orally.

The demographic portion of the questionnaires included questions on how often respondents use libraries, how they locate materials, their highest education level, occupation, sex, ethnic or racial group, and age group.

**Analysis of End-User Questionnaires**

The authors first reviewed the responses of catalogers to determine the “correct” meaning for subdivided subject headings enumerated on questionnaires. This was an unexpected challenge because the authors did not always agree with catalogers’ interpretations of the same subject headings. For example, a cataloger interpreted the subject heading in “current” form Art, Modern—17th-18th centuries—Spain as “Spanish art from the 17th-18th centuries.” A different cataloger interpreted the subject heading in “proposed” form Art, Modern—Spain—17th-18th centuries as “Spanish art from the 17th-18th centuries.” Because their interpretations to this subject heading in “current” and “proposed” forms were exactly alike, the authors were concerned because they expected that meanings would change, even slightly, when subdivision order was changed (Subcommittee on the Display of Subject Headings 1992, 14). The authors did not agree with cataloger interpretations to the following subject headings:

<table>
<thead>
<tr>
<th>Subject Headings</th>
<th>Cataloger Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jews—United States—Music—History and criticism</td>
<td>“History/analysis of the music written/ performed by Jews residing in the U.S.”</td>
</tr>
<tr>
<td>Jews—Europe—Politics and government—Conferences</td>
<td>“Presentation of papers presented at a congress of European politics and/or government relating to Jews”</td>
</tr>
<tr>
<td>Jews—Colonization—History—Palestine—19th century</td>
<td>“The migration of Jews to Palestine (some might say the homecoming that occurred during the 19th century)”</td>
</tr>
</tbody>
</table>

Because they did not always agree with catalogers’ interpretations of “current” and “proposed” forms of subject headings, one study team member (Drabenstott) reviewed catalogers’ responses to obtain a “standard of correctness” for each subject heading. The authors’ skepticism about catalogers’ interpretations carried over to reference librarians’ interpretations. Thus, the authors did not analyze reference librarians’ interpretations for this study. They suggest that future studies of meaning and understanding of subdivided subject headings include several catalogers and reference librarians to shed light on the nature of variations within each group and between groups.

Following their determination of the “correct” meaning of subdivided subject
headings, the authors compared end-user interpretations with the "correct" interpretation. They classified end-user interpretations into one of nine categories, based on their assessment of agreement with the "correct" interpretation. The nine categories are:

- Correct using same language
- Correct using different language
- Read in one concept
- Read in more than one concept
- Left out one concept
- Left out more than one concept
- Substituted one concept for another
- Substituted more than one concept
- None of the above

The categories used in this analysis for one pair of "current" and "proposed" subject headings are shown in Table 1. The "correct" form of this subject heading is World War, 1939-1945—Regimental histories—France and the "proposed" form is World War, 1939-1945—France—Regimental histories. One cataloger interpreted the "current" form as "French Regimental histories of World War II" and another cataloger interpreted the "proposed" form as "Histories of French regiments in or during World War, 1939-1945." The nine interpretation categories and the number of users whose interpretations fit into particular categories are listed in the table.

"Correct using same language" meant the user matched the cataloger's language and syntax. For example, the end-user interpretation of the "current" form "French regimental histories of World War 1939-1945" merited classification in this category. The authors also included user interpretations bearing the prepositional phrase "of France" in this category, as they determined this to mean the same as "French."

"Correct using different language" meant that while the user gave a correct interpretation, its meaning was given in different terms than those of the cataloger. For example, an end user gave the interpretation "France 1939-1945 World War Regimental History" of the "proposed" form. Although all the desired words were included in the answer, the authors could not determine the relationships between the concepts. Thus, they gave the respondent the benefit of the doubt, and classified this response into the category of "correct using different language."

The authors considered the two categories "Correct using same language" and "Correct using different language" as correct interpretations of the subject heading. Responses classified in other categories were considered "not as correct" or "incorrect."

"Read in one concept" and "Read in more than one concept" were categories encompassing responses in which users added one or more concepts to the original subject heading. An example of reading in one concept is the user interpretation "WWII in France including its regimental histories" to the "proposed" form of subject heading given in Table 1. Although this interpretation approximates the correct meaning, it is too broad.

The randomly chosen "current" heading Combined sewers—Illinois—Chicago metropolitan area—Overflows and the "proposed" form Combined sewers—Overflows—Illinois—Chicago metropolitan area, also caused confusion among respondents. Twenty-five percent

<table>
<thead>
<tr>
<th>Interpretation Category</th>
<th>Current Order</th>
<th>Proposed Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct using same language</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Correct using different language</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Read in one concept</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Read in more than one concept</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Left out one concept</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Left out more than one concept</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Substituted one concept for another</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Substituted more than one concept</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>None of the above</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>
of respondents added the "rest of Illinois" concept to their interpretation of the current form of this heading. For example, one user interpretation of the "current" form of heading was "Books on overflows for combined sewers in Chicago metropolitan area and the rest of Illinois." Users had even greater difficulty with the "proposed" form of the heading; 50% of them added "Illinois, in general" in addition to mentioning Chicago. For example, one respondent gave the interpretation "Books about Illinois with particular reference to combined sewer overflows in the Chicago metropolitan area." Unfortunately, this was the only heading among the selected headings containing an indirect place name. Although the authors do not wish to revisit the direct versus indirect geographic subdivision question, responses to this heading invite further investigation into user understanding of subject headings bearing indirect geographic subdivision.

The two categories "Left out one concept" and "Left out more than one concept" describe interpretations in which users omitted one or more concepts. For example, in response to the "current" form of subject heading World War, 1939–1945—Regimental histories—France, one user gave the interpretation "France in WWII"; this interpretation does not account for the idea of regimental histories. In response to the "proposed" form of heading World War, 1939–1945—France—Regimental histories, a respondent gave the interpretation "The second World War," and, thus, left out both the French and regimental histories concepts. Many user interpretations bearing the form subdivision "Congresses" were placed in this category as users left out term(s) indicating this concept from their interpretations. Perhaps users did not understand the meaning of this subdivision and omitted it entirely from their interpretations rather than guess at its meaning.

Fine syntax distinction led the authors to establish categories for "Substituted one concept for another" and "Substituted more than one concept." For example, the user interpretation of the "current" World War II heading in table 1, "Regimental histories in France during the Second World War 1939–45," was placed in the former category. According to the cataloger's interpretation of the "current" form of subject heading, the regimental histories were French regimental histories. The user interpretation allows for regimental histories generally in France, thus, such histories could be histories of German regiments in France, French regiments in France, American regiments in France, and so on.

The second substitution category, i.e., "Substituted more than one concept," was used for interpretations that omitted one or more concepts and added one or more ideas. For example, a user interpretation of the "current" form of heading World War, 1939–1945—France—Regimental histories was "World War II European theater." The user included the concept of World War II, omitted the concepts of French and regimental histories, and replaced them with European and theater concepts.

The authors frequently placed interpretations to subject headings bearing the subdivision "Congresses" in substitution categories. Of the users who attempted to explain what a congress is, many were often incorrect, sometimes adding the notion of government or the Library of Congress in their interpretations. For example, a user interpretation to the subject heading Art, Modern—Central Europe—20th century—Congresses was "20th century modern art in Central European legislatures." Another respondent gave the interpretation "Info. the Lib. of Congress has on Cent. European Modern Art for the 20th C."

A number of people responded in a manner the authors did not anticipate or failed to answer some questions at all. Such responses were placed in the "None of the above" category. Although the authors tried to limit placement of user interpretations in this category, a number of problem responses were unique to particular headings and were not appropriate to other categories. For example, in response to the heading Art, Modern—20th century—Central Europe—
Congressmen, one respondent gave the interpretation “The end of the impressionists and the formation of the Soviet blocs.” Another user responded to the subject heading Jews—Identity—Public opinion—Israel with the interpretation “Zionism.” These interpretations typified responses placed in this remaining category.

**PARTICIPATING END USERS AND CATALOGERS**

Seven concluding questions on the questionnaire asked respondents about themselves and their use of libraries. Responses of the 63 end users and six catalogers who participated in this study are found in tables 2–8.

**DEMOGRAPHIC DATA**

The authors worked hard to find end users who did not have connections to libraries or library and information science, and who represented broad segments of the general population. The highest educational level completed by end users and catalogers is summarized in table 2.

Most end users and all six catalogers were college or university graduates. Less than 10% of end users had no college or university experience.

Tables 3–5 include demographic characteristics of the respondents. The occupations of end users and catalogers are given in table 3; ethnic or racial characteristics of respondents are given in table 4; ages of respondents are summarized in table 5.

Of the end users 40% were professional workers and another 40% were students. Small percentages of end users were clerical workers or homemakers. The majority of end users and catalogers were white. Small percentages of African-American end users were obtained. Percentages of end users by age group were comparable to percentages obtained in an earlier study of public library users (Markey 1983, 58). However, percentages of end users by education level were comparable to percentages obtained in an earlier study of academic library users (Markey 1983, 62). Future studies of

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>EDUCATION LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Education Level of Respondents (N = 63)</td>
<td>% End Users</td>
</tr>
<tr>
<td>Elementary school</td>
<td>0</td>
</tr>
<tr>
<td>Junior high school</td>
<td>2</td>
</tr>
<tr>
<td>Senior high school</td>
<td>6</td>
</tr>
<tr>
<td>Some college or university</td>
<td>32</td>
</tr>
<tr>
<td>College or university graduate</td>
<td>59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>OCCUPATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation (N = 63)</td>
<td>% End Users (N = 63)</td>
</tr>
<tr>
<td>Professional</td>
<td>40</td>
</tr>
<tr>
<td>Student</td>
<td>40</td>
</tr>
<tr>
<td>Clerical worker</td>
<td>11</td>
</tr>
<tr>
<td>Homemaker</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 4</th>
<th>ETHNIC/RACIAL CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic/Racial characteristics</td>
<td>% End Users (N = 63)</td>
</tr>
<tr>
<td>White</td>
<td>64</td>
</tr>
<tr>
<td>African American</td>
<td>5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 5</th>
<th>AGE GROUPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Groups (N = 63)</td>
<td>% End Users (N = 63)</td>
</tr>
<tr>
<td>Younger than 15 years old</td>
<td>2</td>
</tr>
<tr>
<td>15–16 years old</td>
<td>0</td>
</tr>
<tr>
<td>17–18 years old</td>
<td>8</td>
</tr>
<tr>
<td>19–21 years old</td>
<td>10</td>
</tr>
<tr>
<td>22–30 years old</td>
<td>29</td>
</tr>
<tr>
<td>31–40 years old</td>
<td>19</td>
</tr>
<tr>
<td>41–50 years old</td>
<td>16</td>
</tr>
<tr>
<td>51–60 years old</td>
<td>14</td>
</tr>
<tr>
<td>Older than 60 years old</td>
<td>3</td>
</tr>
</tbody>
</table>
subject heading understanding could be focused on specific age groups, e.g., elementary school children, seniors, or library users who have no formal educational training beyond high school.

LIBRARY USE AND SEARCHING KNOWLEDGE

The frequency with which respondents indicate they consult libraries is summarized in Table 6. Generally, end users consulted libraries on a weekly or monthly basis. Only 2% of end users never used libraries. Catalogers consulted libraries on a daily or weekly basis.

Respondents also were asked how they search for library materials by topic. End users and catalogers were instructed to select as many questionnaire responses as were applicable. Their responses are summarized in Table 7.

When searching by topic, large percentages of end users and catalogers browsed randomly under words they knew. A small percentage of end users consulted LCSH in contrast to the large percentage of catalogers who consulted this source. End users also used their search terms by consulting librarians.

About one-third of respondents were asked this question in a different way. End-user and cataloger responses are given in Table 8.

The question about using subject headings was only put to two catalogers but both were unanimous about their frequent use of subject headings. Twenty percent of end users rarely or never used subject headings.

Percentages obtained in questions about frequency of library use, subject headings, and sources of subject terms were comparable to percentages in previous studies in which these or similar questions were asked (Frost 1987, 62; Markey 1983, 54; Pritchard 1981).

SUBJECT HEADING RESULTS

Sixty-three end users and six professional catalogers provided a total of 630 interpretations to “current” and “proposed” forms of subdivided subject headings. An average number of ten interpretations per form of subdivided subject heading was obtained. The range of interpretations per form of heading was nine to twelve (see Table 9). Percentages of interpretations were similar for “current” and “proposed” forms of subject headings. Between 27% and 33% of respondents were correct and used the same language as cataloger interpretations. Between 5% and 7% were correct but used different language as cataloger interpretations. Between 6% and 8% of respondents gave interpretations
TABLE 9

END-USER INTERPRETATIONS OF SUBJECT HEADINGS

<table>
<thead>
<tr>
<th>Interpretation Categories</th>
<th>Current (No.)</th>
<th>Current (%)</th>
<th>Proposed (No.)</th>
<th>Proposed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct using same language</td>
<td>104</td>
<td>33.1</td>
<td>85</td>
<td>26.9</td>
</tr>
<tr>
<td>Correct using different language</td>
<td>22</td>
<td>7.0</td>
<td>16</td>
<td>5.0</td>
</tr>
<tr>
<td>Read in one concept</td>
<td>16</td>
<td>5.1</td>
<td>22</td>
<td>6.9</td>
</tr>
<tr>
<td>Read in more than one concept</td>
<td>2</td>
<td>0.6</td>
<td>3</td>
<td>0.9</td>
</tr>
<tr>
<td>Left out one concept</td>
<td>16</td>
<td>5.1</td>
<td>25</td>
<td>7.9</td>
</tr>
<tr>
<td>Left out more than one concept</td>
<td>3</td>
<td>0.9</td>
<td>9</td>
<td>2.8</td>
</tr>
<tr>
<td>Substituted one concept for another</td>
<td>60</td>
<td>19.1</td>
<td>72</td>
<td>22.8</td>
</tr>
<tr>
<td>Substituted more than one concept</td>
<td>60</td>
<td>19.1</td>
<td>57</td>
<td>18.0</td>
</tr>
<tr>
<td>Other</td>
<td>31</td>
<td>10.0</td>
<td>28</td>
<td>8.8</td>
</tr>
<tr>
<td>Total</td>
<td>314</td>
<td>100.0</td>
<td>316</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Figure 1. User interpretations of "current" forms.

that were placed in categories for "reading in" concepts. "Leaving out" concepts characterized between 6% and 11% of end-user interpretations. End users substituted one or more concepts in between 38% and 41% of their interpretations.

Figures 1 and 2 are graphical summaries of end-user interpretations to "current" and "proposed" forms of subject headings, consolidating multiple categories for "correct," "reading in," and "leaving out" into single categories. In both figures percentages of categorized user interpretations for "current" and "proposed" forms of subject headings are quite similar.

SUBDIVISION ANALYSIS

The authors conducted analyses of end-user interpretations based on the number of subdivisions and number of words in subdivided subject headings. These analyses provided insight into whether the length or wordiness of subject headings affected user understanding.

NUMBER OF SUBDIVISIONS

Of the subject headings included on end-user questionnaires, 57% contained two subdivisions, 30% contained three subdivisions, and 13% contained four subdivisions.
Figure 2. User interpretations of “proposed” forms.

Figure 3. “Correct” interpretations vs. number of subdivisions.

Figure 3 is a summary of percentages of “correct” interpretations based on the number of subdivisions.

When subject headings contained two subdivisions, between 50% and 60% of end-user interpretations were “correct.” Percentages ranged from the high twenties to the mid thirties for subject headings bearing three subdivisions. Percentages dipped into the low twenties for “current” forms of subject headings bearing four subdivisions. Except for “proposed” forms of subject headings bearing four subdivisions, percentages of “correct” interpretations went down as the number of subdivisions in subject headings increased. Thus, end-user understanding of subdivided subject headings may be explained, in part, by the number of subdivisions in subject heading strings. Users understood about 40% of “proposed” forms of subject headings bearing four subdivisions. This high percentage of correct responses might be due to one subject heading bearing four subdivisions (Jews—History—Brazil—Manuscripts—Catalogs) among the subject headings in this category. Users were quite successful in interpreting this lengthy heading, thus, their correct responses raised the average for “correct” forms of headings with four subdivisions. Interestingly, this subject heading contained single words in all five subdivisions. This gave the authors...
the idea of extending their analysis of user understanding to the number of words in subject headings.

**Word Analysis**

The authors ascertained whether the number of words affected user understanding of subject headings. When considering what constituted a word, they counted dates in date ranges as single words and abbreviations such as “ca.” as single words. For example, they counted eleven words in the subject heading *English poetry—Old English, ca. 450-1100—History and criticism—Bibliography*. Number of words in subdivided subject headings ranged from as few as three words to as many as eleven. After counting the exact number of words per heading, the authors placed subdivided subject headings into three divisions based on the number of words in them: (1) three- and four-word headings, (2) five- and six-word headings, and (3) seven- to eleven-word headings (see figure 4).

The results of the analysis were similar to the results for the number of subdivisions per heading (figure 3). That is, as the number of words in subject headings increased, percentages of “correct” interpretations decreased. For subject headings with three to four words the percentage of “correct” interpretations was on average 56%; this dropped to 30% for subject headings with seven to eleven words. The authors concluded that the number of words in subject headings has a direct bearing on end-user understanding.

**CONCLUSION AND RECOMMENDATIONS**

This research effort was driven by the first recommendation of the LC Subject Subdivisions Conference, viz., “If the cataloger chooses to apply subdivisions, the subdivisions should always appear in the following order: topical, geographic, chronological, form” (Conway 1992, 6). The researchers attempted to determine whether end users understand the meaning of subject headings in “current” and “proposed” forms. An analysis of user interpretations of subdivided subject headings showed that end users interpreted the meaning of subject headings in the same manner as catalogers about 40% of the time for “current” forms of subject headings and about 32% of the time for “proposed” forms of subject headings. Percentages in other categories, i.e., “left out concept(s),” “substituted concept(s),” “read in concept(s),” and “none of the above,” were similar for “current” and “proposed” forms of subject headings. Percentages of correct interpretations were greater for subject headings bearing two subdivisions than subject headings bearing three or more subdivisions, but there was little difference between percentages for “current” and “proposed” forms. Percentages of correct interpretations were greater for terse subject headings than for wordy subject headings. Again, there was little difference between
percentages for “current” and “proposed” forms of terse or wordy subject headings.

If a decision about adopting the first conference recommendation is based on the data in this paper, changing the order of subdivisions will have little effect on end-user understanding. That is, changing the order of subdivisions will not make a significant increase or decrease in user understanding. To increase end-user understanding, efforts must be taken to shorten subject headings by reducing the number of subdivisions per string and by reducing the number of words in individual subject heading subdivisions.

Should subject cataloging be simplified in accordance with the first conference recommendation, the resulting changes will have far-reaching effects. Thus, decision makers should consider the many arguments for and against changes in addition to the findings of the research described in this paper. On the side of adopting the “proposed” order of subdivisions are claims that less time and training of both professional catalogers and paraprofessionals will be required. This could lead to reductions in the cost of cataloging and allow paraprofessionals to perform tasks done by professionals. Also on the side of adopting the “proposed” order of subdivisions are the number of systems, e.g., Innopac, that already display reordered subject subdivisions. Thus, many users have already encountered reordered forms of subject headings.

If subject cataloging is not changed, the expense of converting subject headings, retraining, revising and disseminating cataloging tools will be avoided. Subject headings will retain the specificity for which they were designed. There are certainly many more reasons in favor of maintaining the present system than adopting the proposed recommendation.

The research described in this paper suggests that end users understand the meaning of one of every three subject headings in the “proposed” forms that they encounter; they understand the meaning of two of every five subject headings in the “current” forms that they encounter. Should librarians be content with this level of understanding? Should they expend the time, effort, and resources to increase end-user understanding? Should they alter the present system or begin from scratch with an entirely new system?

As librarians consider changes to the LCSH system to simplify cataloging in the immediate future, they must think deeply about the value and future of manual subject cataloging generally. Will the proposed changes enhance the viability of the LCSH system in the digital library future? Will they streamline subject heading assignment to give catalogers more time to spend on intellectual and problem-solving tasks? Will they be implemented with a minimum of changes and disruptions to existing documentation, cataloging tools, and operations? Will they produce terms that users understand? Positive answers to these four questions are compelling reasons for adopting the first recommendation of the LC Subject Subdivisions Conference.

WORKS CITED


APPENDIX

OCLC-PROVIDED SUBJECT HEADINGS

Note: The authors selected headings in bold print to list on questionnaires.

"Current" forms of subject headings:

Art, Modern—17th-18th centuries—Spain
Art, Modern—17th-18th centuries—Europe—Exhibitions
Art, Modern—17th-18th centuries—Italian influences
Art, Modern—19th century—Marketing
Art, Modern—19th century—Austria—Catalogs
Art, Modern—20th century—United States—Themes, motives—Exhibitions
Art, Modern—20th century—Scotland—Exhibitions—Catalogs
Art, Modern—20th century—Netherlands—Awards—Exhibitions
Art, Modern—20th century—Central Europe—Congresses

English poetry—19th century—History and criticism
English poetry—20th century—History and criticism—Theory, etc.
English poetry—Early modern, 1500–1700—Criticism, Textual
English poetry—Early modern, 1500–1700—History and criticism
English poetry—Middle English, 1100–1500—Criticism, Textual—Congresses
English poetry—Middle English, 1100–1500—Modernized versions

"Proposed" forms of subject headings:

Art, Modern—Austria—19th century—Catalogs
Art, Modern—Awards—Netherlands—20th century—Exhibitions
Art, Modern—Central Europe—20th century—Congresses
Art, Modern—Europe—Exhibitions—17th-18th centuries
Art, Modern—Italian influences—17th-18th centuries
Art, Modern—Marketing—19th century
Art, Modern—Scotland—20th century—Exhibitions—Catalogs
Art, Modern—Spain—17th-18th centuries
Art, Modern—Themes, motives—United States—20th century—Exhibitions

English poetry—Criticism, Textual—Early modern, 1500–1700
English poetry—Criticism, Textual—Middle English, 1100–1500—Congresses
English poetry—History and criticism—19th century
English poetry—History and criticism—Early modern, 1500–1700
English poetry—History and criticism—Old English, ca. 450–1100
English poetry—History and criticism—Old English, ca. 450–1100—Bibliography
Manifestations and Near-Equivalents: Theory, with Special Attention to Moving-Image Materials

Martha M. Yee

Differences between manifestations and near-equivalents that might be considered significant by catalog users are examined. Anglo-American cataloging practice concerning when to make a new record is examined. Definitions for manifestation, title manifestation, and near-equivalent are proposed. It is suggested that current practice leads to making too many separate records for near-equivalents. It is recommended that practice be changed so that near-equivalents are more often cataloged on the same record. Next, differences between manifestations and near-equivalents of moving-image works are examined, and their significance to users of moving-image works is assessed. It is suggested that true manifestations result when the continuity, i.e., visual aspect of the work, or the soundtrack, i.e., audio aspect of the work, or the textual aspect of the work actually differ, whether due to editing, the appending of new material, or the work of subsidiary authors creating subtitles, new music tracks, etc. Title manifestations can occur when the title or billing order differs without there being any underlying difference in continuity. Distribution information can differ without there being any underlying difference in continuity, creating a near-equivalent. Finally, physical variants or near-equivalents can occur when physical format differs without the involvement of subsidiary authors.

A manifestation of a work is a version or edition of it that differs significantly from another version or edition. A near-equivalent is used here to mean a copy of the same manifestation of a work that differs from other copies in ways that do not significantly affect the intellectual or artistic content. In this article (excerpted from Yee 1993) I will discuss the kinds of differences that might be considered significant by catalog users, and the ways these differences have been handled by Anglo-American cataloging rules.

Two types of users will be considered: the general user, who is assumed to be interested only in significant differences in the intellectual or artistic content of a work, or in significant differences in the

Martha M. Yee is Cataloging Supervisor, University of California, Los Angeles Film and Television Archive. The author wishes to acknowledge the assistance of Eric Aijala, Bob Epstein and Michael Friend. Manuscript received November 30, 1993; accepted for publication February 20, 1994; revised April 1, 1994.
citation of the work; and other users interested in more minute differences, such as the bibliographer-user, who might be interested in physical evidence of the printing and publishing history of a work, or the preservation officer, who might be interested in binding or paper of differing qualities. Indeed, a theme running through the article will be that of the differences and similarities between bibliography and cataloging.

Under current cataloging practice, the question of what is a manifestation of a work is essentially the same as the question of what is the object of a cataloging record. Note in this connection, however, that several writers (Wilson 1989, 9; Layne 1989, 192-93) have proposed work-based records; Hinnebusch (1989) has proposed devising hierarchical MARC records; Attie (1989) has discussed the difficulty of linking MARC unit records; and Yee (1991, 81) has discussed the possible value of matching keywords in user-input, known-item searches on online catalogs against the set of records that make up a work.

A good deal of what follows will concern (1) the kinds of differences between a document being cataloged (henceforward to be called an item) and documents that have already been cataloged and are represented by surrogate records in the database of records, which can cause the item being cataloged to be considered a new manifestation, requiring a new record, and (2) the kinds of differences that are felt to be so minor that the item can be treated as a near-equivalent, which can be described on a record that already exists.

Historical and current practice will be examined. The small amount of previous research on the question of the most reliable visible indicators of difference in manifestation will also be described. The question of appropriate record-structuring techniques to express differences between items will be considered. Finally, definitions of the following will be proposed: manifestation, title manifestation, and near-equivalent. First, historical and current practice will be examined in general terms.

**Historical and Current Practice**

The practice of creating a new record for each new edition of a work goes back to the beginning of the use of unit records. Jewett's rule IV reads in part, "The whole title is to be repeated, for every distinct edition of the work" (Jewett 1852). Note, however, an equivalent rule concerning the object of a cataloging record is never stated explicitly in any published Anglo-American cataloging rules.

The development of a definition of edition in Anglo-American and international cataloging codes demonstrates an attempt to come to terms with technological change from the printing of books by the setting of type to the production of many different kinds of works, including books, by means of the many new methods of duplication and reproduction that have exploded into being in the course of the twentieth century. Cutter's fourth edition contained the following definition of edition: "A number of copies of a book, published at the same time and in the same form. A later publication of the same book unchanged is sometimes styled a different edition, sometimes a new issue, sometimes a different thousand (4th thousand, 7th thousand)" (Cutter 1904, 19). The 1908 rules were the first Anglo-American cataloging rules to adopt the bibliographers' definition of edition: "The whole number of copies printed from the same set of types and issued at the same time" (American Library Association 1908, xiv). In 1941, the definition was changed so as to remove the requirement that the copies be issued at the same time, in order to accommodate printing from stereotype or electrolyte plates (ALA Catalog Code Revision Committee 1941, xix).

This definition remained essentially unchanged until 1974, when the first of the ISBDs ISBD(M) appeared, defining edition as "all the copies of a publication printed from one setting of type, or produced from one master copy, and issued by one publisher or group of publishers. (An edition may comprise several impressions or issues, in which there may be slight variations)" (IFLA Committee on Cataloguing 1974, 2). For the first time, a
definition had been devised that could be applied to nonbook materials not produced by the setting of type.

The current Anglo-American definition reads (ALA 1988, 617):

(Booklets, pamphlets, fascicles, single sheets, etc.) All copies produced from essentially the same type image (whether by direct contact or by photographic or other methods) and issued by the same entity.

(Computer files) All copies embodying essentially the same content and issued by the same entity.

(Unpublished items) All copies made from essentially the same original production (e.g., the original and carbon copies of a typescript).

(Other materials) All copies produced from essentially the same master copy and issued by the same entity. A change in the identity of the distributor does not mean a change of edition.

The latest ISBD(M) contains the following definition of edition: “All copies of a publication produced from substantially the same original input and issued by the same agency, whether by direct contact or by photographic or other methods” (IFLA Universal Bibliographic Control and International MARC Programme 1987, 3).

The fact that the definition no longer refers to the setting of type seems to indicate an attempt to recognize the fact that catalogers have rarely been able to examine and compare type settings or type image, and that in fact they have relied on evidence on title pages and preliminaries, and on paging or other extent measurement, to determine when two items were two different editions of the same work.

Dorcas Fellows, in 1915, described the cataloging practice of adding editions subsequently acquired by a library to the card for the first edition acquired, using dashed-on entries (Fellows 1915, 132-37). This mention in 1915 might indicate that the use of dashed-on entries was practiced in the construction of card catalogs prior to its formal introduction into AACR in 1967, which allowed the more limited practice of dashed-on entries for different issues of a given edition or for reproductions (ALA 1967, 225-26). This practice may be considered to be a holdover of a long practice in book catalogs of describing subsequent editions of a work with dashes to represent all elements of the description that are the same as in previous editions; the British Museum catalog is perhaps the most readily available example of such a book catalog. The use of dashed-on entries is evidence of a desire not to confuse users with multiple entries for nearly identical items; in a dashed-on entry, only the significant differences in a new edition or issue are noted, and the inclusion of the dashed-on entry on an existing record quickly and concisely indicates to the user the degree to which the two items are identical.

The use of dashed-on entries is also evidence of a desire to create fewer records and to simplify cataloging. Further evidence of the latter is found in the 1949 rules, which state, “To distinguish the various issues of a given edition, any of a wide variety of details might need to be specified. However, at the Library of Congress it is not the policy, except in certain cases of rare books, to collect the various issues of a given edition and consequently no attempt is made to describe works in detail sufficient to identify them as issues. Various issues are added to the collection as copies if the description of the first one cataloged fits those received later in all details or in all details except the imprint date or the form of the publisher’s name or both. If there are other differences, the issues are generally treated as different editions” (LC, Descriptive Cataloging Division 1949, 9).

From 1949 forward, less and less emphasis is placed on the distinction between issues and editions. The 1949 rules were the first to use the term item, as opposed to the more specific terms edition or issue, when referring to the object of a cataloging record: “The objectives of descriptive cataloging are (1) to state the significant features of an item with the purpose of distinguishing it from other items and describing its scope, contents, and bibliographic relation to other items...” (LC, Descriptive Cataloging Division 1949, 7). The term item is a neutral and ambiguous term that allows flexibility in determining what, in fact, to make the object of a
record. It was first defined, somewhat circularly, in the ISBD(G) as "a document, group of documents, or part of a document, in any physical form, considered as an entity and forming the basis of a single bibliographic description. The term document is used here in its widest sense" (IFLA International Office for UBC 1977, 2). The current Anglo-American definition of item is "a document or set of documents in any physical form, published, issued, or treated as an entity, and as such forming the basis for a single bibliographic description" (ALA 1988, 619). The use of the concept of item might represent a backing away from legislation in the cataloging code itself on what the object of a single description should be. Both the Library of Congress and the OCLC Online Computer Library Center, Inc., have published fairly elaborate guidelines, which differ from each other, to enable the cataloger to decide when to make a new record (LC 1990; OCLC 1993, 37-49); both sets of guidelines attempt to identify differences on title pages and preliminaries or in physical description that should be considered so minor that it is not necessary to make a new record. These will be considered in more detail in the next section.

In summary, a historical review seems to reveal a trend away from use of the bibliographers' strict definition of edition to a definition that takes into account newer technologies for duplication, reproduction, and distribution of works. It also seems to reveal a reluctance to legislate in the cataloging codes on the issue of the object of a single cataloging record. And finally, it seems to indicate an attempt to devise methods to cut down on the number of cataloging records created to describe the various issues, variants, impressions, and reproductions of an edition of a work—in other words, to avoid creating new bibliographic records to describe minor variations between items. Perhaps the recent Multiple Versions Forum could be seen as an attempt to respond to these trends; here the recommendation was made that near-equivalents be cataloged on one record, using the new USMARC holdings format (Multiple Versions Forum 1990). The library community has recently limited the single-record approach to one type of near-equivalent, the reproduction (ALA, Task Force on Multiple Versions 1992). The tendency toward reducing the number of new records created seems to be in conflict, however, with the desire to simplify cataloging by teaching cataloging staffs to make a new record any time there is a difference in the publication statement, without differentiating, for example, between distributors and publishers, or among various types of date change.

**Types of Difference Between Manifestation or Near-Equivalent**

Now that the historical context has been established and current practice has been defined, the types of difference that can occur from one manifestation to another or from one near-equivalent to another will be considered.

**Difference in Title Page and Its Connection with Difference in Text**

Catalogers give much more weight to a difference in title page than do bibliographers. For bibliographers, the term edition is used quite strictly to mean "all copies resulting from a single job of typographical composition" (Tanselle 1975, 17) regardless of differences on the title page. It has long been recognized that two copies of the same edition, using the bibliographers' definition, can have different title pages. Bibliographers generally refer to such copies as issues or states (Gaskell 1972, 315–16). As far back as 1876, Cutter mentioned that such issues or states with different title pages were referred to by the Germans as title-editions (Cutter 1876, 61, rule 135; Cutter 1904, 19; see also LC, Processing Dept. 1946). It has long been recognized that the reverse can be true: that two different editions, that is two different settings of type, can be masked by identical title pages (LC, Processing Dept. 1946; Bla...
ing codes have incorporated definitions for *edition* similar to that used by bibliographers. Even though, as noted above, there is a trend away from the mention of settings of type, the current definition of *edition* for books in AACR2 still refers to type image: "In the case of books and booklike materials, all those copies of an item produced from substantially the same type image, whether by direct contact or by photographic methods" (ALA 1988, 617). In practice, however, Anglo-American catalogers do not in fact carry out textual comparisons to determine whether two items represent the same edition. It is very unusual for the cataloger of an item to look at more than its title page, preliminaries, overall paging and dimensions, and any readily available cataloging records that might serve as surrogates for other items that are candidates for representing the same edition. In other words, the Anglo-American cataloger is dependent on title page representation or representation elsewhere in the preliminaries of a work in making decisions about whether two items are copies of the same edition or two different editions. But title pages and preliminaries are not always reliable evidence. In some cases textual comparison of a number of different items, recorded in the form of elaborate collations, is necessary to determine whether two items are copies of the same edition, in the bibliographers' strict use of the term *edition*. Catalogers cannot afford to take the time to create elaborate collations for current publications. Some rare book collections can afford to create elaborate collations, but even in those collections, catalogers often are not able to assemble all the copies usually necessary to accurately classify editions, because, as Tanselle points out, "to establish such facts demands recourse to copies outside the collection" (Tanselle 1975, 17). The question arises, then, whether catalogers should retain the bibliographers' definition of *edition* when they do not have the resources to identify and distinguish editions to that degree of accuracy.

So far, only the question of what catalogers can reasonably hope to accomplish has been considered. The question of whether their definition of *edition* corresponds to the needs of catalog users has not yet been considered. Since catalogers have been unable to implement the bibliographically accurate definition of *edition* carried in their glossaries all these years, they probably have been unable to satisfy the needs of those catalog users who are bibliographers and textual scholars. For example, William B. Todd (1981, 48) writes:

Without further analysis one may readily accept a report, from a major research library, that through 1955 Melville's *Moby Dick* ranged through 118 "editions." Upon proper investigation, however, one must conclude, with G. Thomas Tanselle, that all these NUC entries actually make up only thirty-five editions.

Rather than dwelling on this gloomy fact, however, one should consider the more cheerful possibility that perhaps current practice does meet the needs of many non-bibliographer catalog users. That is, the possibility should be considered that differences in title page representation, while they might not necessarily reflect actual differences in the setting of the type beneath, might nevertheless correspond to differences in citation and searching practice on the part of those catalog users who are not bibliographers.

In practice, bibliographers and rare book catalogers create two records for two items in the same edition with different title pages just as catalogers do. For example, in the Eighteenth-Century Short Title Catalog Project, the object of a record is not just an edition, but an issue or an impression. The real difference between catalogers and bibliographers lies in the degree to which bibliographers clarify the relationships between issues and editions, and use the terms according to their technical definitions, as compared to the tendency on the part of catalogers to simply report how an item describes itself as to edition, whether the publisher has been bibliographically accurate or not, and to report differences in title pages, but not differences in collation beyond changes in primary paging. ("The First Phase" 1983, 11; Alston 1981, 381).

There are several ways title page
representation can vary, and distinctions should be made. In cataloging most items, the following elements are transcribed when present: title and statement of responsibility, edition statement, imprint (called publication, distribution area in the Anglo-American Cataloguing Rules, second edition [AACR2]), and series.

**Title Proper and Series Title**

When two items have different titles, one can make a good argument for creating separate records for each, even if they are not two different editions in the bibliographer's use of the term; in fact, this has always been standard cataloging practice. The title is so important in citation practice that it is felt to be wise to record on separate records all the different titles under which a particular work has been issued. Another way of stating this argument is to say that issues or states with different titles on their title pages should be given separate records even though separate records are not normally made for different impressions, issues, or states. Besides the importance for matching users' citations to catalog records, another argument in favor of making separate records for title differences is that the records of these differences are of historical interest in themselves; they could enable historians and other scholars to trace the history of a particular work, including the various titles it has borne.

One could extend the same argument to cover differences in series titles. Series titles might sometimes warrant less bibliographic respect than title proper, however. A series title serves the dual functions of being (1) a unifying principle for a number of intellectually related works, and (2) a marketing tool for the publisher. Sometimes a series title performs very little of the former function and a great deal of the latter. The Library of Congress Rule Interpretation (LCRI) on when to make a new record indicates that a series title that is associated with just the soft-bound or just the hardbound manifestation of a Cataloging-in-Publication title can be ignored (LC 1990). The OCLC rules for when to make a new record indicate that any difference in name of the series can be ignored, and an existing record that lacks the series, but is suitable in other respects for an item in hand, can be used (OCLC 1993, 47). However, OCLC's record matching algorithm *does* match on the series (O'Neill 1990, 11).

**Edition and Imprint**

A number of writers over the past century or more have noticed that certain differences on title pages have more to do with indicating continuing availability of a particular manifestation, rather than with any difference in the copies of the manifestation available. For example, publishers change dates and edition statements without changing the setting of the type, to indicate that in the new year the work is still available from the indicated publisher. For factual works, motives might be more unscrupulous, implying the work contained is more current than it is. Jewett noted the following phenomenon in 1853 (140):

> It is frequently the case, that publishers, after having stereotyped a book, call every thousand copies of it a separate edition, and, for twenty or more editions, there may be no alteration in the book, except in the word expressing the number of the edition, and in the date. In such cases, it cannot be necessary to print a separate title for each pretended edition.

Differences in the various dates that appear on title pages, i.e., date of publication, copyright date, and printing date, are notorious for not reflecting an actual difference in edition. OCLC has six records for Smollett's *The Expedition of Humphry Clinker* published by Century, all with identical paging, the only differences being publication dates of 1902, 1903, 1904, 1905, 1906, and 1907. One can be virtually certain that these are all the same edition, but different issues with different dates, in order to indicate continuing availability. The 1949 rules allowed two items that differ only in imprint date to be treated as copies and cataloged on the same record, unless copyright date varied as well (LC, Descriptive Cataloging Division 1949, 9). When the current Library of Congress rule interpretation was originally written in 1981, it forbade making a new record
when the only difference between two items was in the publication date, but this provision was dropped later in the same year (LC 1981, 3; LC 1990, 10). OCLC allows the cataloger to ignore differences in printing, manufacturing, distribution, or copyright dates, but not in publication dates (OCLC 1993, 46). Wanninger points out that many duplicates are created in OCLC because separate records with different reproduction dates are created for photocopies and microfilms produced on demand by University Microfilms International and the National Technical Information Service (Wanninger 1982). Edward T. O'Neill found that "the date of publication element, individually and in combination with other fields, was responsible for the greatest number of duplicate records," in a study of duplicate records in the OCLC database (O'Neill 1990, 11; O'Neill, Rogers, and Oskins 1993). He also found "the edition statement, in combination with other fields, was responsible for the highest percentage of duplicate records relative to the number of records in the sample in which it was present."

Sometimes two items are identical except for variations in the name of the publisher. The 1949 rules allowed two items to be described on the same record if the only difference between them was in the form of the publisher's name (LC, Descriptive Cataloging Division 1949, 9). The current LCRI distinguishes two cases: (1) variant forms of name used concurrently by the publisher, in which case two items can be described on one record; and (2) actual change in name of the publisher, in which case two items must be given two separate records (LC 1990, 10). OCLC allows the cataloger to ignore variation in fullness of publisher's name (OCLC 1993, 45), although its machine matching algorithm probably would not do so (O'Neill 1990, 11).

Beginning in the 19th century, the use of stereotype plates and electroplates for printing made it possible for the same edition in the bibliographers' sense, i.e., the same typesetting, to be issued by several different publishers or distributors (Steinberg 1974, 278-9). Now the various photoreproduction processes available for all types of materials make this pattern of distribution widespread. Hagler describes the publishing practice of replacing the printed imprint on a title page by a label or stamp for the U.S. or Canadian publisher or distributor (Hagler 1963, 342). Several writers point out that it is not uncommon for issues of the same edition of a work to be issued with one imprint in England and another in the United States (McNellis 1985, 36; McPherson, Coyle, and Montgomery 1982, 376). Changing distributors are particularly common with nonbook materials (Fothergill and Butchart 1978, 180; Thaxter 1983, 19). In fact, the definition of edition for nonbook materials in AACR2R (based on ISBD) indicates that "a change in the identity of the distributor does not mean a change of edition" (ALA 1988, 617). Unfortunately, this particular provision of AACR2 has not been put into practice; OCLC, for example, requires making a new record when the distributor changes (OCLC 1993, 45); as a result, OCLC contains numerous records for videocassettes of the same film.

Is it really necessary to create separate catalog records to record variation in date of issue, copyright date, or printing date; or variation in distributor; or variation in the name of the publisher, when there is no reason to suspect that the variation is associated with an actual difference in the intellectual content? Catalog records are expensive to create. They are also expensive to maintain in large databases. Most importantly, multiple catalog records for virtually identical items confuse users, including library staff, such as copy catalogers and interlibrary loan assistants. It takes the user a long time to sort through a large retrieval set. Any given search is likely to bring up larger numbers of records than if these near-equivalents were weeded out. The fact that multiple records exist is likely to blind users to the fact that a number of items listed separately are virtually interchangeable for most purposes. Differences in distributor and issue date that are unconnected to any differences in the content are likely of interest only to someone who would like to acquire a copy of a particular
manifestation at any given point in time. Surely sources such as *Books in Print* are more appropriate and more up-to-date for this kind of information than catalog databases can ever hope to be. There is one caveat, however: users who need to find a particular edition because they have a citation to a particular page number would benefit if variations in distributor and date were recorded as near-equivalent-specific variations, so that they could be assured they have found the manifestation with the paging they seek.

**Difference in Responsibility or Other Differences Substantial Enough to Create a Version**

Sometimes a manifestation can have its own manifestations. Panizzi recognized this in his rules for the arrangement of various manifestations under an author. For example, a particular translation of a particular work could itself go into several editions. Thus Panizzi’s rule LXX read, “Editions by the same editor, or such as are expressly stated to follow a specific text or edition, and editions with the same notes or commentary, to succeed each other immediately in their chronological order after the entry of that which is, or is considered to be, the earliest.”

Rule LXXII, dealing with the arrangement of translations, reads, in part, “Translations into the same language, and their several editions, to be entered in conformity with the rules laid down for the entries of the originals” (Panizzi 1885, 11). This kind of grouping together of all the manifestations of a manifestation was never attempted in card catalogs, but one wonders whether it could be done in online catalogs.

The “manifestations of manifestations” under discussion tend to exhibit authorship connected with the manifestation rather than with the work itself. The kind of authorship that can change without causing change in the work itself has been called subsidiary authorship since the introduction of the ISBDs (ALA 1974, 24). Examples of subsidiary authors are editors, translators, authors of introductions or notes, compilers of attached bibliographies, commentators, illustrators, etc. Manifestations that themselves have manifestations do not always have subsidiary authors, however. Sometimes a single author or other creator can create several different versions, or manifestations of one of his works, each of which can then go into several manifestations. Ravilious mentions the “1919 version of Stravinsky’s *Firebird Suite*,” and Whiting mentions Wordsworth’s versions of the *Guide to the Lakes* (Ravilious 1975, 47; Whiting 1980, 5). Thus, several writers have suggested that a conceptual level between work and manifestation is needed, perhaps to be called *version* (Domanovszky 1974, 102; Du Rietz 1974, 84; Richmond 1980, 33; Shinebourne 1979, 240; Whiting 1980, 5).

Barbara Tillett refers to the types of versions described here as having either derivative relationships to their parent works, or descriptive relationships. “Derivative relationships are those [that] hold between a bibliographic item and a modification based on that item... One item is derived from another when it enlarges, abridges, or otherwise modifies the entire item or portions of it” (Tillett 1987, 43). However, she includes adaptations in this category, while adaptations are generally treated as new works rather than as manifestations. She also includes editions, in the sense of resets of type without differences in subsidiary authorship, which have been discussed above. “A descriptive relationship holds between a bibliographic item [or] work and a description, criticism, evaluation, or review of that item or work, such as that between an item and a book review describing it” (Tillett 1987, 57). Although most items in this category are new works about other works, Tillett includes here editions with commentary, which are sometimes treated as manifestations of the same work, depending on the circumstances.

**Difference in Extent**

It has long been recognized that difference in extent, such as difference in the paging of a book, can be with some frequency the only reliable clue that two items are significantly different. Differ-
ence in the paging of a book is a sure sign the type has been reset. Resetting of type can easily lead to either intentional or unintentional alteration of the text. Research done at the Library of Congress in 1946, to be discussed further below, clearly demonstrated that for books, paging was the most reliable clue for detecting differences in edition, i.e., resettings of type. A difference in the paging of a book might well be of interest to even the general user. As has been said, it might indicate significant alteration of the text itself. However, even if the resetting of the type, which creates the new paging, has not altered the text, the user might need to find the correct manifestation in order to look up a citation to a particular page number.

**Differences in Physical Format**

Sometimes the only difference between one item and another is a difference in physical format. This can be due to reproduction, in which a copy of an original is made for preservation or conservation purposes, or to make it available in another useful format. It can also be due to simultaneous release in more than one format, in order to reach different markets. Examples would be a microform of a text, CD and audiocassette releases of a sound recording, or a videocassette copy of a motion picture. Sometimes reproductions are made on a one-time basis either by a particular institution for preservation purposes, or by an on-demand reproduction agency such as University Microfilms International or the National Technical Information Service. Other times multiple copies or reproductions are issued and made available by a reproduction/distribution agency. In any case, the purpose for reproduction or simultaneous release in several formats is to produce a surrogate for the item reproduced in order to make it more widely or readily available. Certainly difference in physical format is of interest to users and should be communicated to them, but whether it is necessary to create a completely separate bibliographic record to communicate this difference is open to question. Libraries have traditionally used holdings statements, dashed-on entries, or other similar techniques to communicate such information rather than asserting that such a difference created a new edition, requiring a new record. The practice of adding reproductions to existing records by means of dashed-on entries was actually codified in AACR in 1967 (ALA 1967, 225–26). The Library of Congress does not explicitly address the question of difference in physical format in its rule interpretation for AACR2 rule 1.0 (LC 1990, 10); in practice, however, as long as Processing Services at the Library of Congress was cataloging audiovisual materials for the libraries of the nation (a service no longer provided by LC), the LC catalogers made a new record only for a difference in general material designation (motion picture versus videorecording), and summarized all videorecording formats available on one record (Tucker 1982). The archival moving-image catalogers at LC attach both videorecordings and motion pictures to one record if the only difference is in physical format. OCLC, on the other hand, encourages the creation of two records if there are differences in the physical description between one item and another (OCLC 1993, 46–47). The probable explanation for this approach is that one of OCLC’s primary goals is to support interlibrary loan, in which a potential borrower needs to know precisely what the physical format of the item to be borrowed is. Since the utilities have never had a holdings format to allow the communication within a single record of information about which formats are held by which institutions, their only recourse has been to fall back on encouraging the creation of a new bibliographic record for every variation in physical description. Now that a USMARC holdings format exists, with a repeatable 007, the opportunity exists to develop a hierarchically structured single record to show differences in physical format. A hierarchically structured single-record approach would cut down on repetition of bibliographic data when all that is different is the physical format.
An unresolved difficulty with a hierarchically structured record is that of deciding what to describe primarily when the item reproduced is not in hand, or when no one item has primacy, as in the case of simultaneous release of several formats. The two-tiered approach advocated by the Multiple Versions Forum requires that one item be designated primary with its physical description given in the first tier; physical descriptions of derivative reproduced items are given in the second tier. If a library has only a reproduction but not the original, it must construct some sort of physical description for an item it does not have. If the technique were ever to be extended to simultaneous publications, e.g., an audiocassette and a CD issued at the same time, one of these physical formats would have to be arbitrarily designated primary and described in the first tier. A more effective solution might be to allow the physical description fields to be repeated on the second tier, and to allow the first tier to exist without a "primary" physical description.

Barbara Tillett includes physical variants in the category of equivalence relationships, which she defines as follows: "Equivalence relationships are those [that] hold (1) between exact copies of the same manifestation of a work or (2) between an original work and reproductions of it, as long as intellectual content and authorship are preserved" (Tillett 1987, 27).

Sometimes rather substantive differences can take place in physical format, especially when audio or visual works are transferred from one medium to another. A sound recording can change from stereo to monophonic in the course of the transfer. A film that is transferred onto video can experience considerable degradation of image. A still photograph in color can experience a considerable shift in color values in the course of reproduction. It can certainly be argued that these differences represent significant difference in the intellectual or artistic content. However, if the differences resulting from this kind of change are the only differences between two items, and the differences can be clearly indicated in the physical description, a more economical way to communicate the differences might be to make one record for both items, with repeated physical descriptions, rather than creating two full bibliographic records that differ only in the physical description. This approach is more economical for database managers to the extent that the cost of managing large databases is increased by having to store, retrieve, and arrange large numbers of near-equivalent records; it is more economical to database users to the extent that they are charged for online searching time, or for the number of records they must access in order to make decisions about usefulness of the records for their purposes; if the user's time is considered valuable in its own right, it is more economical to summarize the differences on one record than to make the user look back and forth between two records to see what the differences are.

**Record-Matching Algorithms**

In the section above, OCLC's record-matching algorithm has been mentioned occasionally, and it has been compared to OCLC's policies for catalogers concerning when to make a new record. Record-matching algorithms are programs used in large bibliographic databases that collect records from many different sources (Coyle 1984; Coyle 1985; Coyle and Galaher-Brown 1985; Hickey and Ryplka 1979; Klemperer 1978; MacLaury 1979; McPherson, Coyle, and Montgomery 1982; O'Neil 1990; O'Neil 1991; Williams and MacLaury 1979). The function of a record-matching algorithm is to identify duplicate records, records that represent the same manifestation of the same work. There is some evidence that these are being designed to try to deal with near-equivalency; for example, most match only on certain characters in the title field, not all characters (Coyle 1985, 59). However, there is always the possibility that such algorithms might lead to some merging of items that are truly different manifestations, and also to lack of recognition of near-equivalencies that appear different to the algorithms. Some research on the validity and reliability of these algorithms is currently being done.
O'Neill reports their current algorithm has a precision of .93, if the record similarity is set to .9 (O'Neill 1990, 13–14); in other words, 93% of the identified pairs were duplicates, and presumably seven percent of the pairs identified as duplicates were not. However, the accompanying recall was only .51; in other words, the algorithm identified only 51% of the duplicates in the sample. Unfortunately, the similarity measure is not described. Seven percent of pairs falsely merged seems of some significance and might not be tolerable in a high-quality database.

PREVIOUS RESEARCH ON VISIBLE INDICATORS OF MANIFESTATIONS

In 1946, the Library of Congress published research on the frequency with which title pages and collations of books could be relied upon to indicate whether two books containing the same work are the same edition or not (LC, Processing Dept. 1946). The Library studied 49 groups of books that had different title pages, i.e., that seemed to be different editions, based on examination of the title page, but had the same paging. The study revealed that of these 49 groups, 40 consisted of either issues, reprints, type-facsimiles or copies, rather than true editions, with reset type. In other words, there were a number of cases in which paging was a more reliable clue than title page variation as to whether two items actually represented different editions.

Svensonius and O'Neill are engaged in a study of a sample of works from the OCLC database, but their results have not yet been published (Svensonius and O'Neill 1988). The purpose of the study is to determine whether it is possible to predict from clues easily accessible to the cataloger, such as paging or title page transcription, when two items are the same work, text, or edition, i.e., typesetting. Barbara Tillett's doctoral research on bibliographic relationships includes a study of the frequency with which equivalence, derivative and descriptive relationships are noted in cataloging done at the Library of Congress between 1968 and 1986 (Tillett 1987). Unfortunately only those relationships that are revealed by way of either explicit edition statements, explicit notes by the cataloger, or USMARC format coding were studied, and even those with explicit notes were only sampled.

Differences between manifestations that are revealed indirectly, for example, by a statement of subsidiary authorship in the 245 field or by other such implicit indications — e.g., two items with the same title and authorship but two different dates of publication and extent statements, i.e., paging — were thus excluded from study. These are relatively important and frequently occurring categories of manifestation. The major value of the study lies in the intellectual analysis of the types of relationships and the way they are communicated in catalog records under current practice.

RECORD-STRUCTURING TECHNIQUES

One of the objectives of descriptive cataloging is to communicate to users any differences between items that are known to the cataloger and that might be of significance to most users. Conversely, insignificant differences should not be made to look as if they were significant. A second goal is to communicate these differences as economically and concisely as possible (ALA 1967, 189). It seems self-evident that the communication of a significant difference to users with a single line of text is preferable to the communication of a significant difference with two full computer screens of data that differ in only one line of text. In the latter case, the users have to spend a good deal more time reading in order to figure out what the difference is. Some differences can affect a number of areas of the description; an example is a language difference between two film manifestations that can lead to the title and credits being in a different language, and to the need to code differently a number of areas in the USMARC format. At times differences can be of equal significance to the user, but that difference can be communicated with a single phrase in the physical description; an example might be the difference
between the 70 millimeter and the panned-and-scanned non-wide-screen manifestation of a film.

There are at least three techniques that could be used to indicate differences that are deemed significant. The first, the separate record technique, is currently the most widely used. The second, the two- or three-tiered hierarchical technique, is currently being considered for adoption for the description of reproductions, a type of near-equivalent (Multiple Versions Forum 1990; ALA, Task Force on Multiple Versions 1992). The third, the four- or five-tiered hierarchical technique, is not currently used in library cataloging, but has been in the past in book catalogs.

**THE SEPARATE RECORD TECHNIQUE**

Using the separate record technique, a new record is made for every different manifestation of a work. Differences are
indicated to users by the fact that two records are identical except at the points where the differences between two manifestations are being described. A record thus describes an item in such a way as to identify it as being in some ways the same as another item or group of items and distinguishes it as being in some ways different from another item or group of items. This technique is currently used for true manifestations, for title manifestations, and for near-equivalents that differ in physical format for reasons other than reproduction, or that differ in distribution information. See figure 1 for some examples of cataloging done using this technique. The records in the examples were all found in OCLC. Under this technique, users who are trying to sort out the various manifestations of a work must read through each description to see how it differs from the others; this involves reading through much repetitive information, describing the aspects of a given manifestation that are actually the same for all manifestations.
The Two- or Three-Tiered Hierarchical Technique

The very fact that two items are described on two records is a signal that significant differences exist. Systems that allow duplicate records, i.e., two records describing the same manifestation, are confusing to users for this reason. If two items are described on the same record, the implicit message is that their intellectual and artistic content is exactly the same. Under the two- or three-tiered hierarchical technique, two items that do not differ in intellectual and artistic content, but only in physical format, are described on the same record; differences in physical format are described in dependent near-equivalent records attached to the main catalog record. If there are differences in the visible indicators associated with mere difference in physical format, these, too, can be indicated in the dependent near-equivalent records. The two- or three-tiered hierarchical technique is currently being proposed as a two-tiered technique to deal with reproductions. The two tiers consist of the catalog record and the dependent records that describe both various near-equivalents and various copies held. Many think that for this new technique to work, it will have to be three-tiered on implementation, with the second tier, the near-equivalent tier, identifying various near-equivalents available, and the third tier, the holdings tier, consisting of copies held and locations attached to the appropriate near-equivalent record.

The current implementation of the two- or three-tiered hierarchical technique requires that one near-equivalent be designated as the original, to be described in the bibliographic record itself. All other near-equivalents, those described at the second tier, are considered to be derived from the original. See figure 2 for an example taken from the Guidelines for Bibliographic Description of Reproductions adopted by the Committee on Cataloging: Description and Access (CCDA) at the ALA Annual Meeting in July 1992. Because of the need to designate an original, this model works well only for reproductions, and even there, only for reproductions of originals that have already been completely described. Difficulties arise when one has to try to describe a reproduction without complete information about the original from which it derived. If the use of this technique is to be extended to other kinds of near-equivalents, such as simultaneous publications in different physical formats, or near-equivalents with different distributors and distribution dates, the technique will probably have to be modified to accommodate near-equivalents of equal status, i.e., with no identifiable original. See figure 3 for an example of a catalog record created at the UCLA Film and Television Archive, where no attempt is made to identify an original.

The Four- or Five-Tiered Hierarchical Technique

The four/five-tiered hierarchical technique is a technique that was used in the old book catalogs. If it is conceived of as a four-tiered technique, the four tiers would be work—manifestation—near-equivalent—holding; if it is conceived of as a five-tiered technique, the fifth tier would be version in the old sense, that is, a manifestation that itself has manifestations, such as the various editions of a particular translation of a work. The five tiers would then be work—version—manifestation—near-equivalent—holding. In a sense, the unit of cataloging was the work. Once a user located a work in which he was interested, he could see displayed the various versions, texts, editions, and physical variants of that work subarranged by language or subsidiary author and then by date. In other words, records were arranged in such a way that manifestations that were most alike were close together, and manifestations that were most different were farthest apart. Concise entries for each version, text, etc., indicated only how it differed from those above it. Thus it was easy for a user to scan multiple entries and make an efficient choice of the best manifestation to suit his or her purposes, in a listing of all the manifestations of a given work. See figure
14. Video reproduction of a 35 mm film (etc.) indicates portions of record here omitted for the sake of brevity

6 film reels (103 min.) : sd., col. ; 35 mm.
Author, James Warner Bellah.
Credits: Art director, James Basevi; musical director, C. Bakaleinikoff; photography, Winton Hoch; editor, Jack Murray.
All credits were supplied from: Film daily yearbook, 1950.
Safety film base; optical sound; filmed using the 3-color Technicolor process; Eastman-color print.
Original running time was 103 min., according to: Film daily yearbook, 1950.

FILM ARCHIVES – MP 619 – Reel 1-6

Reproduction (videocassette): [Los Angeles, Ca. : Taped by UCLA Film and Television Archives, 1988]
1 videocassette (103 min.) : sd., col. ; 1/2 in.
VHS.

AUDIOVISUAL – VC 201

Figure 2

4 for an example from the British Museum book catalog.
The four- or five-tiered hierarchical technique has not been used since the days of the book catalog, prior to the advent of the environment in which we now live, dominated by the unit record, by shared cataloging, and by multiple national databases. Such conglomerated records, representing a work with the editions held described in four or five tiers, would be difficult to use in shared cataloging the way it is currently practiced, because each collection would hold different manifestations, and would have to re-edit and replace the whole work record each time it added a manifestation. The Multiple Versions Forum might represent a move in the direction of the four- or five-tiered hierarchical technique, although the two-tiered approach that does not clearly differentiate between near-equivalent-specific information and holding-specific information, but lumps them together on the second tier, is not yet a very elegant solution. So far, the library community has taken a very conservative approach to defining the scope of potential application of the two-tiered approach, limiting it to reproductions.
In the unit record, shared cataloging, multiple national database environment
in which we have been living for the past century, it is difficult to devise elegant solutions. Perhaps it would do no harm to dream of a distant future in which all libraries share a single virtual catalog, with searching and display mechanisms for library patrons that could, on demand, suppress items not in the local collection. Part of the cataloger's task would be to determine where a new manifestation of a work should fit among other manifestations of that work, and to devise a concise description that indicated only how it differed from other manifestations. Once this record had been fitted into place, its place in the arrangement of all manifestations would be fixed for all users of the catalog. In effect, we could share not just
unit records, but decisions about the relationships of multiple unit records. Or perhaps it would be possible to devise some other way to record and share information about how an item being cataloged is related to other items already cataloged in the national databases. Current techniques for relating, involving alphabetic matching on main entries, do not work well for machine linking, because so many works are given title main entries under AACR2 rules, and there are so many cases of different works that have the same title.

Because the four- or five-tiered hierarchical technique is currently impractical, the following discussion of recommended cataloging techniques assumes a choice between the separate record technique
SMOLLET (TOBIAS GEORGE)

AN ESSAY ON THEEXTERNAL USE OF WATER.
—— An essay on the external use of water. In a letter to Dr. with particular remarks upon the present method of using the mineral waters at Bath in Somersetshire, etc. London: printed for M. Cooper; sold by D. Wilson: Bath: sold by Leake & Frederick, 1752. C. 123. k. 3. pp. 48. 4°.


THE EXPEDITION OF HUMPHRY CLINKER


Anonymous.
3 vol. 12°.
Anonymous.

Anonymous.
2 vol. 12°.
Anonymous.

Anonymous.
2 vol. 12°.
Anonymous.

Anonymous.
2 vol. 12°.
Anonymous.

Anonymous.
3 vol. 12°.
Anonymous.

Anonymous.
—— [Another edition.] *Dublin: W. Sleater, etc.*, 1784, 85. 1471. de. 44.
2 vol. 12°.
Anonymous.
and the two- or three-tiered hierarchical technique.

**PROPOSED DEFINITIONS**

Based on the above discussions of user needs, the following definitions are proposed:

*Manifestation:* The set of all items that represent the same work and do not differ in intellectual and artistic content from each other in a way that would be considered significant by most users of the collection. An example of an insignificant difference in intellectual and artistic content, i.e., one that would not create a new manifestation, might be correction of typesetting errors or misspellings. An example of significant difference in intellectual and artistic content, i.e., one that would create a new manifestation, is creation of a distinct manifestation by the original author, e.g., a revised edition.

*Title manifestation:* The set of all items that represent the same manifestation of the same work and that have identical chief sources of information, other than distribution information; two items that have the same intellectual and artistic content, but differ in title or statement of responsibility, are two different title manifestations.

*Near-equivalent:* The set of all items that represent the same manifestation of the same work and that have identical distribution information and physical characteristics; two items that have the same intellectual and artistic content and identical chief sources of information other than distribution information, but differ in distribution information, such as edition statement, publisher, distributor, or date, or in physical characteristics, such as paper, type, binding, film base, or medium of reproduction, are two different near-equivalents.

If we could adopt the definitions above, we could cut down considerably on the number of near-equivalents cluttering our databases. A principled approach could be taught as follows: Make a new record only if title, authorship or extent (paging for books) changes; if the only change is in publisher, date or physical format, do not make a new record. This approach could both save money and help users.

**MOVING-IMAGE MATERIALS**

Above, we have attempted to define *manifestation*, *title manifestation*, and *near-equivalent* in general terms that would apply to all materials. Now, the kinds of differences that can occur between manifestations or near-equivalents of moving-image works, and that might be significant to users, will be discussed and categorized based on the previously developed definitions.

There is much anecdotal evidence in the film literature concerning the existence of various manifestations. The rights to most moving-image materials belong to for-profit corporations that are perfectly willing to edit these works to be shown to various markets in various formats, as long as they think a profit can be made. Prior to the era of television, companies such as Film Classics and Realart Pictures acquired the rights to distribute older studio titles to neighborhood theaters and drive-ins to fill out double features. According to McElwee, cuts would be made when necessary to accommodate time limitations in the double-feature format (McElwee 1990, pt. 3, 140). When television became a medium of distribution for films, they were edited to remove profanity, sex, violence and product identifications (if Lucky Strike was a sponsor, Humphrey Bogart couldn’t be seen smoking Camels), and then footage was either added or removed to enable them to fit into standard time slots between commercials; wide-screen films would be “panned and scanned,” a process in which only a portion of the wide-screen image is selected for showing on the small TV screen (Haserot 1989, 49). Airline manifestations are edited for sex, violence (especially airplane crashes), language, and length.

Sometimes different manifestations were created for censorship reasons. In the early days of states’ rights distribution of motion pictures, each state had its own censorship board; in effect, there were state-specific manifestations of each
work. Pre-code 1930s films were cut prior to reissue or rerelease (McElwee 1990, pt. 3, 139). Foreign films of the fifties and sixties were felt to be too racy for U.S. audiences and were cut before being shown. Sometimes unacceptable words were dubbed out on the soundtrack.

In other cases, manifestations were created for different regions. Newsreels were issued in several manifestations with regional stories for showing only in a certain part of the country. Leni Riefenstahl made several different manifestations of *Olympia* (1936); the German manifestation included more minor events so as to show more German victories than did the Spanish and English manifestations.

**TYPES OF DIFFERENCE BETWEEN MOVING IMAGE MANIFESTATIONS OR NEAR-EQUIVALENTS**

Manifestations of moving-image works can be created in many of the same ways that manifestations of other kinds of work can be created. Let us consider some specific categories of difference.

**DIFFERENCE IN TITLE AND ORDER OF CREDITS: TITLE MANIFESTATIONS**

It is very common for films to be reissued or rereleased under new titles, and for television programs to be rebroadcast under new series titles. At least one reason for the reissue of films under new titles was a desire to prevent a member of the audience from realizing ahead of time that he or she had already seen the film. McElwee mentions, for example, that Chaplin and Pickford shorts were reissued under a variety of misleading titles (McElwee 1989, 593). Maltin indicates that films are being retitled on video “to lure unsuspecting renters” (Maltin 1989, viii).

Films would also be reissued or rereleased with the credits altered. McElwee indicates that after Alan Ladd, Marilyn Monroe, and Humphrey Bogart became big stars, earlier films in which they played minor roles were reissued or rereleased with their names given top billing above the title. He mentions one such Bogart film, *Midnight* (1934), which also had its title changed, to *Call It Murder*. Another example is the 1936 film of *As You Like It*. When originally issued, Elizabeth Bergner received top billing. By the time the film was reissued several years later, her costar, Laurence Olivier, was a bigger star and was given top billing on reissue prints. Making two separate catalog records for the original release and the reissue documents this difference in billing order for film historians. Billing changes are interesting in their own right, and therefore probably worth recording in our catalogs; as McElwee puts it, “Billing changes charted a player’s rise and fall from the original release of a feature to its reissue years later” (McElwee 1990, pt. 3, 140). However, billing changes do not always please the actors and actresses involved. A recent news item in the *Los Angeles Times* indicates that Kevin Costner is suing a video firm for using his name prominently in marketing and distributing the 1985 film *Chasing Dreams*, in which Costner had a minor role (“Costner sues video firm” 1990).

**DIFFERENCE IN EDITION OR DISTRIBUTION STATEMENT: TRUE MANIFESTATIONS AND NEAR-EQUIVALENTS**

Educational and informational films will sometimes carry edition statements on revised and updated editions. Until recently, such statements have been very rare on theatrically released films or network broadcast television programs. *Close Encounters of the Third Kind* (1977) had a much-advertised rerelease in 1980 as “The Special Edition,” which had indeed been re-edited by Spielberg. The recently released reconstructed manifestations of films such as *A Star is Born* (1954) and *Lawrence of Arabia* (1962) have had prominently displayed manifestation statements, as have the director’s cut manifestations being released on video. Television manifestations and airline manifestations, on the other hand, do not carry explicit manifestation statements, and the industry has resisted recent attempts to get it to label such manifestations.
Distribution statements often differ on moving-image materials without there being any other difference. In today's world of videocassette distribution, one suspects that rights to videocassette distribution frequently change hands without any accompanying change in the work being distributed. This was undoubtedly true, as well, in the 16 millimeter market that preceded today's videocassette market.

**Difference in Actual Content: True Manifestations**

There are basically three ways in which an edited film work can be altered in such a way as to create differences in the intellectual and artistic content significant enough to create a new manifestation of the work.

- The film can be edited to change the continuity. For example, footage can be deleted, or "cut," but with the original continuity, or order of shots, preserved. This would be equivalent to abridgement of textual works. Also, footage can be added, but with the original continuity preserved. This would be equivalent to enlargement of textual works. Finally, alternate footage can be substituted. The most common example of this is a manifestation released with two different endings.

- New material can be appended to the work. For example, Blackhawk reissues of early motion pictures often include historical introductions.

- Finally, changes to the soundtrack, or subtitles can be carried out by identifiable subsidiary authors, or the cast can change slightly. The soundtrack or titles can be either translated or rewritten entirely. (The term *titles* is used in the film world to mean either subtitles on sound films, or intertitles—frames of textual matter appearing between frames of picture—on silent films.) Differences in the soundtrack other than differences in text can occur. A silent film can have a music track added or changed, or the sound effects portion of the soundtrack can be changed. A commentary by a film scholar can be added in such a way that it can be switched on or off. This latter would be equivalent to an edition of a textual work with commentary.

Some physical format differences, such as colorization or panning and scanning of wide-screen films, might be considered by some to be a difference in the intellectual and artistic content, because they affect the visuals so radically. These issues will be discussed further below.

The following, then, are examples of alteration that can be said to create new manifestations:

**Manifestations with Editing Causing Differences in the Continuity or Track**

This category includes short manifestations, and manifestations censored or edited for television or airline showing or for inclusion in double features. Informational films with new footage added to update them would fall into this category. Sometimes footage is added to films. Dobi indicates that the 1948 reissue of *Nanook of the North* (1922) included outtakes from the original footage that were not in the original release (Dobi 1977, 11). Airline and television manifestations might sometimes require the addition of footage to bring them up to contractual length or to fit specified time slots. MCA added a two-minute dream sequence to *Rear Window* (1954) after Hitchcock had died in order to make the film fit into television time slots. The rerelease of *Phantom of the Opera* (1925) in a sound manifestation required the shooting of new footage to replace silent footage where there were sound synchronization problems. In the course of restoring *Toll of the Sea* (1922), UCLA found it necessary to reshoot the last scene (Slide 1992, 109-10). Films released in several different manifestations fall into this category, as well. One example is *Fred Niblo's Blood and Sand* (1941), released with two different endings (American Film Institute 1971, 69). Another example is *Legal Eagles* (1986), which had its ending completely changed for television showings (Maltin 1989, viii). Several recent restoration projects, *A Star*
is Born (1954), Intolerance (1916), and Way Down East (1920), involved the substitution of stills for footage missing even after exhaustive searching (Everson 1990, 17; Gunning 1984, 19; Haver 1983, 33; Stanbrook 1989–90, 29).

Sound films can have their soundtracks altered in ways that do not involve differences in the footage. The MCA Home Video videocassette and videodisc manifestations of Dracula (1931) include an original soundtrack suppressed before release because it contained more groans, bone cracks and other horrible noises than were considered acceptable for audiences of the 1930s.

Addition of New Material Appended to Work

Some of the new director's cuts being released on video include such additions as an interview with the director, outtakes, rehearsals, shot setups, and auditions (Fleming 1990). Blackhawk reissues with historical introductions were mentioned above. McElwee mentions several silent films that were rereleased in the sound era with prologues (McElwee 1989, 594). He also mentions that Public Enemy (1931) was rereleased in 1954, heavily censored and with a cautionary foreword (McElwee 1989, 596).

Rebroadcasts of television programs might be considered to be special cases in this category. When television programs are rebroadcast, the commercials, public service and station announcements, etc., that are broadcast at regular intervals throughout the program are different. Since commercials and the like can be very revealing social and historical documents in their own right, they are often analyzed in contents notes and made accessible by means of analytical title added entries in television cataloging. Thus, it is useful to treat each rebroadcast of a television program as a new manifestation and create a new record for it.

Manifestations with Subsidiary Authors

This category includes dubbed and subtitled manifestations in which the soundtrack in one language has been translated into another language. It also includes silent films with intertitles that have been translated from another language. The intertitles on silent films can differ from one manifestation to another in ways other than translation. For example, Gunning indicates that Way Down East (1920), Griffith's silent film, existed in manifestations with several different sets of intertitles (Gunning 1984). Gillett notes that “intertitles could be altered to smooth over censorship problems from one country to another” (Gillett 1977–78, 38). There have been several English translations of soundtrack into subtitles for Grand Illusion (1937) and Breathless (1960), some more accurate than others. In the late 1920s and early 1930s, during the transition from silent to sound films, films were often released in silent and sound manifestations. The sound manifestations would have music tracks and some dialogue added. The new FIAF rules consider difference in language, music, or dialogue to create “an item with minor changes,” one that is to be described on the same record as the item without such differences (FIAF 1991, 41). Since such “minor” differences can be associated with differences in subsidiary authorship (translator, composer, writer of intertitles, etc.), this practice seems dangerous. It could lead to no access under the names of subsidiary authors, or to misleading access if a user retrieves a record on which only one holding of several is of interest; it might be hard for the user to tell which holding is of interest when a great deal of holding-specific information is buried far down the record in the notes. Another consideration is that the coding for language in the USMARC format is record-specific. If holdings have different language characteristics, there is no way at present to code for them all.

In addition to the voices of the performers, the soundtrack of a film also contains music and sound effects, and these, too, can be different from one manifestation to another. Films originally issued silent can be reissued or rereleased with a music track. The same film can be reissued or rereleased with several different music tracks. Few of the silent films came
with a score, but some did. Various manifestations of these silent films can exist with various performances of the same original score. Stanbrook discusses a new recording of the original score for Alexander Nevsky (1938), for instance, and mentions a video manifestation of Battleship Potemkin (1925) that allows one to choose to hear either the score originally composed for the film by Edmund Meisel, or the score by N. Kryukov that was associated with the film for years (Stanbrook 1989–90, 31). The restorations of Nanook of the North (1922), and Lucky Star (1929) include newly composed contemporary scores on the soundtracks (Dobi 1977, 14-16; Benson 1991). On the 1942 reissue of Gold Rush (1925), Chaplin’s voice was substituted for the original intertitles (McElwee 1989, 594). The thrust of North Star (1943) was completely changed on rerelease as Armoured Attack, largely by editing the soundtrack. The reconstruction of the director’s cut of Lawrence of Arabia (1962) involved getting some of the original actors to rerecord eight minutes of their dialogue, which was then mechanically altered to compensate for the way the actors’ voices would have changed over the years (Stanbrook 1989–90, 31). Fantasia (1940) was apparently released in 1982 with a new performance of the musical track conducted by Irwin Kostal, replacing Leopold Stokowski’s original performance (Phinn 1990, 86).

PHYSICAL VARIANTS: NEAR-EQUIVALENTS

Sometimes rather substantive changes take place in physical format. For example, color films can be reissued as black and white, black-and-white films can be colorized, and silent films can be reissued with music and effects tracks. Such differences can substantially affect the quality of image in what are essentially visual materials. The addition of soundtrack to a silent film actually introduces an element of subsidiary authorship (e.g., the arranger of a music track), and a colorizer might also be considered a subsidiary author. For these reasons, such differences might be said to create a new manifestation on the grounds of difference in intellectual and artistic content. Haserot would seem to support this approach when she writes, “The addition of color . . . radically alters the film’s nature by changing the language through which a film communicates” (Haserot 1989, 50). However, this argument might also be used to argue that the creation of a black-and-white print of a film originally in color, frequently done in the days when television was black and white, creates a new manifestation, or that two black-and-white prints of a silent film, one with tinting, are two different manifestations. Videotransfer of a color film alters its color values and preservation of a Technicolor film must be done on Eastman color stock using a completely different color process, because the earlier color process is no longer available in the United States. Certainly these bits of information about the prints are important and should be communicated to users, but whether a new record is necessary to do so is another question.

Other substantive differences in physical format could result in near-equivalents, as well, if they could be concisely indicated in the physical description. Ever since the 1950s, the motion picture industry has been trying to devise means to make films spectacular enough to draw the audience away from their television sets and back to the theaters. Various wide-screen processes, 3D, and various kinds of stereo sound have been the result. Usually these processes required that the films be projected using special equipment that not all theaters would have. Thus, the films were often issued in several different formats. Three-dimensional films were often released in both a 3D manifestation and a non-3D manifestation for running in theaters that did not have the correct projection equipment to show 3D films. The same is true of wide-screen films and, more recently, films on 70 millimeter film that would also be issued in 35 millimeter for theaters that could not project 70 millimeter. All of these could easily be treated as near-equivalents. In the days of the transition
to sound, prints would be released with both optical soundtracks and sound-on-sound recording disks for the smaller theaters that had not yet converted to the newer sound equipment. Other examples of physical variants eligible for this treatment might be monophonic and stereo soundtrack variants, or panned-and-scanned 16 millimeter prints or videotapes of wide-screen motion pictures in which a wide-screen image has been cropped at the sides, losing part of the picture, or even cut slightly differently. A wide-screen sequence of two people having a conversation, with both people on screen, and with no cuts, can become a sequence in which one person is shown on screen at a time, with cuts at each point where one person stops talking and the other begins. Apparently panning and scanning is also occasionally used to make a wide-screen film out of one originally released at the standard width. The 50th anniversary reissue of Snow White (1937) in 1987 was “vertically panned and scanned to fit the 1.85 frame,” according to Joseph McBride (McBride 1992). Letterboxing, adding black borders to the top and bottom of a wide-screen image to allow it all to fit into the bounds of a CRT screen, actually preserves the original wide-screen image, so although the fact that letterboxing has been done should be recorded as holding-specific information, it cannot be argued that it creates a new manifestation per se. It can certainly be argued that these differences represent a significant difference in the intellectual or artistic content. However, if this kind of difference is the only difference between two items, and the difference can be clearly indicated in the physical description, a more economical way to communicate the difference might be to make one record for both items, with repeated physical descriptions, rather than creating two full bibliographic records that differ only in the physical description.

The equivalent for soundtracks of colorization is “stereo-ization.” Spotnitz writes about sound engineer Rick Chace, who since 1984 “has electronically transfigured the soundtracks of some 300 films—including Casablanca, Gone With the Wind, and Bambi—eliminating unwanted noise and converting monophonic, or single-channel, sound into stereo” (Spotnitz 1990, 56). McElwee also mentions the Perspecta Process, which simulated stereo and was applied to reissues of Gone With the Wind (1939) and The Johnson Story (1946), and a reissue of Disney’s Fantasia (1940) with a Dolby track that apparently annoyed Disneyphiles (McElwee 1990, pt. 3, 139). Certainly these differences should be communicated to users so that they can make sure they have the proper equipment or can simply make choices, but whether they need to be treated as distinct manifestations is questionable. Spotnitz quotes several people who differ in their views about the advisability of tampering with original soundtracks in this way, but ends with a quote from director John Milius, who says, “As long as it sounds basically the same, it doesn’t matter” (Spotnitz 1990, 56).

Restoration of earlier film formats, such as 22 millimeter, 17.5 millimeter and 28 millimeter, can involve blowing the image up to a standard 35 millimeter image. Silent films were shot through hand-cranked cameras and then projected through projectors that were hand-cranked by projectionists to match the original cameraman’s speed. Thus film speed can vary a great deal. In order to restore silent films that are not at the modern 24-frames-per-second speed, the films are often step-printed (a process in which a single frame is repeated) up to 24 frames per second. Again, these kinds of differences seem to produce near-equivalents, rather than new manifestations.

More controversial changes to film speed apparently occur in the process of “time compression/expansion” of picture and “lexiconing” of sound in order to shorten or lengthen a film to fit broadcast formats. As Stanley Richards puts it, “The art of an actor’s performance is bound up in timing. Every moment of principal photography is concerned with timing—of staging, of performance, of camera movement. Filmmakers labor in postproduction for months and even years to finesse the exact timing of cuts and pacing of
sequences to within a fraction of a second. Time compression/expansion (literally running the film in slow or speeded-up motion) is so totally damaging to every single moment of the filmmaker’s vision that to allow for its use... is an insult to intelligent thinking men and women everywhere” (Richards 1990). If time compression/expansion and lexiconing result in any loss of image or soundtrack, they certainly should be considered to create a new manifestation; if not, however, perhaps they could be considered to create near-equivalents.

CONCLUSIONS REGARDING MOVING-IMAGE MATERIALS

It appears, from anecdotal evidence in the literature, that the following kinds of difference can occur between film items representing the same work:

- Title manifestations can occur when the title or billing order differs without there being any underlying difference in continuity.
- Distribution information can differ without there being any underlying difference in continuity, creating a near-equivalent.
- True manifestations can occur when the continuity, i.e., visual aspect of the work, or the soundtrack, i.e., audio aspect of the work, or the textual aspect of the work actually differ, whether due to editing, due to the appending of new material or due to the work of subsidiary authors creating subtitles, new music tracks, etc.
- Finally, physical variants or near-equivalents can occur when physical format differs without the involvement of subsidiary authors.

SHOULD THE OBJECT OF THE RECORD BE CODIFIED?

There is a long history of variant practice with regard to the object of a record, i.e., different institutions have different policies on when one item is sufficiently different from another to require a new record. It is one area in which cataloging institutions are still free to follow local practice based on local needs. To the degree that there are emerging standards, they conflict. For example, OCLC’s input standards are quite different from the LCRI on when to make a new record. Current library practice calls for making two full catalog records for two items that differ only in distributor or physical format. On the other hand, current archival moving-image practice calls for recording on the same record two items that have significantly different intellectual and artistic content, such as two films that are in different languages or have different music tracks.

Since the time of Jewett, catalog codes have avoided formulating rules concerning the object of a record. Some might argue that it is a healthy thing to allow local practice to vary. Public librarians could probably make the case that the majority of their users are not particular as to which edition (setting of type) they read, and that the long practice in public libraries of making one record for each text is adequate for their users. On the other hand, it is possible that research libraries, with their current financial problems and cataloging backlogs, should consider adopting practices similar to these for purposes of economy. The Multiple Versions Forum might represent a slight trend in this direction, although the field has taken a conservative approach in limiting application to reproductions. If all institutions were to decide to create new records only when significant difference in either intellectual and artistic content or identification occurs, codification of this practice would help to standardize it. Now that many of us are using large bibliographic databases such as OCLC for shared cataloging and interlibrary loan, such standardization could have a practical benefit for copy catalogers and interlibrary loan clerks and those patrons who benefit from their activities if the standardization could be done in a simple, elegant, and principled way that could be explained to copy catalogers and interlibrary loan clerks. If codification of the object of a record is attempted, however, it should be based on a rationale of empirical research.
WORKS CITED

Note: The following abbreviations have been used in the citations for this paper:

ALA American Library Association
LC Library of Congress


Blaneck, Jacob. 1966. The title-page as bibliographical evidence Berkeley, Calif.: School of Librarianship, University of California.


Coyle, Karen, and Linda Gallaher-Brown. 1985. Record matching: An expert algo-


Stanbrook, Alan. 1989/90. As it was in the beginning. Sight and sound 59, no. 1: 28–32.


You get one chance with authority control, so it's important to get it done right. LTI guarantees that its affordable, machine-only authority control will link 95% or more of your library’s controlled headings to an LC or LTI authority record. No exceptions! No excuses!

When manual review is requested, only professional librarians are used as editors and link rates approach 100%.

LTI maintains the complete LC MARC authority files (updated weekly), supplemented with over 410,000 LTI authority records and 350,000 proprietary “cross links.”

Contact LTI for more information on authority record link results.

“Authority Control for the 21st Century”

**Library Technologies, Inc.**
1142E Bradfield Road  Abington, PA  19001
(215) 576-6983  Fax: (215) 576-0137
(800) 795-9504
Team Cataloging in Academic Libraries: An Exploratory Survey

Anita Schuneman and Deborah A. Mohr

Team cataloging has been adopted by several academic libraries in recent years. With this system of organization, librarians and paraprofessionals work together in teams devoted to particular subject areas, languages, or formats. A summary of team organization used by eight academic libraries is presented. Telephone interviews with team members were conducted, and a survey to elicit perceptions of morale and productivity changes was distributed. Respondents perceived a slightly higher level of productivity with team cataloging. The findings on morale are inconclusive due to mixed responses.

In these days of shrinking library budgets, “the burden of adapting to less money has fallen heavily upon technical services and especially upon cataloging” (Holley 1981, 90). At the same time, as Gregor and Mandel have noted, cataloging departments face increasing demands for access to all kinds of information and materials. These conditions make “doing the job differently” a necessity (1991, 42).

In response to the pressure to use limited resources more effectively, librarians in several academic libraries have reorganized cataloging departments using the team cataloging model. We define the team cataloging mode of organization as one in which groups composed of both professional and paraprofessional cataloging staff catalog materials in specific subject areas, languages, physical formats, or a combination of these. Patricia A. Eskoz has called this the “cluster pattern” of organization (Eskoz 1990, 384).

Although Eskoz found in her 1983–84 and 1986–87 surveys of cataloging departments in U.S. academic libraries that team cataloging “seem[ed] to be a less popular method of organization” in 1987 than in 1984 (Eskoz 1990, 384–85), team cataloging still represents a viable option in the 1990s. Three recent articles, for example, describe the implementation of team cataloging at the University of Florida and Yale University (Herbsman and Yontz 1992; Walton and Botero 1992; Lowell and Sullivan 1990).

The present study provides an overview of team cataloging and identifies several areas for further research. Descriptive information from telephone interviews with cataloging personnel in several academic libraries and from a literature review paints a broader picture of team cataloging. In addition, the study examines the responses of cataloging staff in four academic libraries to a question-
naire about the perceived effects of the adoption of team cataloging on their productivity and morale.

THE CATALOGING TEAMS

As an initial step in gathering information about team cataloging, in 1990 telephone interviews were conducted with catalog librarians in eight university and research libraries known to use team cataloging. The eight institutions were: the University of Florida, Gainesville; the University of Iowa; the University of Oregon, Eugene; the University of New Mexico; Virginia Polytechnic Institute and State University; Yale University; Princeton University; and the Library of Congress. The interviews elicited data on reasons for adopting team cataloging, numbers, sizes, and composition of teams, team specialties, and tasks and workflow.

All eight libraries are relatively large, with the smallest collection slightly over one million volumes. The size of their cataloging staffs ranged from fifteen to fifty-three, meeting an implicit requisite for team cataloging, that of a cataloging staff big enough to allow specialization. Experience with team cataloging in the eight libraries ranged from a few months to fourteen years.

REASONS FOR ADOPTING TEAM CATALOGING

The librarians interviewed cited many different reasons for the adoption of team cataloging in their libraries, from preparation for a new online catalog system to a need to ease the administrative burden on the head of the cataloging department. The extent of the reorganization also varied from library to library. In one, team cataloging resulted from a reorganization of the entire library, while in another, a small number of cataloging personnel did a limited amount of team cataloging on an experimental basis at the time of the survey.

In several of the libraries, growing backlogs and inadequate staffing created pressure to increase productivity. These comments by the interviewees were supported by Walton’s and Botero’s observation at the University of Florida that “the monographic cataloging arrearage [was] increasingly composed of titles lacking any kind of OCLC copy” (Walton and Botero 1992, 52). In one of the libraries involved in the present study, team cataloging began in an attempt to mitigate the effects of a staff shortage caused by reassignment of three cataloging department positions to a newly created authorities unit.

Several interviewees also mentioned morale issues as considerations in the change. Team cataloging presented an opportunity to develop closer relationships between professional and paraprofessional staff as well as for career development for both groups. Lowell and Sullivan have written, for example, that Yale University library administrators took both productivity and morale into account in the library’s reorganization, with stated goals of “improvement in the quality as well as the quantity of work performed, and greater collaboration among individual staff and among work units” (Lowell and Sullivan 1990, 21).

SUMMARY OF TEAM DATA

Although the eight libraries shared some reasons for adopting team cataloging, the specific implementation of this mode of organization took a number of different forms. The libraries’ cataloging teams varied in number, size, proportion of profes-

<table>
<thead>
<tr>
<th>TABLE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TEAM PROFILES</strong></td>
</tr>
<tr>
<td>Library</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
</tbody>
</table>

Data collected in interviews with catalog librarians.
ional to paraprofessional staff members, specialties, workflow, and assignment of tasks. Enough commonalities remain, however, to give an overall picture of team cataloging in the eight libraries.

The numbers, sizes, and composition of the cataloging teams in the eight libraries are given in table 1. The largest libraries had the most team members, as might be expected, but not necessarily the biggest teams. Team size depended mainly upon the number of teams created within a library. The average ratio of professional to paraprofessional team members equaled nearly one to one, but depended in each library on the types of materials to be cataloged and on individual management philosophies. Paraprofessionals in some libraries were allowed to do more advanced cataloging than in others.

Most cataloging team leaders were professional catalogers, a finding that agrees with Eskoz’s finding that “the ‘cluster’ or specialty unit . . . is usually headed by a professional cataloger” (Eskoz 1990, 386). In two of the four libraries where student workers were employed in the cataloging departments, teams also included students.

Among the eight libraries surveyed, each cataloging team fell into one of four types, representing four different approaches to dividing the materials to be cataloged and to assigning personnel to teams: subject, language, format, and a combination of these (see table 2). Multiple types of cataloging teams occurred in all but one library, where only subject teams were used. Subject teams were the most prevalent among the eight libraries, which makes sense given that subject specialization among professional librarians, at least, might enhance a library’s effectiveness, as Jennifer Younger has summarized (Younger 1990, 59). The criteria for determining the optimal types and numbers of teams for a cataloging department represent an area where further research is needed.

<p>| TABLE 2 |
| TEAM SPECIALTIES |</p>
<table>
<thead>
<tr>
<th>Type of Team</th>
<th>No. of Teams</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject Teams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Religion/Philosophy/Psychology</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Education/Sports/Recreation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Social Sciences/Sci-tech</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Humanities/Social Sciences</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td><strong>Language Teams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slavic</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Slavic/German</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>East Asian</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Japanese</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Near East</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hebraica</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Arabic</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>“Ibero”</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Romance/Classical</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Northern European</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td><strong>Format Teams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serials</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Rare books</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Non-book</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Combination Teams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latin American/Fine Arts</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Humanities/Special Collections</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Data collected in interviews with catalog librarians.

CATALOGING WORKFLOW AND DISTRIBUTION OF TASKS

In five of the eight libraries, team cataloging occurred assembly-line fashion and usually included Library of Congress (LC) copy cataloging. Paraprofessionals in these libraries performed such steps as description and heading verification, then
forwarded the items to professional teammates for review and for subject analysis and classification. In two other libraries, on the other hand, each team member, professional or paraprofessional, cataloged an item from start to finish, requiring advanced cataloging skills of the paraprofessionals; LC copy was handled outside the team structure. Neither model prevailed in the eighth library, where each team made its own decisions about workflow.

While the telephone survey and questionnaire did not elicit much information about the actual process of organizing team cataloging in the libraries, articles published by librarians from the University of Florida, Gainesville and Yale University highlight some important points. In both libraries, team management based on J. Richard Hackman’s “self-managing work group” was implemented along with the team form of organization (Herbsman and Yontz 1992, 21; Lowell and Sullivan 1990, 20). At the University of Florida, for example, “each team [made] its own decisions about workflow and work division” (Herbsman and Yontz 1992, 25).

Both libraries sought extensive staff participation in the reorganization. At Yale, “this extensive involvement of staff in the various parts of the planning process fostered acceptance of the reorganization . . .” (Lowell and Sullivan 1990, 22). In addition, Lowell and Sullivan found at Yale that “the critical step in preparing staff for self-management was a comprehensive training program” developed by a management consulting firm (Lowell and Sullivan 1990, 22). While this training was particularly important at Yale because of the implementation of team management, the adoption of team cataloging might also require additional training for staff members, especially because staff in teams usually work more closely with one another than in other forms of organization.

The literature also provides some “hard” data about productivity and morale with team cataloging. In the area of productivity, Walton notes that during the cooperative cataloging pilot project at the University of Florida, 250 original monograph records were produced in 6 months, for an average of 80 per month per FTE. According to Walton and Botero, “We considered this a highly acceptable figure considering that much of the staff time for the project was expended on training and revision” (Walton and Botero 1992, 57).

**Survey Results about Productivity and Morale**

**Methodology**

In addition to the organizational information about team cataloging elicited in the telephone interviews, information about perceptions of the effects of team cataloging on productivity and morale was sought through a questionnaire administered to cataloging staff members in four of the eight libraries. The questionnaire’s perceptual approach complemented the exploratory nature of the study. As Younger has noted, the use of perceptual data in exploratory surveys is particularly appropriate because of its potential to lead to substantive questions (Younger 1990, 90). No criteria for statistical significance of the data were developed because this methodology permits interpreting the results in general terms. Questions about perceptions of changes in morale were included because, as Donald L. Foster has noted, “to establish responsibilities without regard for staff morale is dangerous” (Foster 1987, 176).

Administration of the questionnaire was limited to the four libraries newest to team cataloging (and whose cataloging department heads acquiesced to the survey) in order to elicit respondents’ comparisons between team cataloging and earlier modes of organization. The questionnaire was pretested, resulting in changes in the wording of several questions to clarify meaning. The questionnaires were mailed to the cataloging department heads of the four libraries with the request to distribute them to all cataloging department staff members, who returned them anonymously directly to the authors. Of the seventy-six questionnaires mailed, thirty-nine were returned, a response rate of 51%. Due to the exploratory nature of the study, which
brought out a wide range of issues despite the somewhat low response rate, follow-up questionnaires were not sent to non-respondents.

FINDINGS ON PRODUCTIVITY

Responses to the question that asked whether productivity increased, decreased, or stayed the same with the adoption of team cataloging are summarized in figure 1. While 71% of the respondents perceived a change in overall productivity as a result of the new form of organization, they were divided over whether the change was positive or negative. The proportion who believed productivity had increased (42%) was slightly larger than the number who believed it had decreased (29%). These figures suggest that team cataloging might contribute modestly to a perception of an increase in productivity.

Respondents frequently mentioned specialization as an advantage of team cataloging. A typical comment was “I do a better job of cataloging because I know the subject matter better, what things need to be watched for.” Specialization by subject, language, or format enabled team members to develop their skills in cataloging certain kinds of materials, leading to a modest perception of increased productivity. In further support of this finding, Herbsman and Yontz note that “the team structure encourages work division which reflects individual strengths” (Herbsman and Yontz 1992, 27). Specialization with team cataloging reflects the “growing emphasis on staff specialization” (Foster 1987, 98) for all cataloging staff and a trend whereby “many of the functions formerly performed by academic librarians are now being performed by highly skilled support staff” in all areas of the library (Presley and Robison 1996, 25).

While team members specialized in cataloging certain types of materials, however, the questionnaire respondents also found “broader knowledge and skills [were] expected of everyone” and “more cross-training and varied job duties” occurred than with previous modes of organization. Professional catalogers in particular often assumed new supervisory responsibilities, but all cataloging team members also handled a variety of materials within their assigned areas. As Gregor and Mandel have stated, “the pressure is on to catalog more, and to do so with a wider range of expertise as each format presents unique problems” (1991, 43). This trend might have counteracted some of the perceived gain in productivity from team specialization. Questionnaire respondents did find, however, that the breadth of experience within each team made the cataloging departments more flexible: “staff turnover, changes in workload, non-book formats are all much easier to accommodate.”

The questionnaire respondents cautioned that “people may be assigned to a team without the subject or language required” and that sometimes the “supervisor expects more expertise than training warrants.” In addition, organization into teams sometimes disrupted previously existing informal channels for consultation: “Expertise is split and some people don’t like to go outside of team” to ask questions of those with the necessary knowledge, stated one questionnaire respondent.

The decentralization of cataloging expertise, as the reorganization created

![Figure 1. Respondents' perceptions of change in productivity with team cataloging.](image-url)
closer ties between professionals and paraprofessionals, was another factor in the perceived effects of team cataloging on productivity. The paraprofessionals in particular appreciated having ready access to their professional teammates for answers to questions and problems, rather than having to approach already overburdened unit or department heads. A typical comment was that staff "receive feedback in a more timely manner," which positively affected the respondents' perception of a change in productivity. This finding is supported by Herbsman and Yontz' observation at the University of Florida, Gainesville. Libraries that an advantage of team cataloging was "additional assistance to paraprofessional catalogers... help for paraprofessionals is now more readily available" (Herbsman and Yontz 1992, 25).

On the other hand, some questionnaire respondents believed this decentralization led to inefficient communication, with announcements repeated within each team rather than disseminated centrally. One respondent characterized this effect as "confusion in supervision—no central authority, duplication of effort." Others noted the development of inconsistencies among teams in procedures and even in treatment of staff members because of the decentralization of communication. It seems clear from the respondents' comments that the cataloging department still needs central leadership when implementing team cataloging as well as a regular means of communication among teams to forestall the gradual divergence of policies and procedures.

A majority of the questionnaire respondents perceived a change in productivity among professional catalogers with the adoption of team cataloging, but these respondents were nearly evenly split between those who thought the professionals' productivity had increased (43%) and those who thought it had decreased (38%). Those who perceived a decrease in productivity among the professional catalogers usually attributed it to the assumption of supervisory or managerial responsibilities by many of the professional catalogers, who often served as team leaders. Professional catalogers generally spent less time cataloging because of these new duties, although the reverse may have been true for the handful of professional librarians who were supervisors before the implementation of team cataloging.

Some respondents pointed out the benefits of dispersed supervisory responsibilities, but these were intangibles that did not directly enhance the professionals' productivity. Increased opportunities for interaction between professionals and paraprofessionals, more detailed knowledge of paraprofessional cataloging procedures among the professionals, and a chance for professional catalogers to acquire new skills and to become more involved in the functioning of the cataloging department. Two of the questionnaire respondents also thought the success of the entire team cataloging operation depended heavily upon the quality of the supervision in the department: the "teams must have capable and knowledgeable supervisors."

According to the questionnaire respondents, the least negative effects of team cataloging on productivity were perceived for the paraprofessional catalogers; only 20% of the respondents perceived a decrease in the paraprofessionals' productivity. This perception occurred despite the observations of many respondents that paraprofessionals had taken on more difficult levels of cataloging with team cataloging, which increased the amount of original cataloging but made less of the paraprofessionals' time available for copy cataloging.

If the paraprofessionals generally did more difficult, more time-consuming cataloging with the adoption of team cataloging, why did so few questionnaire respondents perceive their productivity as having decreased? Again, the specialization and decentralization concomitant with team cataloging might have contributed to this perception. The factor most commonly cited by the respondents as contributing to a change in productivity was the more efficient use of expertise, the most evident benefit of specialization. The paraprofessionals' productivity might have been perceived to increase because
the copy catalogers either began with or gained expertise in the subjects, languages, or formats in which their teams specialized. In addition, paraprofessionals benefited from decentralized supervision, which enabled them to consult with professional catalogers more easily.

A problem related to productivity that is touched upon in the literature and to some extent in this study is the difficulty of allocating personnel to teams. Questionnaire respondents mentioned that team members sometimes lacked the necessary expertise for cataloging the materials assigned to that team. Balancing the composition of the teams, both in numbers and in types of staff, also presented difficulties.

**FINDINGS ON MORALE**

Like the question about the perceived effects of team cataloging on productivity, a similar question about morale elicited mixed responses about overall morale. Responses to the same question about the perceived effects on professionals and on paraprofessionals exhibited such even distribution among those who perceived improvement, no change, and decline that little analysis of differences is possible for those groups (see figure 2).

While a majority of questionnaire respondents perceived a change in morale related to team cataloging, slightly more perceived a decline in morale (38%) than perceived an improvement (30%). The ambivalence might represent a potential drawback to the team cataloging mode of organization, given that “in the short run, employees can be dissatisfied and still be highly productive . . . but in the long run . . . dissatisfied employees tend to adopt either ‘fight’ or ‘flight’ patterns of behavior” (Vaughn and Dunn 1974, 175). The respondents’ specific comments in their answers to questions about morale, however, highlighted both problem areas and areas where team cataloging helped enhance morale.

Responses mentioned both short-term and longer-term negative effects of team cataloging on morale. Many cataloging staff members were apprehensive about the change initially, as might be expected. Some evinced the attitude, “If it ain’t broke, don’t fix it,” and one respondent said some feared team cataloging would bring “chaos management” to the cataloging department. “There was a period of insecurity and confusion while roles were being redefined,” summarized another respondent. When a respondent perceived that team cataloging had been imposed unilaterally, without staff participation in the decision, his or her estimation of the effect on morale was especially negative.

The professional librarians in particular worried about performing the new supervisory responsibilities that often accompanied the implementation of team cataloging. While many of the librarians found the new duties stressful in themselves, some also resented what they perceived as the devaluation of their cataloging activities, perhaps because they spent less time cataloging and because the paraprofessionals generally took on more advanced cataloging duties. Certainly requiring professional catalogers to take on additional supervisory and management activities does not make full use of their cataloging expertise.

![Figure 2. Respondents' perceptions of change in morale with team cataloging.](image-url)
An ongoing stress of team cataloging, mentioned by several respondents, was the emphasis on increased productivity. Some questionnaire respondents perceived pressure for a greater increase in productivity than the new form of organization could reasonably be expected to achieve. One respondent thought such pressure contributed to lower standards, which in turn negatively affected morale: “The quality of cataloging has gone way down in an effort to get materials out. This is bad for morale at an institution where we used to have such particular standards of perfection in all cataloging, not just original.” The emphasis on productivity in team cataloging reflects an overall trend in libraries in general, where “underfunding has resulted in a fundamental shift in librarianship from an emphasis on service provision to one on productivity, that is, a shift in focus from qualitative to quantitative output measures” (Schneider 1991, 388).

Questionnaire respondents observed that teams sometimes became territorial and competitive, taking an “I’m better than you” stance and blaming other teams for problems. This divisiveness undermined the focus on a common goal that can enhance morale. Some of the negative interactions cited by questionnaire respondents might have resulted from the lack of communication also mentioned by several respondents.

With nearly as many respondents who found team cataloging a boost to morale as found it detrimental, however, there were also many positive comments about the effects of team cataloging on morale. One advantage of team cataloging appeared to be better working relationships among team members (although not always among teams). Team cataloging “foster[ed] an attitude of mutual respect among team members,” according to one respondent, and of “mutual support,” according to another. One respondent praised the new form of organization highly: “The team concept where one or more of each job type is present results in better working relations. We learn what each person is capable of and what to expect from each. There is much better team spirit, and more desire to complete the job.”

In addition, team cataloging benefited morale because “people [were] happier cataloging subject matter they like[d],” at least when allowed some say in team assignments, which was not always the case. Herbsman and Yontz observed a similar effect at the University of Florida: “Since people have input, they are more willing to accept changes,” and “since people feel that they have input on issues that affect their work, the morale in the unit is higher than it was before the change” (Herbsman and Yontz 1992, 29).

The majority of the questionnaire respondents liked having more and different things to do once they overcame initial apprehension about some of their new responsibilities. The increased variety of duties was the factor most often cited by questionnaire respondents as contributing to a perceived increase in morale with team cataloging. Librarians generally cited as benefits the increased involvement in department leadership and the opportunity to acquire management and supervisory skills, while paraprofessionals mentioned more interesting work and increased levels of responsibility and involvement. As Schneider has noted, job satisfaction, certainly an important component of morale, is higher for library employees “when the job involves challenge, creativity, and responsibility” (Schneider 1991, 389). Reclassification of staff members who have taken on significant additional responsibilities, as at the University of Florida (Walton and Botero 1992, 69), might be an appropriate response to the concern of one questionnaire respondent that “extra duties without extra support [are] stressful.”

Additional factors in the effects of team cataloging on morale mentioned in the literature include “more participatory decision making,” “reduction of isolation,” and “room in the team structure for varying interests and aptitudes” (Herbsman and Yontz 1992, 26–27). These factors appear to benefit morale, at least when team management techniques are implemented along with team organization.
OTHER FACTORS TO CONSIDER IN REORGANIZATION

The results of this exploratory study also provide information about team cataloging to librarians who are considering reorganization of their catalog departments. Additional factors presented here about team cataloging and about reorganization in general are based on responses to the interviews and questionnaires and on the literature.

Despite the range of reasons given for reorganizing cataloging departments into teams, few of the libraries indicated an in-depth examination of the rationale for doing so. Donald Foster has listed a number of questions to be asked when considering reorganization of the cataloging department (Foster 1987, 177–78). Answering these questions fully and honestly might lead to more realistic expectations among librarians who decide to reorganize a cataloging department.

In any cataloging department reorganization, as many members of the department as possible should be involved both in the decisions about whether and how to reorganize and in implementing any change. The staff then has a vested interest in the success of the new form of organization, which can be evaluated more realistically without the atmosphere of resentment that might otherwise result.

All involved must realize as well that no reorganization is a panacea. Both the current form of organization and any proposed changes should be evaluated in depth to determine whether such a major change is really needed and, if so, what the reorganization can reasonably be expected to achieve. As several questionnaire respondents noted, the change to team cataloging sometimes raised unrealistic expectations about increases in productivity, which in turn created pressure that strained morale. The scope of the reorganization also merits consideration. A reorganization also need not affect all areas of the department; several libraries had cataloging teams for some types of materials but not others.

If a new form of organization is adopted, cataloging department members need to have expectations and new roles made clear to them in order to perform effectively. As one questionnaire respondent stated, “[We] need clear definitions of expectations for all involved; clear definitions of minimum standards; clear distinction of roles.” In fact, for the team cataloging mode of organization in particular, communication is key, both departmentwide and among team members, who might work together more closely than within a previous mode of organization.

While teams might have considerable latitude for making decisions about their own procedures and workflow, departmentwide communication must continue in order to assure consistency of cataloging policy throughout the department. Department meetings are one means to achieve such consistency, as well as an opportunity for all staff members to raise questions and problems.

The team mode of organization does not eliminate the need for central authority (i.e., that of a cataloging department head). In business, team managers must have the authority to choose team members, decide work assignments, report evaluations of team members to the department head, and remove team members if necessary, if they are to be held accountable for the work of their teams (Carson 1992, 40). Clear reporting lines are necessary in libraries as well, both within cataloging teams and in the catalog department as a whole. It should be stated who is responsible for assigning cataloging personnel to teams and for evaluating the work of team members. As mentioned by some of the questionnaire respondents, the team form of organization sometimes created “team chauvinism,” which might have led team members to base decisions upon team considerations rather than upon what was best for the department or the library. The development of backlogs of certain kinds of material in some of the libraries that adopted team cataloging also suggests the need for central monitoring of workflow.

Questionnaire respondents offered several other recommendations about team cataloging. Foremost among these
was that team members have the subject or language expertise to catalog the materials assigned to their teams. Those without the necessary expertise should be assigned to other teams or provided training to fill the gaps in their knowledge. Team size should be limited to allow for more effective supervision by team leaders.

**CONCLUSION**

This study has provided an overview of team cataloging through interviews with catalog librarians in libraries that use team cataloging, a survey of cataloging department staff members, and information from the literature. It is evident that team cataloging in several different academic libraries shares certain characteristics, such as division of cataloging staff into groups to catalog materials in specific subject areas, languages, or formats, with the groups comprised of both professional and paraprofessional catalogers but typically headed by professional catalogers.

Considerable differences occurred among libraries, however, in the numbers, types, sizes, and composition of cataloging teams. Team members’ perceptions of the effects of team cataloging on productivity and morale varied widely, although slightly more respondents perceived an increase in productivity than perceived a decrease or perceived no change. Responses to the question about the perceived effect of the adoption of team cataloging on morale showed almost even distribution among those who perceived an improvement, no change, or a decline.

This study has been an initial step toward answering the key question of whether team cataloging is an effective form of organization for the academic library cataloging department. In addition, this exploratory survey indicates several avenues for further research. Quantitative studies of productivity with team cataloging are needed, as these findings suggest that changes in productivity did occur. Based on comments from the respondents, the quality of cataloging and the use of expertise within a team system also deserve closer examination. Such work could indicate whether the apparent promise of team cataloging truly is worth the effort and stress involved in reorganizing a library department.

**WORKS CITED**


Notes on Operations

Independent Office Collections and the Evolving Role of Academic Librarians

Joan B. Fiscella and Nancy Sack

Recent collaboration between librarians and teaching faculty at the University of Illinois at Chicago aided in the identification of a new type of library on campus. This so-called hybrid office library is similar to a personal collection in the type and arrangement of materials acquired, and it is like a branch library in that the materials are collected and used by a number of persons working in the same field. Until now, librarians have not been concerned with providing access to faculty-owned collections. But changing information requirements of the faculty, new technologies available to them, and financial constraints on the university require that librarians take on a new role: helping faculty organize their independent office collections and encouraging them to make their materials available to a broader constituency.

Identification, acquisition, organization and dissemination of information are the cornerstones of librarianship. At academic institutions these activities have traditionally been performed in the central campus library and any branch libraries within the library system. Librarians have been aware that departmental and personal collections of books, journals, reprints, and other supportive materials exist on campus, but they have not been concerned with providing access to them. Today, however, changing programs in higher education and the increased use of sophisticated technologies are beginning to blur distinctions among personal collections, departmental collections, and library resources. These developments have opened the way for librarians to re-examine the relationship of independent office collections to library collections and to consider the information services they provide in the context of the broader information resources of the campus. A recent collaboration between librarians and teaching faculty serves to illustrate a consulting role that academic librarians might be expected to play in the future.

The University of Illinois at Chicago (UIC) is home to a number of centers and institutes, among them a group of four programs in mathematics and science education. The faculty and staff of the programs had been accumulating materials to support their scholarship, teaching, and consulting with off-campus clients. As
the collections continued to grow, the faculty were finding it increasingly difficult to keep track of what they held and to whom it was lent. They sought the assistance of librarians to help them organize their collections and to devise a system of circulating their materials. This and subsequent requests for librarians' advice in organizing office collections were evidence to us of a broader need among university faculty to improve access to their personal collections and an acknowledgment of librarians' expertise in bibliographic control. As a result of those inquiries, we decided to investigate the nature of extra-library collections on campus and the potential role of librarians in helping to make these collections more accessible.

**Personal Collections and the Center's Materials**

Studies of scholars' personal collections indicate the presence of a wide range of materials including notes, paper drafts, memos, minutes, correspondence, and files, as well as publications (Case 1986 and 1991). Because scholars place high value on the convenience and ease of use of their personal collections (Soper 1976; Moon 1988), they locate the materials in a place conducive to their work. As Mary Ellen Soper points out in her study: "Only the personal collection provides optimum physical access at all times" (Soper 1976, 399–400). As owners of these materials, scholars can use them when and as they wish; they need not be dependent on the open hours of a university library nor be hindered by finding that materials are missing from the shelf.

Having materials close at hand is just one benefit of scholars' personal collections; another is their freedom to arrange materials as required by their particular needs. Whether or not scholars create records for their collections, using for example index cards, research bibliographies, or sophisticated software packages, they may still customize the physical organization of the materials to suit their own purposes. Books and papers can be grouped not only by author or subject, but also according to their intended use, for example, work in progress, planned research, or development of curriculum. Thus under certain conditions, physical access is one with intellectual access. Soper concludes that a scholar's arrangement of a personal collection is "highly individualistic and reflects the interests and work habits of the owner" (Soper 1976, 399), while Charlotte Moon attributes such idiosyncrasy to the fact that the individual "both stores and retrieves the information, in contrast to the multi-user systems in libraries" (Moon 1988, 266), where the individual retrieves information from more generically organized collections.

The same approaches to organization that aid scholars in locating materials in their personal collections can sometimes become an obstacle to access. Soper's subjects note the flexibility and responsiveness of their personal collections but, "a few of the respondents expressed dissatisfaction with the lack of organization in their own collections and the amount of time they had to expend on them" (Soper 1976, 410). As the quantity of information resources increases, a consistent organizational scheme and easy access to the collection become more difficult for the non-expert to achieve (Moon 1988, 265).

The research and teaching materials of UIC's mathematics and science education programs, perhaps typical of smaller autonomous collections on campus, have grown out of and resemble personal libraries. Like single-user collections, the programs' materials are composed of a variety of resource formats, including books, journals, unpublished manuscripts, audiovisual materials, computer disks, kits, curriculum materials, educational tools, and other objects. Some of these, for example reprints, would rarely be collected in an academic library. Moreover, in specialized areas, such as a particular educational philosophy, the collections are comprehensive across many formats. The UIC faculty have developed these collections based on their research, on recommendation or referral from colleagues, and perhaps even serendipitously. Their focus on specialized research
or practice implies less concern for balance than would be present in the collection of a university library.

The organization of the UIC programs' materials, too, is similar to the arrangement of personal collections. Materials are organized flexibly and are immediately accessible to the faculty, their assistants, students, and their visiting off-campus clients. Currently located in researchers' offices or in a nearby room, materials are easily retrievable, although to an outsider, their arrangement might seem haphazard. Finding specific materials might depend on physical placement as much as on an indexing or cataloging system. Like the subjects of the research studies, the faculty and staff of UIC's programs were becoming overwhelmed by the lack of organization of their collections, and they approached a librarian for help.

**PROJECT**

In response to program faculty request, we began a short-term consulting project with these programs (which subsequently evolved into a more formal cooperative arrangement among themselves), described hereon as the Center. Together we met with the Center's faculty and staff to determine the current and projected size and scope of their collections, the population these collections were intended to serve, and the kinds of services the Center wished to provide. The Center's personnel identified three distinct visions for their growing collections: Some saw their collections as a resource for curriculum materials to be used primarily by Chicago area teachers and students; others acquired materials primarily to support their own scholarly research; still others thought that, among them, they had accumulated a valuable collection that could become a library of outstanding and innovative materials for use by the scholarly community throughout the country.

Although the Center's faculty and staff were interested in physically consolidating their collections and in devising a system of cataloging and circulating their materials, they were not interested in merging their collections with the university library. Rather, they wanted to continue to keep the materials close at hand to ensure easy access to them. For its part, the university library was unwilling to assume responsibility for creating and maintaining a catalog of the Center's holdings or to operate another lending library. We did offer to draw up an outline of options for physical and intellectual access to their collections, and we agreed to provide some consultation in planning and implementing an independent Center library. We emphasized that the most appropriate organization of their collection would depend, in part, on the population that the library would serve, which in turn would be determined by the purpose and goals they defined for their collection. For example, Chicago-area teachers might require only local catalog access, but in a workshop setting they might want to browse the collection by grade level, by format, or by subject. Alternatively, in a catalog or index record, the subject vocabulary relevant to teachers might not be appropriate to describe a collection of scholarly materials intended to support faculty research. Further, if the Center's library were to be a resource for scholars throughout the country, then remote access to the Center's catalog would probably be the primary concern. We therefore recommended that they first decide which of their three purposes was most important to them.

Our report outlined ways of physically arranging the Center's materials and of providing intellectual access to them through catalog or index records. We described the advantages and disadvantages of various methods of organization and circulation, both manual and automated, and we recommended that they choose an approach that would be both simple to use and sufficiently flexible to adapt to the future needs of a growing collection and, possibly, an expanding clientele. We urged them to consider carefully the type of information they wanted in each record (Kwasnik 1989 and 1991), without limiting themselves to the established content or structure of library catalog records or bibliographic citations. For example, they
could enhance their bibliographic records for classroom materials by encoding grade level, evaluative comments, remarks about usage, and identification of educational philosophy.

The most ambitious of the options we suggested to the Center faculty was that they create a catalog of their materials using commercial bibliographic software and that they make it publicly accessible through the campus computing system. We did not suggest that the records for the Center's materials be merged into the university library catalog or that the library take responsibility for creating a separate database for them. Instead, in the interest of cooperation and promoting wider accessibility, we offered assistance in designing an appropriate record structure for their materials. We also mentioned potential funding options to support developing their catalog, including the possibility of preparing a joint study and applying for a research grant.

**CENTER'S LIBRARY AS BRANCH COLLECTIONS**

The impetus to combine their collections was the faculty's desire to house the Center's materials in a common space. Beyond that, Center personnel thought they might maximize their own resources by pooling them. Consistent with the faculty's goals, the combined collections could then be used by a greater number of people. Because the scope of their collections overlapped, they could jointly decide what to purchase and thereby avoid unnecessary duplication of materials. There would, however, be costs as well as benefits to pooling the Center's resources: the convenience and idiosyncratic physical arrangement so important in single-user collections would inevitably be compromised to allow for common access and lending of materials.

Users of this combined collection would find it virtually indistinguishable from a branch library. Both multi-user departmental collections and university branch libraries bring together heavily used materials in a place that is convenient to those who need them. Like office collections, branch libraries have a limited scope; because they are small, their staffs can be more responsive to the changing needs of their clientele. Branch libraries' relatively small size and their responsiveness can provide an ease of use that is as important as access to many faculty and students.

Yet the Center's collections cannot be considered a UIC library branch, because the library is not funding the collection, the staff or the space for the Center's library. In fact, the UIC library, like libraries of many universities, already supports a limited number of branches related to the Center's field of work, including a science library, a mathematics library, and a small curriculum library. Further, the UIC library selectively collects materials in the area of mathematics and science instruction to support research, teaching, and curriculum development.

This existing support accounts in part for the UIC library's reluctance to fund an additional department branch. In the current economic climate, supporting additional library sites diverts funds, weakening services at all existing branches and sites. Libraries that refuse the financial responsibility for additional sites can maximize their resources for supporting curriculum and research information needs, and can help conserve campus resources by containing costs.

The policy of restraint toward branch libraries has become a national trend, as Shkolnik notes in his review article. The arguments for centralizing libraries' collections support the interests of library administrations; the claims are cast in terms of efficiency, cost-saving, and security (Shkolnik 1991, 347). Moreover, trends in scholarship and teaching across disciplines also support centralizing the collections for access to a broader constituency (Shkolnik 1991, 349).

**INDEPENDENT OFFICE COLLECTIONS: A HYBRID MODEL**

The similarities of the Center's collection both to personal collections and to branch libraries suggest that neither model fully accounts for all the characteristics of
multi-user office or departmental collections; a better model combines the central attributes of both personal and branch collections. In such a “hybrid” independent office library, faculty-owned materials are acquired to support individual scholars’ teaching or research, without necessarily considering a balance of viewpoints. Yet because these materials are collected and used by a group of researchers, some personal control and ease of use are compromised for the sake of a stronger collection and systematic organization. The hybrid model maintains faculty ownership and decision making, but broadens access (either of materials or records) to a larger group of their determination.

Identifying office or departmental collections as hybrids of personal and branch libraries could lead some librarians to question the relationship of the campus library to these collections. They might claim that the library need not concern itself with them at all, because the collections would remain the property of the faculty. With a sizable backlog of its own uncataloged materials, the library could scarcely undertake to catalog materials belonging to faculty members. Moreover, it would be a disservice to library patrons to integrate records for faculty-owned materials into the online library catalog because the library does not determine access to them. Others could argue that librarians should not participate in projects that could be seen as implicit support for new branch libraries or extensive collections unrelated to the library. If anything, the faculty should be encouraged to donate their personal or office materials to the university library, with its arguably broader constituency.

From a perspective that places a high value on centralization, independent departmental libraries are perceived as fugitive collections that dissipate scarce campus resources. On the other hand, from a perspective that views the existence of individual collections as an opportunity to develop mutually supportive relationships, owners of personal or office collections are valuable allies, for they can help provide access to materials not otherwise available on campus and promote campus resource sharing.

Hybrid collections are most valuable when they are accessible through electronic records. Although Shkolnik points out the important role of the online catalog in reducing users’ needs for immediate physical access, he concedes that “current technology will not end the need for departmental libraries. They will continue to exist because distance and other local conditions warrant it; however, they will no longer be isolated or independent from the larger library system” (Shkolnik 1991, 350). Although by “departmental libraries” Shkolnik means branches of the central library, his comment may be applied to office or personal collections as well: they will continue to exist, and it is in the central library’s interests to help expand these resources into campus information resources through, for example, a departmentally maintained, but more widely accessible, online catalog of the materials.

In the case of the UIC Center, the proposed faculty-owned and maintained, but public, online catalog or file could turn this collection from a perceived problem into a project beneficial not only to the Center and its clients, but to the university library as well. The faculty and staff could gain access from home, off-campus offices, as well as the Center office, at almost any time of the day. A database of reliable information available through a campus computer network would also help to meet all three of the Center’s original goals: members of the Center and students could use the records to help identify and locate appropriate materials; area teachers would have a resource accessible through school computers (dialing in or via the Internet); and the Center staff could make the database available across the country through the Internet, thus positioning its collection as a national resource.

The university library, too, would realize advantages from lending expertise to help develop the Center’s publicly available online bibliographic database. An immediate benefit to collection development activities would be the existence of
an additional information resource indicating important works identified by faculty working in the field, some of which could be added to the central library's collection. Even if the Center should decide to limit access to its material, cooperating with the faculty and staff further establishes librarians' expertise in managing information resources and points to developing roles of the library on campus, for example, as consultants to academic departments. Perhaps the most important long-term advantage is the fostering of future campus partnerships. Each such cooperative venture provides a visible example of the interrelation of all campus information resources and helps establish the central role of the library in shaping information policy.

ACADEMIC LIBRARIES OF THE FUTURE

The selection, acquisition, and organization of information resources for teaching and research are issues that go well beyond discussions about centralized or branch libraries. Individuals, departments, and institutes continue to collect their own materials. Focusing on whether these extra-library collections should exist or whether the campus library should meet all the information needs of the faculty and students assumes a narrow vision of the process of scholarship and an unrealistic assessment of the financial and human resources provided to academic libraries. Librarians can aid faculty, students, and staff in managing their own information resources, and in this context, librarians must continue to rethink the role of the library vis-à-vis the diversity of information resources on campus.

The library literature is replete with predictions about the future of academic librarianship. Many of these consider how library collections and bibliographic access to them will change in the next century (Gorman 1991; Horny 1987). One paper, a collaborative effort of several scholars, academic administrators, and librarians (Woodsworth 1989), presents a new conceptual model of academic librarianship in the year 2020. The authors predict that in the future, library staff will serve as consultants in creating databases for individuals and groups of users and in making these databases available beyond the university. They suggest that one way to achieve this vision of the model academic library of the future is to offer "new services on campus by identifying campus data files and data resources that could be campuswide resources" (Woodsworth 1989, 137).

In fact, this future is upon us. Individuals on campus can already gain access to an enormous array of information sources from their personal computers. William Y. Arms (1992), vice-president for academic services at Carnegie Mellon University, writes of the power of distributed computing in research universities, noting that many individuals and departments purchase computers and develop their own programs, using central computing only for networking. He suggests that with the increase in electronic resources, individuals, along with their campus and professional affiliations, will develop and manage their own information to a greater degree. Lois Jennings, university librarian at the University of Canberra in Australia, notes: "The established roles of university libraries are being challenged by the emerging scholar's workstation concept in which the client has the ability to access, from a personal computer via communication networks, information irrespective of its ownership or location" (Jennings 1992, 4).

What role will librarians play? According to Arms, librarians' expertise will be useful, and library services will remain important, but libraries cannot assume they will have centralized control over all information resources on campus. Their roles will change from campus to campus (Arms 1992), but one role will be to act as a kind of network for dispersed resources, akin to a network among distributed computers. In the same vein, David Bishop points out that the role of information provider does not belong exclusively to the library, but is "highly sought by other groups within the university" such as the computer center, the telecommunications office, and the schools and colleges themselves (1989, 197–98). He urges librarians
to play a central role in developing information policy on campus. Jennings also proposes initiating new services to keep the library central as more and more departments rely on and create electronic resources. She foresees that libraries will continue their traditional services of selecting, acquiring, cataloging, and circulating materials, but these services will be less important than helping clients do those things for themselves: "The Library's increasingly important new roles will be to provide clients with advice about electronic information and to help them develop skills in accessing, using, and managing this information" (1992, 11).

Hard-pressed to keep up with current demands for service with decreased budgets and limited staff, some librarians argue that any time spent advising faculty on managing their own collections adversely affects the library. But our experience suggests that greater collaboration between academic departments or programs and the library is beneficial to both parties. Faculty can benefit from librarians' expertise in identifying relevant materials and in organizing collections for efficient and effective retrieval. Collaborative projects between the library and academic departments give faculty a better understanding of the principles of collection management and bibliographic control, and foster a greater appreciation for the work of librarians. By working together with faculty and encouraging them to make their resources more widely available, librarians can reduce duplication of specialized materials, thereby helping to contain costs. An increased awareness of the variety of library resources on campus and a greater understanding of the information needs of the faculty can also help position librarians to take an active role in coordinating a campuswide information policy.

WORKS CITED
Arms, William Y. 1992. Fwd: chronicle article. Public-access computer systems forum[PACS-L@UHUPVM1, electronic message], September 11.
Gorman, Michael. 1991. The academic library in the year 2001: Dream or nightmare or something in between. The journal of academic librarianship 17: 4-8.
The Internet Troubleshooter: Help for the Logged-On and Lost
Nancy Regina John and Edward J. Valauskas
The authors have taught hundreds of Internet users and understand the common problems that arise in the midst of online activity. An index, section dividers, screen illustrations, and real-life examples make solutions easy to find, understand, and enact. With its spiral binding, the guide is perfect for use by your terminal. This is your user-friendly lifeline, complete with a detailed index and glossary.
$20.00 spiral-bound 1994 approx. 100p. ALA Order Code 0633-8-0011

Guidelines for Bibliographic Description of Interactive Multimedia
ALCTS Interactive Multimedia Guidelines Review Task Force
Created in response to demand by catalogers for practical instructions on cataloging interactive multimedia resources. The guidelines remain in compliance with the principles and provisions of AACR2, in so far as the complications of media integration in interactive multimedia resources allow compliance. Reviewed by more than 300 catalogers to ensure usefulness in the field.
$12.00 pbk. 1994 approx. 50p. ALA Order Code 3445-5-0011

Revision Amendments 1993
Joint Steering Committee for Revision of Anglo-American Cataloguing Rules
The latest set of amendments to the AACR2 covers almost five years of updates. Contains rule revisions since 1988, changes to entries in the index affected by rule revisions and corrections, and typographical corrections.
$12.00 pbk. 1993 160p. ALA Order Code 3431-5-0011

Serials Acquisitions Glossary
$5.00 pbk. 1993 ALA Order Code 7692-1-0011

After the Electronic Revolution, Will You Be the First to Go?
Arnold Hirshon, editor
$18.00 pbk. 1993 ALA Order Code 7650-6-0011

TO ORDER, CALL 800-545-2433; PRESS 7

(formerly ALA Books) / American Library Association / Order Fulfillment / 520 N. Dearborn St. / Chicago, IL 60610
A Survey of East European Monographic Records in the OCLC Database

Viveca S. Seymour

To determine the availability of catalog copy for East European monographs, OCLC Online Computer Library Center, Inc., bibliographic records were studied for all newly acquired East European monographs at the Hoover Institution Library for the period August through December 1993. A total of 431 monographs published in East Europe were received and searched for catalog copy. Copy was available for only 20% of the titles searched.

The Hoover Institution Library, a collection of 1.6 million volumes, contains collections focused around 20th-century economic, political, and social change. Considered a major collection for East European materials, Hoover's collecting efforts greatly accelerated with the recent tumultuous political changes taking place in East Europe and the former Soviet Union. Between January 1991 and January 1993, Hoover operated an office in Warsaw, Poland (Warsaw Office Project), to gather materials to document these historic events. Included in this survey are monographs gathered on site as well as those materials gathered through more traditional library collecting methods.

During the five-month period of this study, 431 monographs published in East Europe were received and searched for catalog copy. (431 monographs for five months corresponds to 1,094 monographs for a twelve-month period.) In this group, 44% were published in 1993, 38% in 1992, 8% in 1991, 3% in 1990, and 7% before 1990 (table 1). The titles were published in the following 14 countries of East Europe: Albania, Bosnia/Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Serbia, Slovak Republic, and Slovenia. Approximately half of the titles were from Poland. Other frequently occurring imprints include 8.5% from Hungary, 8% from Romania, and 7% from the Czech Republic (table 2). The subject scope of these materials covers 20th-century history and politics, in particular political ideologies (communism and socialism) and the development of democratic institutions, within the East European geographic area. The items in the survey are typical in number and scope of the Hoover Institution Library's current acquisitions.

RESULTS

Catalog copy was available for only 20% of the 431 titles searched. The remaining 80% required original cataloging. This compares to an overall hit rate for copy at
TABLE 1
COPY VS. NO COPY BY YEAR OF PUBLICATION

<table>
<thead>
<tr>
<th>Year of Publication</th>
<th>Titles with Copy</th>
<th>Titles without Copy</th>
<th>Total No. of Titles</th>
<th>% of Total No. of Titles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>7</td>
<td>181</td>
<td>188</td>
<td>43.62</td>
</tr>
<tr>
<td>1992</td>
<td>42</td>
<td>121</td>
<td>163</td>
<td>37.82</td>
</tr>
<tr>
<td>1991</td>
<td>11</td>
<td>25</td>
<td>36</td>
<td>8.35</td>
</tr>
<tr>
<td>1990</td>
<td>10</td>
<td>5</td>
<td>15</td>
<td>3.48</td>
</tr>
<tr>
<td>Pre-1990</td>
<td>15</td>
<td>14</td>
<td>29</td>
<td>6.72</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>346</td>
<td>431</td>
<td>100.00</td>
</tr>
</tbody>
</table>

TABLE 2
SOURCES OF COPY BY COUNTRY OF PUBLICATION

<table>
<thead>
<tr>
<th>Country of Publication</th>
<th>Total No. of Titles with Copy</th>
<th>Library of Congress Copy</th>
<th>Member Copy with Call Number</th>
<th>Member Copy without Call Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Bosnia</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Croatia</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>10</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Estonia</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Hungary</td>
<td>14</td>
<td>8</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Latvia</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lithuania</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Poland</td>
<td>24</td>
<td>5</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Romania</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Serbia</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Slovenia</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>33</td>
<td>36</td>
<td>16</td>
</tr>
<tr>
<td>% of Total</td>
<td>100</td>
<td>39</td>
<td>42</td>
<td>19</td>
</tr>
</tbody>
</table>

the Hoover Institution Library of 48% for new acquisitions. As can be expected, the hit rate increased with earlier publication dates. The hit rate for 1993 imprints was only 3%. For 1992 imprints the hit rate increased to 25%; for 1991 imprints the rate was 30%; and for 1990 imprints the rate was 66%.

Although the overall hit rate for copy was a disappointing 20%, the hit rate by country varied greatly. Excluding countries where only one title was received and searched, the greatest hit rates were found for Estonia at 45%, Hungary at 38%, Serbia at 38%, Slovak Republic at 35%, Croatia at 33%, and the Czech Republic at 32%. The largest group surveyed, Poland, had a hit rate of only 10% (table 3). This low hit rate for Poland could be a result of the unique nature of materials acquired by the Hoover Institution's Warsaw Office Project during 1991 and 1992.

There was approximately the same amount of full Library of Congress copy with a usable call number available as full
TABLE 3

STATISTICS BY COUNTRY OF PUBLICATION

<table>
<thead>
<tr>
<th>Country of Publication</th>
<th>Total No. of Titles Searched by Country</th>
<th>% of Total No. of Titles Searched</th>
<th>Total No. of Titles without Copy</th>
<th>Total No. of Titles with Copy</th>
<th>Hit Rate for Copy by Country (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>1</td>
<td>0.23</td>
<td>0</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Bosnia</td>
<td>1</td>
<td>0.23</td>
<td>0</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>1</td>
<td>0.23</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Croatia</td>
<td>6</td>
<td>1.39</td>
<td>4</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>31</td>
<td>7.19</td>
<td>21</td>
<td>10</td>
<td>32</td>
</tr>
<tr>
<td>Estonia</td>
<td>20</td>
<td>4.64</td>
<td>11</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>Hungary</td>
<td>37</td>
<td>8.58</td>
<td>23</td>
<td>14</td>
<td>38</td>
</tr>
<tr>
<td>Latvia</td>
<td>16</td>
<td>3.71</td>
<td>13</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Lithuania</td>
<td>16</td>
<td>3.71</td>
<td>14</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Poland</td>
<td>230</td>
<td>53.36</td>
<td>206</td>
<td>24</td>
<td>10</td>
</tr>
<tr>
<td>Romania</td>
<td>35</td>
<td>8.12</td>
<td>28</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>Serbia</td>
<td>13</td>
<td>3.02</td>
<td>8</td>
<td>5</td>
<td>38</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>17</td>
<td>3.94</td>
<td>11</td>
<td>6</td>
<td>35</td>
</tr>
<tr>
<td>Slovenia</td>
<td>7</td>
<td>1.62</td>
<td>6</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>431</td>
<td>100.00</td>
<td>346</td>
<td>85</td>
<td>20</td>
</tr>
<tr>
<td>% of Total</td>
<td>100</td>
<td>100.00</td>
<td>80</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

member copy with a usable call number. Overall, for 85 titles, 39% had full Library of Congress copy, 42% had full member copy with a usable call number, and 19% had member copy without a usable call number.

Of a total of 85 records with usable copy, 84% required at least one revision. A total of 165 different revisions were made to descriptive, subject, fixed field, and call number elements. In other words, most records required at least two revisions.

The greatest percentage of all revisions, 47%, were made to descriptive cataloging elements. Some of the more frequent revisions were made to general notes (MARC field 500), bibliography notes (field 504), geographic area code (field 043), and title field (field 245). These included typographical errors as well as errors of omission (table 4).

Errors in subject cataloging fields accounted for 14% of all corrections made. Most common were errors in the subject heading fields (650 and 651), many relating to geographic headings and subdivisions. The most amusing error was the coding of the heading "Luxemburg, Rosa, 1871–1919" as a geographic name.

Fixed field revisions accounted for 24% of all revisions made. The most frequent changes included upgrading of the encoding level (12 revisions), illustration code (10 corrections), nature of contents code (8 corrections), and place of publication code (6 corrections).

And finally, revisions to call numbers supplied on copy accounted for 15% of all corrections. Five of these revisions changed locally formulated law call numbers to Library of Congress classification. The other 20 revisions required adjustment of the cutter for local shelf listing. In addition to these 25 revised call numbers, there were 16 member records without any call number. For all copy—LC, member with call number, and member with-
TABLE 4
REVISIONS TO COPY BY MARC TAG

<table>
<thead>
<tr>
<th>Type</th>
<th>Total No. of Revisions</th>
<th>% of Total Revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Fields</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E/L</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>CONT</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>ILLUS</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>PLACE</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>BIOG</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>GOVT</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>CONF</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>DCODE</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>24</td>
</tr>
<tr>
<td>Variable Fields</td>
<td></td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>1XX</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>240</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>245</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>260</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>300</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>4XX</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>500</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>504</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>650</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>651</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>7XX</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>610</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>250</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>600</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>041</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>505</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Call Number</th>
<th>Total No. of Revisions</th>
<th>% of Total Revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutter</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Reclass K</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Grand Total</td>
<td>165</td>
<td>100</td>
</tr>
</tbody>
</table>

out call number—48% of records required either revisions to the provided call number or provision of a call number. Due to the nature of our collection and its narrow scope, this was not unexpected and would not necessarily be expected for more general collections.

DISCUSSION
When compared with a study by Gurevich (1991) for Russian monograph records in OCLC, the results for East European monographs appear even more dismal. Gurevich found a hit rate of 47.3% for Russian monographs in OCLC for full catalog copy with and without call numbers. It is interesting to compare the two results since it is often the same cataloging staff in a library who handle Russian and East European materials. The results for East Europe more closely reflect those found for Latin American materials in a study by Sercan (1994). She found on her initial search a hit rate of only 28% for titles in the Research Libraries Information Network (RLIN) from 14 Latin American countries.

The explanation for such a low hit rate for East European monographs is perhaps a combination of the problems encountered in cataloging a group of linguistically diverse materials and the limited availability of this copy after it is produced. East European materials in this survey are representative of the following language groups: West Slavic (Polish, Czech, Slovak), South Slavic (Bulgarian, Serbian, Macedonian, Croatian, Slovenian), Baltic (Latvian, Lithuanian), Finno-Ugric (Hungarian, Estonian), and Thracio-Ilyrian (Albanian). As Byrd notes (1993), Slavic catalogers frequently must work with languages in which they have little expertise and therefore production is slower.

After overcoming the linguistic challenges of cataloging East European monographs, the copy might not become available in the bibliographic utilities on a timely basis. This is cited by Sercan in regard to Cornell and Latin American materials in RLIN, and is also true for some
other institutions. In our environment, although we rely on OCLC for copy, original cataloging is entered into our local integrated library system (NOTIS), and then sent to RLIN on a monthly basis. However, for the period December 1990 through December 1992, no catalog records (original or copy) were sent to RLIN due to many factors, including local priorities. While this group of records will be loaded eventually into RLIN, it is an example of copy not made available on a timely basis in the utilities.

A curious situation exists wherein we rely on one utility for copy (OCLC) and contribute cataloging to another (RLIN). Our experience has shown in 1993 that supplemental searching on RLIN (after searching OCLC) in all collecting areas yields only 1.5% copy. In 1993, only 82 records (out of 5,340 total receipts) were found on RLIN (in all collecting areas including East Europe) for titles that had no copy in OCLC.

CONCLUSIONS

Little catalog copy is available for current East European monographs, which are in varied and diverse languages. When set against a backdrop of rapid political change and increased scholarly interest in East Europe and a need to share copy on a timely basis, the results are not surprising.

The following steps are suggested to improve the quality and availability of copy for East European monographs.

- Improve the quality of original cataloging for East European monographs by following nationally accepted standards and providing continuing education for descriptive and subject cataloging, especially in the formulation of geographic headings.
- Recruit actively for professional catalogers specializing in the languages of East Europe.
- Work together to coordinate cataloging by language to best apply diverse language skills across this varied material.
- Bring pressure on local administrators and national bibliographic utilities to insure that copy is made widely available by updating utilities from local systems processing on a timely basis.

WORKS CITED


Gaylord provides experienced help to all types of libraries preparing for automation. Our wide range of data conversion services will save you time, prevent errors and avoid confusion.

Your Gaylord project manager chooses from a variety of resources designed for efficient and timely conversions. A team of shelflist conversion specialists are matched to your individual needs - assuring consistency, accuracy, and timeliness.

If we are unable to complete your project in a timely fashion with the highest level of quality, we will make it right or refund your money. That's it. We are that confident of our ability to handle your every conversion need.

Total Library Automation Made Easy.

Call for more information: 1-800-962-9580.

Gaylord Information Systems, Box 4901, Syracuse, NY 13221.4901
FAX 315.457.5883
The Library Collections Conservation Discussion Group: Taking a Comprehensive Look at Book Repair

Maria Grandinette and Randy Silverman

A national effort to improve the quality of book repair operations is under way. This work has been spearheaded by the Library Collections Conservation Discussion Group (LCCDG) of the American Institute for Conservation. During the past three years LCCDG has broadly examined samples of book repair techniques in order to identify and document those practices that are appropriate for use in research library collections. In addition to close scrutiny of technical specifications, the group is addressing issues such as: expanding treatment selection guidelines to encompass historically significant materials housed in the stacks; investigating methods for achieving economic and efficient operations; defining the degree and form of documentation required; identifying educational needs within the field; and exploring ways to support training workshops and programs.

Library conservators and, to a growing degree, book repair technicians are immersed in a process of reevaluation. This critical subgroup of librarianship is taking a fresh look at its approach to repairing books and pamphlets not designated as "rare," a population of material comprising the majority of holdings in U.S. libraries. The dialogue centers on the basic guidelines of practice: How can we accomplish the greatest good for the largest portion of the collection? What are the techniques at our disposal, and how well are they serving us? What can be learned from the failure of older techniques? Are our routines for selecting, sorting, and repairing economical? Does our rationale for repair have substance? Do repair technicians have the training, resources, and support they need to perform their jobs?

Library Collections Conservation Discussion Group

Since 1992, the Library Collections Conservation Discussion Group (LCCDG) of the American Institute of Conservation of Historic and Artistic Works (AIC) has

Maria Grandinette is Preservation Officer, The Hoover Institution on War, Revolution and Peace, Stanford University. Randy Silverman is Preservation Librarian, Marriott Library, University of Utah. This paper is extrapolated from an abstract published by the American Institute for Conservation of Historic and Artistic Works (AIC Abstracts 1994) and presented at the 22d annual meeting in Nashville, June 9, 1994. Invited manuscript received March 15, 1994; revised March 29, 1994; accepted for publication March 31, 1994.
emerged as the principal national forum for the dialogue about book repair. Its purpose is to foster improvements in the management and implementation of conservation programs for non-rare library collections. Participants include members of the Book and Paper Group of the AIC involved in library conservation, book repair technicians, and preservation administrators responsible for repair programs. Together they have voluntarily elected to function as a liaison between the conservation and library communities, working to publicize issues related to the state of book repair in the United States. The primary role of LCCDG has been to act as a catalyst for discussions on technical and managerial options available to improve the quality and permanence of book repair within academic and research libraries.

BUFFALO

To date, the LCCDG has organized two events to review and refine treatment specifications for the full range of book repair activities. The first was at the 1992 annual conference of the AIC in Buffalo, where, on 150 linear feet of display tables, twenty-five exhibitors representing libraries from across the United States and Canada brought examples of repair work produced at their institutions or commercial facilities. Each sample was accompanied by an identification label that described salient features of the treatment specification, such as:

1. A description of the technique including materials used;
2. The type of problem it was designed to overcome;
3. The average time it took to execute;
4. The cost of materials; and
5. The number produced by the institution per year.

Exhibitors also drafted institutional profiles (which subsequently were published) to help place their work within a programmatic context (Grandinette and Silverman 1992; Silverman and Grandinette 1993). This exhibit provided the first opportunity for most participants to examine book repair techniques produced by other major repair programs and to exchange information. This workshop format proved so successful it has been adopted as a model for exchanging information at the regional level by the Association of College and Research Libraries, New England chapter, Preservation/Conservation Interest Group.

What became immediately clear from the cross-section of work exhibited in Buffalo is that nationally, book repair work has much in common. The profession has taken to heart the significant contributions of Morrow and Dyal (1986), Milevski (1985), Greenfield (1984), and Kyle (1983), authors of texts written explicitly about book repair. Our work is also indebted to others, especially John Dean and Gary Frost, who have organized many training programs and are teaching tirelessly today.

What also became clear in Buffalo was that these basic "core repair techniques" were not diverse enough to meet all the needs of collections repair. All circulating or heavily used books break down from similar types of structural damage: torn joints and hinges, broken sewing, failed adhesive textblocks, etc. But each library also has examples of bindings that need more complex solutions than have been widely discussed. Exposing professional book repair technicians and book conservators to a "trade show" of binding options results in a healthy exchange of creative ideas.

For example, when faced with damaged 18th- and 19th-century leather bindings, conservators are now more freely adopting the use of the Etherington toned Japanese paper hinge (Etherington 1992) and Cains/Espinosa board-tacketing (Espinosa and Barrios 1991)—two relatively quick solutions for reattaching leather boards. The lapped-case structure, revitalized by Frost (1982), is being adopted as a durable alternative to the traditional case binding structure. Thick and heavy volumes are receiving split-board bindings designed to accommodate their weight. First linings of paste and Japanese paper are being used before application of a second lining of polyvinyl acetate adhesive (PVA) to prevent the
PVA from coming into direct contact with the folds of the sections. Finally, spine labels are “generated” with computer graphic arts programs and printed with laser printers.

**DENVER**

Needless to say, one meeting was not enough. LCCDG reconvened at the annual conference of the AIC in Denver in 1993; again participants brought book repair samples. This time the LCCDG members were organized into groups that paired types of damage with similar types of treatment options. Isolating thirty or more examples of specific solutions allowed conservators and technicians to work toward consensus on standardizing book repair nomenclature. Also addressed were organizational and philosophical topics that pertain to library collections repair.

**BOOK REPAIR AS A DISCIPLINE**

The environment in which library conservation is practiced varies considerably from other conservation disciplines. Libraries, books, and reading are more commonly integrated into daily life than, for instance, an oil painting or a Renaissance sculpture. Their utilitarian use exposes books regularly to more than contemplative appreciation; they are borrowed, stowed, photocopied, deposited in book drops, and inadvertently abused. Also significant to their longevity is the rate of deterioration of the organic materials making up the physical book, a factor equally weighty in the preservation of all artistic or historic objects.

The primary goal of library preservation is to extend the useful life of each item in the collection for as long as it is needed to satisfy the institution’s objectives. Book repair can contribute significantly to preventing and correcting certain types of damage and forms one component of a comprehensive preservation program. In light of a library’s programmatic options, alternative approaches can provide solutions as well, and decision makers must weigh a number of variables such as condition, use, value, and structure of the specific book in hand. For example, if the text is brittle, it might require replacement or reformatting. If the book is rare, it might need the services of a conservator. If its paper is strong, the margins sufficiently wide, and its projected use utilitarian, the book may be sent for commercial library binding. However, if library binding is inappropriate due to considerations of speed, economy, or specific need for additional care in its treatment, the book might well require book repair.

**USE-DRIVEN PROGRAMS**

Under the shadow of decreasing budgets, institutions, from the impoverished to the well-endowed, require responsible management of their resources. For this reason, book repair is predominately “use” driven; that is, damaged items selected for repair are identified as a result of screening that occurs after circulation or prior to reshelving. This approach embodies the realization that a damaged book in use is at greater risk of sustaining further damage than a damaged book at rest on the shelf.

**BATCH-WORK**

An efficient book repair program strives to process large numbers of materials and return them in useful condition to circulation. The ideal is to work economically to perform treatments that are at once neat, quick, tough, and nondamaging. Periodic, ongoing maintenance can improve a collection’s overall condition.

Workflow and strategic organization are critical elements to a repair program’s success. In pursuit of efficiency, book repair operations often incorporate “batchwork,” that is, the practice of identifying a group of materials exhibiting similar treatment problems, performing a discrete step to each book before proceeding to the next step, and working through this cycle of repairs until all books in a group are completed. This approach contrasts with rare book conservation, which generally engages in one-of-a-kind treatments,
although batch-work has a role there as well. Ideally, a book repair operation approaches its work with a full complement of options and relies on either approach as needed, acknowledging that even with batch-work, the competent technician must make adjustments for variations between individual books, such as in determining board thickness or the position of a joint.

**TREATMENT TO SPECIFICATION**

Book repair employs what Glen Ruzicka calls “treatment to specification.” This approach allows a single well-trained supervisor to coordinate with a high degree of success the work of a large number of technicians or student employees. Contrasting the difference between single-item conservation and book repair, Ruzicka (1992, 17-18) suggests:

In book repair, one or more specifications are defined and items for treatment are grouped accordingly . . . . The [rare book] conservator begins with the item and derives the specs, the book repairer begins with the specs and defines the item (“this is a reback”; “this is a hinge repair”) . . . the definition of the specifications is key. A variety of specifications are desirable; however, too many options can lead to a random, “How shall I do it this time” approach. Book repair is not conservation. Treatment to specification is essential to any book repair service, in-house or on contract. Conservation treatment, on the other hand, can function with six or sixty alternative treatment specifications.

Treatment to specification requires that considerable thought and time be devoted to developing specifications that meet a specific institution’s requirements. The specification should include a description of the applicability of the treatment, a description of the technique detailing all steps and materials used, and the time the treatment takes on average to perform. There is a growing consensus that written treatment specifications, in conjunction with the date of treatment routinely recorded in the finished book, can function as treatment documentation en masse for non-rare library materials. These records provide a repair department with feedback about the effectiveness and durability of specific techniques over time, and document the evolution of materials for future reference.

**SELECTION FOR TREATMENT**

Matching a treatment problem to a repair specification is handled on an item-by-item basis. The decisions governing the flow of work through the repair shop must balance a number of variables, including:

1. The appropriateness and availability of other preservation options for treating damaged materials, including library binding;

2. The total number of items needing repair based on the library’s use patterns and the overall condition of the collection;

3. The rate of flow through the shop based on availability of staff, their technical proficiency, and the library’s rate of demand for finished work; and

4. The appropriateness of the technical solutions selected for the material being treated.

Inadvertent but permanent damage to the collection can occur through the application of techniques that later prove undesirable. While each library must establish its own approach to setting treatment guidelines, certain materials require additional attention if they are to be properly preserved. For example, due to current rebinding practices there is growing concern among some conservators and librarians about the loss of original 19th- and early 20th-century publishers’ bindings. These books are no longer produced. They lack the protection afforded books housed in special collections and they are disappearing at an alarming rate.

Formal criteria to prevent the loss of this material are being implemented, as demonstrated by Harvard’s “Collection Guidelines at Widener Library” (Schrock 1992, 40). Guidelines to help selectors identify these endangered books should include the following considerations:

1. Rarity, i.e., uniqueness;
2. Historical significance, i.e., exemplifying physical evidence of technological advancements that accompanied 19th-century industrialization;
3. Artistic attribution, i.e., the "signature" or monograms of the designer, artist, engraver, printer or binder who contributed to the work's production; and,
4. Aesthetic excellence, as determined using local criteria.

TRAINING OPPORTUNITIES

Book repair training has been offered in a large variety of formats to accommodate persons of varying skill levels and the needs and resources of different libraries. Throughout the 1980s funding was sought and received for training programs, and several book repair manuals were published. For example, in 1980 Johns Hopkins University received funding from the Andrew W. Mellon Foundation to conduct four workshops, three consultancies, and two three-month internships a year for three years. In 1981, the Illinois State Library approved Library Services and Construction Act (LSCA) funding to support the Illinois Cooperative Conservation Program, which emphasized book repair workshops. During this same period, the H.W. Wilson Foundation and the National Endowment for the Humanities supported a series of workshops taught at the New York Botanical Garden Preservation Center. Also in 1980, the Guild of Book Workers conducted its first annual Seminar on Excellence in Bookbinding. At these seminars, experts in conservation and the book arts demonstrate techniques, giving participants an opportunity to see skillful workmanship and samples of beautifully executed work.


Conservators and preservation administrators are working together to ensure that training opportunities continue to be made available. While much has been done on a "formal" level, it should also be noted that many preservation programs have throughout the years served as a state and local resource, providing training and assistance to neighboring institutions.

An ambitious approach to book repair training occurred in 1992, when forty conservators and preservation administrators from across the country were invited to the University of California, Berkeley, to participate in a planning program funded by the National Endowment for the Humanities. The goal of this program was to develop teaching modules. As a result of this meeting, funding has been awarded by the NEH for regional training programs in the Pacific Northwest, the Mountains/Plains states, the South, and California and Hawaii. Also, a series of workshops was offered in the Southwest region in the spring of 1994 on a cost-recovery basis. These workshops were sponsored by AMIGOS in collaboration with the Preservation and Conservation Education Programs, University of Texas Preservation
Department, and BookLab. It is hoped that other proposals of this kind are still forthcoming.

**CONCLUSION**

Treatment of rare and non-rare library materials holds these basic principles in common:

1. The materials used for the repairs should be of high quality;
2. The repair should be non-damaging and appropriate for the book; and
3. The conservator or technician must exercise care, dexterity, and judgment.

Library conservators who are responsible for non-rare materials are actively working to facilitate their preservation. Prerequisites for accomplishing this collectionwide task include improved access to human and material resources and opportunities to motivate people through professional training and workshops. Both are needed to gain a foothold on a problem that is being dwarfed in the face of the looming electronic library. But books continue to be published and acquired. Maintaining them in usable condition is as important as providing bibliographic access. Their repair must be addressed now and for the future so that they can be read and shared.

**WORKS CITED**


———. 1980. Wrappers. Yale University
Library preservation pamphlet, no. 1. New Haven: Yale University Library.
Guidelines for Preservation Photocopying

Subcommittee on Preservation Photocopying Guidelines, Reproduction of Library Materials Section Copying Committee, Association for Library Collections & Technical Services

These guidelines are to assist collection managers in using the standard photocopying process to produce replacement volumes. Discussion of product characteristics and process are followed by supplemental materials. This is the first publication of these guidelines, viewed as the beginning of a process to document the product and the process in a useful and accurate manner.

INTRODUCTION

It is intended that these guidelines will include a description of the product of full-size, paper-based reformatting operations for complete volumes using electrostatic imaging technologies; a product also to be described as a preservation replacement photocopy.

The goal of this reformatting is to produce a usable preservation replacement copy of an entire printed volume. As use is the overriding reason for preservation photocopying, criteria for acceptable finished copy should be: (1) legibility of the new text; (2) reproducibility (i.e., can the text be copied again); and, 3) durability of physical form.

The main body of the guidelines is followed by appendix materials including a list of cited works and an example of notice of copy.

SCOPE

Preservation replacement copies reproduce full text on stable material; the process can improve the quality of the text image compared to the poor-quality original. The technology of copying equipment is changing very quickly, and in these guidelines no attempt is made to describe or limit the equipment used to produce the preservation replacement photocopy. The characteristics of the preservation replacement photocopy are described, from the base paper substrate to the image put onto it, with some discussion of the preservation replacement photocopy in the context of a preservation program (elements of selection and decision making as well as bibliographic control are included).

Copyright issues are not discussed in detail; it is assumed that libraries (and other repositories) will act ethically in re-
spects to fair use of publications in their custody.

The terms library and librarian will be used throughout the text to identify the agents initiating preservation photocopying, although the materials may be from an archive, historical society or other type of repository; in the same vein, the term vendor will be used for the agent producing the copy, although the vendor may be a commercial firm, another department in the institution, or even the staff in the department initiating the copying.

Color copying is not addressed in these guidelines; exceptional materials (oversized volumes, folded maps or other inserts, manuscript materials, or loose sheets) are not addressed in the guidelines at this time, but might be included in future supplemental material.

**DESCRIPTION OF THE PRESERVATION REPLACEMENT PHOTOCOPY**

The quality of a photocopy depends on elements of the paper used, the imaging materials adhered to the paper, the machine used to make the copy, the expertise of the machine operator, the quality of the original printed image, and the completeness of the text. The quality of the original printed image must be evaluated as a limiting factor to the quality of the final preservation replacement photocopy, although in some cases it might be possible to enhance the original text contrast and eliminate yellowing in the photocopying process to produce an improved image of the text.

**PAPER**

The paper used for preservation photocopies must adhere to standards for permanence and durability; a plain sheet (not coated “copier paper”) is required. Applicable standards are American National Standards Institute (ANSI) Z39.48, Permanence of Paper for Printed Library Materials; American Society for Testing and Materials (ASTM) D3280, Bond and Ledger Paper for Permanent Records; and ASTM D3458, Copies from Office Copying Machines for Permanent Records. The color of the paper to be used is not specified, but is left for local option; generally a white or off-white (buff, cream, etc.) paper will be used.

**BINDING**

When the preservation replacement photocopy is to be bound, work will be done according to the Library Binding Institute Standard for Library Binding to provide a long-lasting volume suited to the expected use. The copy may be bound by the copying vendor or another agent.

Due to the adverse effect of plasticizers from vinyl on electrostatic images, unbound copies should not be stored in vinyl binders without using a blank cover (or barrier) sheet to separate the text pages from the vinyl covers.

**IMAGE PERMANENCE**

The equipment used for the copyng work will have specific toner requirements that must be met. A toner with carbon black pigment is required. Testing of toner components and compositions is continuing and may result in addition to these guidelines in the future.

Copy machines must function at their optimum operating condition to meet the toner's need for heat and pressure setting of the image in the copying process; assurance of this is best met through a special clause in a copy machine's maintenance agreement. Due to this requirement for maintenance, most operations will find it necessary to dedicate specific machines to the task of preservation photocopying.

**TEST FOR IMAGE ADHESION**

The tape-pull test, a modification of an ASTM procedure, should be used as a simple "on-site" test of print adhesion; it is an imprecise test, but allows general observations on the permanence of the photocopied image in a simple manner. The test should be performed daily on a sample of preservation replacement photocopies from machines routinely used for preservation photocopying, and may be performed by library customers receiving
copies produced by vendors. The National Archives and Records Administration (NARA) Technical Information Paper No. 5 identifies a standard target and procedure for a tape-pull test. Any sample used for this test should: (1) be the same target for every test; and (2) include both text typical of the work to be done and some solid black area. A four-inch-long, one-inch-wide piece of 3M brand #250 drafting tape (or equivalent having 20 oz./in. adhesion to steel) is folded with a pull tab and applied to a portion of the copied text, gently rubbed, and slowly lifted off the image. If the outline of letters or symbols appears on the tape, the copy fails the test; if two out of three trials of the test image fail at the same time, the machine is not capable of producing the permanent copies desired at that point without servicing. This tape-pull test may also be used to evaluate machines considered for preservation photocopying. The NARA report includes this note regarding the standard tape-pull test: “Assume that the tape has a shelf life of two years and may give inaccurate results after that time. Mark the tape roll with the expiration date when you acquire it.”

**IMAGE QUALITY**

The image quality of the original will influence image quality in the preservation replacement photocopy; non-destructive trial exposure is suggested regardless of the condition of the original, to assure success of the process. Within the limits of the copier used, different exposure settings may increase the ability to produce clear copies from poor originals.

Constant awareness of the condition of the original and the quality of the copy is necessary to minimize errors during copying; this is where the skill of the machine operator will decide the efficiency and quality of the copying process.

**NOTICE OF COPY**

It is the responsibility of the reformatting agents (both the library and vendor) to properly identify the new work as a copy. This notice of copy should appear as a separate new leaf inserted in the copy; it is recommended that this leaf always be placed in the same place in all preservation replacement photocopy volumes. This statement should indicate that the copy is a preservation replacement photocopy volume and that the paper complies with ANSI Z39.48—19XX (with date to indicate specific standard used); a sample “notice of copy” statement is included at the end of the guidelines. A note of “poor quality original” may be added to the notice of copy to describe a less than perfect product resulting from poor-condition originals (indicating the source was the fault, not the copying process). A comment about the limited use of the copied material due to copyright restrictions may be added to this statement if appropriate. The leaf containing the notice of copy should include the ANSI permanent paper compliance symbol.

**DESCRIPTION OF THE PRESERVATION PHOTOCOPY PROCEDURE**

**PREPARATION/COLLATION**

Items selected for preservation replacement photocopying should be collated by library staff both before and after the copy
process. Collation verifies page order, legibility, and completeness of the text (in both the original and preservation replacement photocopy). If replacement pages are desired for missing pages, an attempt should be made to obtain replacement pages prior to sending an item for photocopying; this will generally fall to the responsibility of the library. Options for handling missing pages should be discussed with the vendor—such as "copy as is" or the addition of a blank leaf for missing pages to later be tipped-in—identified by the vendor in the copying process.

DISBINDING AND CUTTING

Preservation photocopying for creation of preservation replacement photocopy volumes is the primary objective of these guidelines; this will generally require disbinding of volumes for the copying process. Both the library and the vendor should inspect a volume as part of the collation process: narrow gutter margins, manuscript annotations, centerfold illustrations, or printing across the center of the volume are situations that would each require special attention in disbinding operations to be certain that the original image is available for copying. Books may be cut into separate leaves, disbound into sections (gatherings, folios or signatures), or copied in their bound form. Copying from bound volumes is possible but might not be practical; cut leaves might be the only approach to producing a complete copy of the existing text, including all text from the binding edge.

Cutting is usually done on a guillotine; the covers are detached and the text divided into segments using a knife (working from the inside of the volume), and the sections are then trimmed. The minimum amount of trim necessary to release the leaves at the spine should be applied to each segment.

ILLUSTRATIONS, MAPS, ETC.

Preservation photocopying for creation of preservation replacement photocopy volumes is the primary objective of these guidelines; decisions for copying will consider the title as a whole text and thus all materials of the title should be copied. A library might wish to consider some portions of the volume for conservation treatment in addition to the copying, and might also need to review materials that will not be adequately reproduced in the photocopy.

BIBLIOGRAPHIC DESCRIPTION

The bibliographic description of the preservation replacement photocopy volume should include the fixed field indicator and descriptive note that the item is a reproduction and the name of the copy's producer. Based on practice for description of microfilms, a note would indicate "the preservation replacement photocopy volume was made by Vendor for Library, year," information that should appear in the volume's Notice of Copy for transcription by catalogers. Any significant differences between the original and the copy in regard to margin should be noted in the bibliographic description of the copy; special treatment of any portion of the volume may also be included in a local note field.

INSPECTION OF THE REPLACEMENT VOLUME

A library should require return of the copy source materials with the preservation replacement photocopy from any vendor, to assure accurate completion of the work. The preservation replacement photocopy volume must be collated to verify page order, legibility, and completeness of the copy text. The quality of the copied text must maintain consistent clarity and contrast in comparison to the background. Evidence of print bleed-through or background "noise" (copied images from the original that are not text) might require discussion with the copying vendor as to trade-offs in image quality.

DISPOSITION OF SOURCE VOLUME

After inspection of the preservation replacement photocopy volume, a library may discard the original materials and add
the preservation replacement photocopy volume to the collection.

For some items, copyright would require the library to discard the original and retain only the replacement copy, an action that would fall in the area of “fair use” by the library. For items under copyright protection and available for purchase, it would be unethical for the library to retain both the “replacement” volume and the original in the collection.

When copying has been done from a bound volume (and that volume survives the copying process in usable condition) and copyright restrictions do not apply, the library might be able to retain both the replacement and the original volumes in the collection.

In some cases the original disbound leaves of the title may be stored for retention as a non-circulating “leaf master” of the title, which could be retrieved for future duplication (in event of loss/damage to the replacement volume), to fill a request for additional replacement copies (within copyright restrictions) or to allow a source document for future electronic technology media conversion. Using these guidelines, the preservation replacement photocopy volume was to be created to allow patrons a hard copy volume for use; any decision to retain a “leaf master” for a title should be carefully thought out in terms of storage, catalog description, and intended use of the leaf masters.

WORKS CITED

Note: The following abbreviations are used in the citations for this article:

ANSI American National Standards Institute, 1430 Broadway, NY, NY 10018.
ASTM D3290, Bond and Ledger Paper for Permanent Records.
ASTM D3458, Copies from Office Copying Machines for Permanent Records.

APPENDIX

Example of “Notice of Copy”

In compliance with current copyright law, Northern Archival Copy and Northwestern University Library have produced this replacement volume on paper that meets the ANSI Standard Z39.48-1984 to replace the irreparably deteriorated original.

1992

∞
Comparative Searching Styles of Patrons and Staff

Terry Ballard

Three months of transaction records from Adelphi University's Innopac online catalog were examined. Patron searchers rely on the standard access points of subject, title, and author for nearly 90% of their searches. Library employees search by title nearly 50% of the time. Title searching predominated among technical services staff as well as public services staff. Approximately 30% of staff searches and 40% of patron searches retrieved no records. Patrons were ten times more likely than staff to make a search resulting in 500 or more hits.

In the summer of 1992, we at Adelphi University were given a chance to find out. At that point, the university's library was upgraded to version 7 of Innopac, containing a substantially improved search data module that enabled the systems librarian to run transaction log analysis on specific groupings of terminals. Because the library featured a number of terminals that can only be used by staff and faculty, search results from those terminals would reflect usage from people who are experienced in the use of the system, and we could compare those data with the corresponding patterns from general users. For a three-month period starting in September 1992, five sets of results were maintained each week. The first was for all users. The second set was for users on public terminals. The third set was for users on terminals that only staff and faculty could use, excluding the terminals in cataloging and acquisitions. The fourth set was derived by subtracting the totals on patron-only terminals from

Terry Ballard is Serials Cataloger and Systems Librarian, Adelphi University, Garden City, New York. Manuscript submitted October 14, 1993; revised March 21, 1994; accepted for publication March 31, 1994.
the overall totals to get the numbers of all staff searches. Finally, by subtracting the patron and the public services totals from the overall totals, the remainder was listed as the totals for cataloging and acquisitions.

Further breakdowns of staff data (i.e., circulation desk terminals, science library terminals, and periodicals desk terminals) were considered, but it was decided that such comparisons should be saved for a follow-up study. The point of this research was to determine the main differences in searching styles and results between staff members and patrons.

Innopac is a menu-driven online catalog (figure 1). From the main menu, the searcher can select from a series of one-letter hot keys. Next, they will be shown a help screen for that type of search mode with brief instructions. Staff search main menus have all of the features of public menus, with the addition of search keys for record numbers.

There were several working assumptions about what the data might show. First, it was assumed that library employees would use the keyword option much more than patrons. Second, it was anticipated that librarians would be much heavier users of a feature that would allow the searcher to limit a search that resulted in an overly high number of hits. Finally, the librarians and their support staff were expected to have a much higher success rate than that of the users. This assumption was based on previous transaction log study at Adelphi University showing that most failed searches were the result of some sort of confusion about the way data should be retrieved from the online catalog. Librarians and staff are less confused about the online catalog because they work with it every day, so they should demonstrate a much higher hit rate.

**Literature Review**

There are a number of significant writings concerning transaction log analysis that have appeared in the past decade. Charles W. Simpson (1989) aptly covered the important studies up to that year. He traces the history of transaction log analysis studies to 1977 with studies of Ohio State University’s LCS system by Lawrence and Norden (1981). A study of the University of California’s MEVYL system utilized the system’s capability of producing online questionnaires. To try this system out, the library made a pretest that logged detailed information about the search strategies of staff in the new automated environment. When the questionnaires were used with the public, they were set to activate for every fifteenth user. This combination of questionnaire with actual information about that user’s searches was a very powerful tool in measuring the behavior of all types of users. Simpson concluded that transaction log analysis had peaked in the mid-1980s, but as soon as his work was published, there was a new wave of studies.

Possibly the most influential of these has been Thomas A. Peters’ (1989) substantive work. Peters concentrated on searches that produced zero matches in the University of Missouri LUMIN system, which uses a modified version of WLN software. An analysis was devised with a grid of error types and their frequency in each of the possible search modes. Peters found that 97.2% of searches were either author, title, or subject. He concluded that all librarians who have access to transaction logs should make use of them to help improve the communication between online catalogs and their users. These studies can be done for virtually no cost, and they can reap large benefits in collection development and bibliographic instruction.

Peters (1993) also wrote an exhaustive summary of all transaction log analysis to date. A particularly useful sidebar to that article sorted all studies by the brand of online catalog used in the studies. He also reported on research in progress that had not yet been published. While he identified studies of actual staff use as one of the possible types of studies, he could not find any examples of the kind of general study of staff usage that was performed at Adelphi. The two studies that he cited involved the performance of technical services personnel in editing records.

An antecedent to the current study was
****** SEARCHING RECORDS ******

A > AUTHOR SEARCH

T > TITLE SEARCH

D > SUBJECT SEARCH

K > KEYWORD

C > LC CALL # SEARCH

M > NON-LC CALL NO SEARCH

G > GOVT DOC # SEARCH

O > OCLC NO SEARCH

I > ISN SEARCH

R > RECORD #

Q > QUIT

Choose one (A, T, D, K, C, M, G, O, I, R, Q)

Figure 1
performed by Ballard and Smith (1992). Like Peters, they studied patterns in searches that failed to produce a match in the system. They found that subject searches normally fail because the library catalog uses Library of Congress Subject Headings, which are often not intuitive to the users. Author searches often fail because people type the author’s first name before the last name. Also, people searching from lists of reading assignments tend to enter author entries like “Arthurs and Montgomery,” even though the system’s author command retrieves single-author entries only. A major cause for no-hit searches in all categories was incorrect spelling.

Zink (1991) at the University of Nevada, Reno, also studied zero-hit searches in a university Innopac system. He was particularly concerned by the high number of failed subject searches. He wrote that users who had no concept of subject headings while using a card catalog are only going to transfer this confusion to the online catalog. Zink suggested that many of the problems searchers encounter would be alleviated if they used keyword search-

<table>
<thead>
<tr>
<th>TABLE 1</th>
</tr>
</thead>
</table>

| Table 1...
|---|

<table>
<thead>
<tr>
<th>All</th>
<th>Total</th>
<th>Limit</th>
<th>No hit</th>
<th>Keyword</th>
<th>Kword &quot;W&quot;</th>
<th>Author</th>
<th>Subject</th>
<th>Title</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>33079</td>
<td>612</td>
<td>11149</td>
<td>2332</td>
<td>460</td>
<td>6478</td>
<td>8353</td>
<td>12388</td>
<td>3528</td>
</tr>
<tr>
<td>October</td>
<td>44000</td>
<td>1019</td>
<td>16111</td>
<td>3455</td>
<td>611</td>
<td>7555</td>
<td>12471</td>
<td>15123</td>
<td>5416</td>
</tr>
<tr>
<td>November</td>
<td>41904</td>
<td>833</td>
<td>16685</td>
<td>3239</td>
<td>607</td>
<td>7142</td>
<td>13156</td>
<td>13983</td>
<td>4693</td>
</tr>
<tr>
<td>Average</td>
<td>39651</td>
<td>854.6667</td>
<td>14396</td>
<td>2999</td>
<td>593.3333</td>
<td>7058.3333</td>
<td>11326.67</td>
<td>13831.33</td>
<td>4445.667</td>
</tr>
<tr>
<td>Total</td>
<td>118893</td>
<td>2564</td>
<td>43188</td>
<td>8997</td>
<td>1578</td>
<td>21175</td>
<td>33980</td>
<td>41494</td>
<td>13337</td>
</tr>
<tr>
<td>Per Cent</td>
<td>100</td>
<td>2.16493</td>
<td>36.25762</td>
<td>7.561544</td>
<td>1.410286</td>
<td>17.79666</td>
<td>28.5587</td>
<td>34.87389</td>
<td>11.20916</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patrons</th>
<th>Total</th>
<th>Limit</th>
<th>No hit</th>
<th>Keyword</th>
<th>Kword &quot;W&quot;</th>
<th>Author</th>
<th>Subject</th>
<th>Title</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>25236</td>
<td>412</td>
<td>9390</td>
<td>1950</td>
<td>440</td>
<td>5771</td>
<td>7704</td>
<td>8895</td>
<td>916</td>
</tr>
<tr>
<td>October</td>
<td>32054</td>
<td>657</td>
<td>12467</td>
<td>2767</td>
<td>564</td>
<td>6664</td>
<td>11640</td>
<td>9644</td>
<td>1339</td>
</tr>
<tr>
<td>November</td>
<td>31359</td>
<td>578</td>
<td>12479</td>
<td>2637</td>
<td>577</td>
<td>6165</td>
<td>12158</td>
<td>9005</td>
<td>1394</td>
</tr>
<tr>
<td>Average</td>
<td>29553</td>
<td>542.3333</td>
<td>11452</td>
<td>2413.3333</td>
<td>527</td>
<td>6200</td>
<td>10504</td>
<td>9181.3333</td>
<td>1216.3333</td>
</tr>
<tr>
<td>Total</td>
<td>88659</td>
<td>1627</td>
<td>34359</td>
<td>7354</td>
<td>1561</td>
<td>1800</td>
<td>31512</td>
<td>27544</td>
<td>3849</td>
</tr>
<tr>
<td>Per Cent</td>
<td>100</td>
<td>1.835121</td>
<td>38.75072</td>
<td>7.829702</td>
<td>1.783237</td>
<td>20.97296</td>
<td>35.54292</td>
<td>31.06735</td>
<td>4.115769</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff</th>
<th>Total</th>
<th>Limit</th>
<th>No hit</th>
<th>Keyword</th>
<th>Kword &quot;W&quot;</th>
<th>Author</th>
<th>Subject</th>
<th>Title</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>7843</td>
<td>200</td>
<td>2019</td>
<td>382</td>
<td>20</td>
<td>707</td>
<td>649</td>
<td>3493</td>
<td>2612</td>
</tr>
<tr>
<td>October</td>
<td>11946</td>
<td>382</td>
<td>3624</td>
<td>668</td>
<td>47</td>
<td>891</td>
<td>831</td>
<td>5479</td>
<td>4077</td>
</tr>
<tr>
<td>November</td>
<td>10535</td>
<td>326</td>
<td>3109</td>
<td>563</td>
<td>30</td>
<td>977</td>
<td>988</td>
<td>4926</td>
<td>2999</td>
</tr>
<tr>
<td>Average</td>
<td>10108</td>
<td>312.3333</td>
<td>2944</td>
<td>547.6667</td>
<td>532</td>
<td>6200</td>
<td>10504</td>
<td>9181.3333</td>
<td>1216.3333</td>
</tr>
<tr>
<td>Total</td>
<td>30334</td>
<td>937</td>
<td>8832</td>
<td>1643</td>
<td>97</td>
<td>2575</td>
<td>2468</td>
<td>13850</td>
<td>9688</td>
</tr>
<tr>
<td>Per Cent</td>
<td>100</td>
<td>3.089962</td>
<td>29.12545</td>
<td>5.4181606</td>
<td>0.319879</td>
<td>8.495124</td>
<td>8.138768</td>
<td>46.00317</td>
<td>31.94928</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Not Tech</th>
<th>Total</th>
<th>Limit</th>
<th>No hit</th>
<th>Keyword</th>
<th>Kword &quot;W&quot;</th>
<th>Author</th>
<th>Subject</th>
<th>Title</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>4357</td>
<td>184</td>
<td>1285</td>
<td>334</td>
<td>15</td>
<td>419</td>
<td>502</td>
<td>2265</td>
<td>837</td>
</tr>
<tr>
<td>October</td>
<td>7166</td>
<td>368</td>
<td>2242</td>
<td>611</td>
<td>45</td>
<td>691</td>
<td>661</td>
<td>3506</td>
<td>1697</td>
</tr>
<tr>
<td>November</td>
<td>6542</td>
<td>324</td>
<td>1062</td>
<td>457</td>
<td>24</td>
<td>585</td>
<td>755</td>
<td>3068</td>
<td>1272</td>
</tr>
<tr>
<td>Average</td>
<td>6055</td>
<td>292</td>
<td>1736.3333</td>
<td>477.3333</td>
<td>26</td>
<td>565</td>
<td>639.3333</td>
<td>2953</td>
<td>1420.3333</td>
</tr>
<tr>
<td>Total</td>
<td>18165</td>
<td>876</td>
<td>5389</td>
<td>1432</td>
<td>84</td>
<td>1695</td>
<td>1918</td>
<td>8859</td>
<td>4261</td>
</tr>
<tr>
<td>Per Cent</td>
<td>100</td>
<td>4.822461</td>
<td>29.660594</td>
<td>7.883292</td>
<td>0.452428</td>
<td>9.331131</td>
<td>10.586771</td>
<td>48.769611</td>
<td>23.4572</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Just Tech</th>
<th>Total</th>
<th>Limit</th>
<th>No hit</th>
<th>Keyword</th>
<th>Kword &quot;W&quot;</th>
<th>Author</th>
<th>Subject</th>
<th>Title</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>3486</td>
<td>16</td>
<td>734</td>
<td>48</td>
<td>5</td>
<td>258</td>
<td>147</td>
<td>1228</td>
<td>1775</td>
</tr>
<tr>
<td>October</td>
<td>4780</td>
<td>14</td>
<td>1382</td>
<td>57</td>
<td>2</td>
<td>200</td>
<td>170</td>
<td>1973</td>
<td>2380</td>
</tr>
<tr>
<td>November</td>
<td>6642</td>
<td>31</td>
<td>1327</td>
<td>106</td>
<td>5</td>
<td>302</td>
<td>233</td>
<td>1850</td>
<td>1272</td>
</tr>
<tr>
<td>Average</td>
<td>4999.3333</td>
<td>20.33333</td>
<td>1147.067</td>
<td>70.33333</td>
<td>4</td>
<td>333.3333</td>
<td>293.3333</td>
<td>183.3333</td>
<td>2725.3333</td>
</tr>
<tr>
<td>Total</td>
<td>14508</td>
<td>61</td>
<td>3443</td>
<td>211</td>
<td>15</td>
<td>880</td>
<td>550</td>
<td>5031</td>
<td>8176</td>
</tr>
<tr>
<td>Per Cent</td>
<td>100</td>
<td>0.409179</td>
<td>23.09498</td>
<td>1.4115475</td>
<td>0.087202</td>
<td>5.902671</td>
<td>3.689294</td>
<td>34.14545</td>
<td>54.84304</td>
</tr>
</tbody>
</table>
Management Information on PUBLIC CATALOG SEARCHES - Adelphi University Library

S > Search STATISTICS
I > INDEXES used and search results
T > TERMINAL used for search
C > CLEAR search history
V > VIEW current searches
L > LIMIT terminals reported on
Q > QUIT
Choose one (S, I, T, C, V, L, Q)

Figure 2

Management Information on PUBLIC CATALOG SEARCHES - Adelphi University Library

From Mon Nov 16 1992 08:17:19 to Fri Nov 20 1992 08:38:21

Report on search activity:

U > Number of USER keyed searches............ 8215
S > Number of SYSTEM suggested searches... 16215
R > Number of RECORDS retrieved............. 964,415
L > Number of searches LIMITED.............. 198
E > Number of EXPORTED records............ 0
D > Number of DISPLAYS invoked............. 38500

Figure 3

ing more and standard "card catalog" access points less.

Thomas A. Lucas (1993) also used the transaction log analysis features of Innopac to study usage patterns at the New York Public Library during a two-month period in the spring and summer of 1992. Lucas found that for dial-in searchers, the two days that the library was closed were nearly as busy as the days it was open. Also, 48% of remote searching was done during hours that the library was closed.
**Search results for user keyed searches**

<table>
<thead>
<tr>
<th>Searches retrieving</th>
<th>#Done</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 record</td>
<td>1624</td>
<td>19.77%</td>
</tr>
<tr>
<td>2 - 8 records</td>
<td>1351</td>
<td>16.45%</td>
</tr>
<tr>
<td>9 - 30 records</td>
<td>767</td>
<td>9.34%</td>
</tr>
<tr>
<td>31 - 99 records</td>
<td>624</td>
<td>7.60%</td>
</tr>
<tr>
<td>100 - 499 records</td>
<td>548</td>
<td>6.67%</td>
</tr>
<tr>
<td>500 - 4999 records</td>
<td>321</td>
<td>3.91%</td>
</tr>
<tr>
<td>5000 or more records</td>
<td>30</td>
<td>0.37%</td>
</tr>
</tbody>
</table>

Total searches retrieving records 5265 64.09%

Total records / Average per search 964,415 183

Search with no direct retrievals 2950 35.91%

Total searches 8215 100.00%

---

**Figure 4**

**Methodology**

In addition to the hard-wired terminals in the public areas in the main library and science library, there are six ports available through dial-up or by way of the campus local area network. Each Monday, the data management system in Innopac was checked and the previous week's search data were transferred into an ASCII file. The ports for the two kinds of users are not consecutive, so function keys were set up using Procomm, a communications program used at Adelphi to access the Innopac system on microcomputers. This ensured that the ports were grouped in the same way during each week of the study. The data from the weekly reports were transferred to an ASCII file using the PRN2FILE program, and weekly
Management Information on
PUBLIC CATALOG SEARCHES - Adelphi University Library
From Mon Nov 16 1992 08:17:19 to Fri Nov 20 1992 08:38:21

INDEXES USED

<table>
<thead>
<tr>
<th>SEARCH</th>
<th>#Done</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>. &gt; Record number</td>
<td>7</td>
<td>0.09</td>
</tr>
<tr>
<td>W &gt; Words</td>
<td>654</td>
<td>7.96</td>
</tr>
<tr>
<td>* without user re-keying</td>
<td>112</td>
<td>1.36</td>
</tr>
<tr>
<td>A &gt; AUTHORS</td>
<td>1323</td>
<td>16.10</td>
</tr>
<tr>
<td>C &gt; LC CALL NOS</td>
<td>694</td>
<td>8.45</td>
</tr>
<tr>
<td>D &gt; SUBJECTS</td>
<td>2424</td>
<td>29.51</td>
</tr>
<tr>
<td>G &gt; GOVT DOC NOS</td>
<td>20</td>
<td>0.24</td>
</tr>
<tr>
<td>I &gt; ISN'S</td>
<td>40</td>
<td>0.49</td>
</tr>
<tr>
<td>M &gt; NON-LC CALL NOS</td>
<td>49</td>
<td>0.60</td>
</tr>
<tr>
<td>O &gt; OCLC NOS</td>
<td>316</td>
<td>3.85</td>
</tr>
<tr>
<td>T &gt; TITLES</td>
<td>2688</td>
<td>32.72</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8215</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Figure 5

printouts were made. The data were then input to a Quattro file that arranged the data in monthly groupings (table 1).

The main screen of Innopac's search analysis option allows one to analyze all of the search data or limit the ports to be reported and then look at the same breakdown of data (figure 2). On each occasion, search statistics would first be checked to get the total number of user keyed searches, and a count of the number of searches that were limited (figure 3).

Pressing "R" displays a breakdown of the number of records retrieved by the searches, including the percentage of the searches that had no matches in the system (figure 4), as well as the percentage of searches that activated an excessive number of hits. In addition to hit rates, data were saved on the search key used—author, title, subject, keyword or other. The number of times that people used a new option to run a failed title or subject search as a keyword search was also recorded (figure 5).

FINDINGS

The aggregate data concerning search modes demonstrate that patrons and li-
brarians have substantially different searching strategies (figures 6 and 7). Library employees are eight times more likely to go beyond the standard author, title, subject, and keyword search than patrons.

The data turned out to be remarkably consistent from week to week and from month to month. The most consistent data of all were those on the search forms used on the staff-only ports (figure 8). During all three months, the proportions of the types of searches are shown to be virtually identical. The graph clearly demonstrates the extent to which staff inquiries are dominated by title searches throughout the period of the study. When staff searching is further broken down to distinguish public services from technical services (figures 9 and 10), the monthly patterns are very similar and quite distinct from the patron's choice of search modes.

In general, patron searching reflects the classic card catalog access points—80% of the searches are either author, title, or subject, with a slight emphasis on subject searching. This choice of search modes was somewhat less consistent than that of the staff searchers (figure 11), but it might be noted that October and November show a nearly identical pattern.

One possible explanation for the preponderance of title searches in September is that library users at the beginning of the semester might be more likely to be working from reading lists. The same students might be working on their own topics later in the term; a situation that would lend itself to subject and keyword searching. In a study of an academic online system that tracked the volume of subject searching for a school year, Kaske (1991) also found that the lowest percentages of subject searches were in the first weeks of the semester.

There was less than a 10% spread in hit
Figure 8. Staff Searches.

Figure 9. Public Services Staff Searches.
Figure 10. Technical Services Staff Searches.

Figure 11. Patron Searches.
rates between users and staff (overall failure rate of 36.1%; patrons 38.6% and staff 29.1%). A higher success rate was expected from the staff, but the reason for the small difference might be the choice of search modes. Nearly 50% of staff searches are by title. Ballard and Smith (1992) indicated that a major reason for no-hits in a title search is simply that the library does not own the item in question.

The initial perception was that staff searchers used keyword substantially more than patrons. This did not turn out to be true—patrons actually had a slightly higher percentage of keyword searches. Furthermore, patrons were five times more likely than staff to rerun a failed title or subject search in keyword by pressing the “w” key. (figure 12).

In general, keyword searching is on the rise at Adelphi—a year ago, it never went higher than 5% of total searches in any given week. Six months after this study was completed, the search menu was changed to list Keyword as the first option. Since then, keyword usage has been close to 10%. When staff searches are excluded, the keyword totals have been as high as 14%.

Another perception was that staff searchers were more likely to limit an initial search that produced a large number of hits. This turned out to be true (figure 13)—staff searchers were consistently more likely to do this, even though they were much less likely to get an overly large hit result. Still the use of these advanced features is quite low—consistent with Peters’ (1989) finding that only about 3% of searches made use of advanced methods.

The likelihood of an unmanageable large search result turned out to be the chief qualitative difference between a staff search and a public search in this study. Patrons were ten times more likely than staff searchers to obtain search results exceeding 500 hits. Again, the choice of search mode partially explains this result. Subject searching is much more prevalent with patrons than staff, and it is also the form most likely to create an excessively large search result.

**Conclusions**

The variation in searching styles seems to reflect a difference in confidence. Since patrons are far more likely to rerun a failed title or subject search in keyword,
this demonstrates that they aren't quite sure about the terminology they are using. The librarians are looking for a particular title, and if it doesn't turn up, they are more likely than the patrons to conclude that the library simply doesn't have it. This confidence may well be correct: Larson (1981) found that 64% of staff searchers made no errors at all in sessions that averaged 14 minutes.

It would be useful to see follow-up studies from other library systems capable of running this type of analysis. It is hoped that other InnoPac sites in particular will find out if they too have striking differences in searching styles and if they follow similar patterns. Lucas (1993) mentioned the capability of studying staff and patron searching habits at the New York Public Library, and hopefully data about this will be reported. As previously mentioned, finer breakdowns of agencies might be studied for staff searches, and patron searches for dial-in terminals and remote library sites could be useful when compared with the overall trends. Recent transaction logs at Adelphi have shown patterns consistent with those reported above, but looking at only the reference desk terminal shows keyword usage that is consistently higher than 25%, while this is consistently masked by lower keyword usage at other staff terminals.

Certain factors might, in the long run, improve the performance of the human-online catalog connection. If catalogers regularly study transaction log data from their systems, they will be able to find no-hit subject searches that seem perfectly reasonable. Authority files could then be adjusted to provide "see references" to the correct heading. If patrons learn to use keyword searching more and subject searching less, their success rate would improve. There is a substantial body of transaction log documentation such as Peters (1989) and Barrett and Maticka (1989) showing that patron unfamiliarity with controlled subject language leads to search failures. This should result in more systems emphasizing subject keyword access in preference to standard subject headings. However, even in a system with optimum patrons searching the best system imaginable, a failure rate of at least 20% seems likely.
Works Cited


In 1985 potential users were surveyed about their preference for the format in which AACR2R should be published. In 1992 the authors circulated a questionnaire to investigate what formats had actually been purchased, whether the formats acquired were deemed satisfactory, and what format would be chosen in any future purchase. While loose-leaf was acquired in greater numbers than either hardbound or paperback formats, and would be the preferred format for repurchase, levels of overall satisfaction ranked it third. Moreover, a statistically significant number \((p < 0.05)\) of libraries indicated that, while they had purchased loose-leaf, it would not be their first choice in any future purchase. While this finding seems incongruent with responses to the 1985 survey where the idea of loose-leaf was strongly supported, the same kind of dissonance regarding the purchase and preference was also observed for hardbound and paperback formats \((p < 0.001)\).

In the ten years between the 1978 publication of the Anglo-American Cataloguing Rules, second edition (AACR2) and the 1988 publication of the Anglo-American Cataloguing Rules, second edition, 1988 revision (AACR2R) three sets of rule revisions appeared in 1982, 1983, and 1985. As a package of revisions arrived each cataloger devised a method of noting changes in the rules. Two procedures appear to have been used most frequently: (1) the cataloger kept the package of rule revisions separately and noted on the appropriate pages the rules that had been revised; and, (2) changes to the rules were amalgamated into the AACR2 text by crossing out and writing in, or pasting on, revisions to the appropriate page. No matter which method was used, by the third revisions package catalogers complained that their AACR2 texts had become messy and difficult to use. They wanted a better method for dealing with revisions and a loose-leaf format was suggested as a solution to these needs. An additional impetus for this change was provided by the many catalogers who indicated that they would like to be able to house rule interpretations from national agencies with the pertinent AACR2 rules.

**JSC Survey**

In 1985 the Joint Steering Committee for the Revision of AACR (JSC) decided to test the strength of this input in a survey. Each JSC representative undertook the task of recruiting organizations that would distribute the questionnaire. In Canada the National Library of Canada graciously agreed to distribute the JSC questionnaire with an issue of the National Library
Several other professional organizations in Canada also cooperated in the survey. Because of the low response rates, these organizations were not approached for the 1992 survey.

JSC received 813 responses from all sources. The number of responses from the National Library News distribution was the greatest of all the instruments used by the various JSC representatives: a total of 356,340 from Canada, 12 from the United States, and 4 from outside North America. Howarth and Weihs (1994) describe the methodology for this survey, including a discussion about why the National Library News was again selected as the vehicle for circulating the present survey, while at the same time recognizing its particular limitations.

**Response Rates 1985 and 1992**

The number of responses received by province and territory from surveys distributed via the National Library News in 1985 and 1992 respectively appear in table 1. 1991 census data are provided to give some sense of population size across the provinces and territories of Canada. No direct comparison between the percentage of population and the percentage of respondents is implied or intended though it is interesting to note the number of close parallels in some instances. The total number of responses obtained from the 1985 \((N = 340)\) and 1992 \((N = 336)\) surveys are similar. It is not possible to test the difference in response rates between the two instruments (i.e., number returned as a proportion of those distributed), given that the total number of questionnaires distributed in 1985 could not be determined. Comparing totals in column four with column three in table 1, a rise in response rate is noted for seven provinces or territories (Alberta, Manitoba, Quebec, New Brunswick, Nova Scotia, Newfoundland, Yukon Territory), a decrease for three (British Columbia, Saskatchewan, Ontario), and no response in either year for two (Prince Edward Island, Northwest Territories). The goodness-of-fit Chi-square test was applied to detect whether the distribution of 1992 responses across provinces or territories replicated those of the 1985 survey. The

<table>
<thead>
<tr>
<th>TABLE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL RESPONSES BY PROVINCE OR TERRITORY IN CANADA</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1991 Province/Territory</th>
<th>% of Population</th>
<th>Total Responses 1985</th>
<th>Total Responses 1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Columbia</td>
<td>12.0</td>
<td>39</td>
<td>11.4</td>
</tr>
<tr>
<td>Alberta</td>
<td>9.3</td>
<td>42</td>
<td>12.4</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>3.6</td>
<td>15</td>
<td>4.4</td>
</tr>
<tr>
<td>Manitoba</td>
<td>4.0</td>
<td>12</td>
<td>3.5</td>
</tr>
<tr>
<td>Ontario</td>
<td>36.9</td>
<td>153</td>
<td>45.0</td>
</tr>
<tr>
<td>Quebec</td>
<td>25.3</td>
<td>59</td>
<td>17.4</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>2.7</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>3.3</td>
<td>13</td>
<td>3.8</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>0.5</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Newfoundland</td>
<td>2.1</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Yukon Territory</td>
<td>0.1</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>0.2</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>340</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Decimals have been rounded.
TABLE 2
TOTAL RESPONSES BY TYPE OF LIBRARY

<table>
<thead>
<tr>
<th>Library Types</th>
<th>Total Responses 1985</th>
<th>Total Responses 1992</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Academic</td>
<td>120</td>
<td>35.3</td>
</tr>
<tr>
<td>Special</td>
<td>155</td>
<td>45.6</td>
</tr>
<tr>
<td>Public</td>
<td>39</td>
<td>11.5</td>
</tr>
<tr>
<td>School</td>
<td>17</td>
<td>5.0</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>340</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The results indicated that the two distributions were different ($p = 0.0003$).

The response rates by type of library are listed in table 2. The 1985 questionnaire did not request information about the type of library. JSC sorted the responses received into five categories—academic, school, public, special, and other. Therefore, in order to harmonize categorization across the two survey instruments so as to facilitate analysis, the 1992 responses for university and college libraries have been amalgamated as “academic” and government and special libraries as “special.” The 1992 respondents who characterized their libraries as “other” have been categorized in a manner similar to that employed in 1985.

We see in table 2 that the percentage of responses from academic libraries decreased from 35.3% in 1985 to 26.5% in 1992 while those from public libraries rose from 11.5% to 21.7%. Special, school, and other types maintained their percentages. Overall the distribution of responses across types of libraries was statistically different ($p < 0.0001$) between the two survey years (goodness-of-fit Chi-square test).

Since the 1985 survey did not request collection size, no table has been created.

FORMATS ACQUIRED BY LIBRARIES
The purpose of the 1985 survey was to determine the format preferred by potential users of the forthcoming edition of AACR2R. Ninety-eight percent ($N = 333$) of responses from all sources favored a loose-leaf format; 52% ($N = 177$) wanted 8½-by-11-inch pages with holes suitable for a three-ring binder; 79% preferred AACR2R sold in a binder rather than as separate pages; 80% were willing to afford the cost of plasticized reinforcements for the three-hole edge of the pages.

JSC does not control AACR2R’s physical format; this is vested in AACR2R’s publishers, the American Library Association, the Canadian Library Association, and the Library Association Publishing Limited. JSC advised this group of the survey results and recommended that AACR2R be published in a three-ring binder loose-leaf format with reinforced page edges. It further recommended the publication of a much cheaper paperback format for the use of students and libraries that purchase catalogue records. The publishing group invited Jean Wehs, JSC chair during this period, to several of their meetings to discuss publishing details. The publishing group subsequently decided to publish AACR2R in three formats: loose-leaf in a binder, hardbound, and paperback. It rejected the 8½-by-11-inch page size and reinforced page edges for economic and publishing reasons.

In table 3 and 4 we list the acquisition of AACR2R format reported in 1992 by types of libraries and by size of library collections. While the loose-leaf format ranks first in acquisition, it clearly did not have the sale that a study of the 1985 survey might have predicted. There are several possible reasons why the strong support for the loose-leaf format indicated in the 1985 survey, which might have been expected to result in 90% of respondents acquiring the loose-leaf format, did not materialize, the actual acquisition constituting 39.4% of respondents.

1. Some libraries when faced with over $30.00 difference in price between the loose-leaf and paperback formats might have chosen a less preferred format.

2. When AACR2R was first published, the loose-leaf format sold out very quickly and this format was not available for some time. In this situation some libraries might have purchased...
TABLE 3

AACR2R FORMAT ACQUIRED BY TYPE OF LIBRARY

<table>
<thead>
<tr>
<th>Library Type</th>
<th>Looseleaf</th>
<th>Hardbound</th>
<th>Paperback</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>College</td>
<td>17 44.7</td>
<td>10 26.3</td>
<td>11 29.0</td>
<td>38 100</td>
</tr>
<tr>
<td>University</td>
<td>32 42.7</td>
<td>21 28.0</td>
<td>22 29.3</td>
<td>75 100</td>
</tr>
<tr>
<td>Public</td>
<td>26 36.1</td>
<td>15 20.8</td>
<td>31 43.1</td>
<td>72 100</td>
</tr>
<tr>
<td>School</td>
<td>3 33.3</td>
<td>2 22.2</td>
<td>4 44.5</td>
<td>9 100</td>
</tr>
<tr>
<td>Government</td>
<td>24 36.9</td>
<td>24 36.9</td>
<td>17 26.2</td>
<td>65 100</td>
</tr>
<tr>
<td>Special</td>
<td>24 38.1</td>
<td>13 20.1</td>
<td>26 41.3</td>
<td>63 100</td>
</tr>
<tr>
<td>Other</td>
<td>11 42.3</td>
<td>5 19.2</td>
<td>10 38.5</td>
<td>26 100</td>
</tr>
<tr>
<td>Total</td>
<td>137 39.4</td>
<td>90 25.8</td>
<td>121 34.8</td>
<td>348 100</td>
</tr>
</tbody>
</table>

Decimals have been rounded.

TABLE 4

AACR2R FORMAT ACQUIRED BY SIZE OF COLLECTION

<table>
<thead>
<tr>
<th>Collection Size</th>
<th>Looseleaf</th>
<th>Hardbound</th>
<th>Paperback</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>&lt; 100,000</td>
<td>70 34.0</td>
<td>58 28.1</td>
<td>78 37.9</td>
<td>206 100</td>
</tr>
<tr>
<td>100,000–500,000</td>
<td>36 44.5</td>
<td>18 22.2</td>
<td>27 33.3</td>
<td>81 100</td>
</tr>
<tr>
<td>500,001–1,000,000</td>
<td>7 53.8</td>
<td>1 7.7</td>
<td>5 38.5</td>
<td>13 100</td>
</tr>
<tr>
<td>&gt; 1,000,000</td>
<td>23 52.3</td>
<td>11 25.0</td>
<td>10 22.7</td>
<td>44 100</td>
</tr>
<tr>
<td>Total</td>
<td>136 39.5</td>
<td>88 25.6</td>
<td>120 34.9</td>
<td>344 100</td>
</tr>
</tbody>
</table>

Frequency missing = 4. Decimals have been rounded.

the hardbound format or bought the paperback format for use until the loose-leaf format was reprinted.

3. Since some libraries in the 1992 survey indicated the possession of more than one AACR2R format, another possible explanation for the unexpectedly high acquisition of the paperback format in large collections is that the high cost of the loose-leaf format was moderated by the purchase of additional copies in paperback. According to table 4, the loose-leaf format ranked first in all collection sizes except the smallest, i.e., collections of fewer than 100,000 volumes, where the paperback format was first. When responses for libraries with collection sizes greater than 100,000 volumes were grouped and compared with libraries holding fewer than 100,000 volumes, an association between format acquired and size of collection was detected using Pearson's Chi-square test ($p = 0.029$); libraries with collection sizes of fewer than 100,000 volumes were more likely to acquire the paperback format than were libraries with larger collections.

This impression is reinforced in table 3. The three types of libraries that are likely to have small collection sizes—public, school, and special—had paperback
acquisitions in the first rank. In all these instances the acquisition of the loose-leaf format was a strong second. On the other hand, college and university libraries and libraries with collections greater than 100,000 volumes ranked the loose-leaf format first. Again, when responses (table 3) for college and university libraries were grouped and compared with those of public, school, and special libraries, an association between format acquired and type of library was detected using Pearson’s Chi-square test ($p = 0.001$); public, school, and special libraries combined were more likely to acquire the paperback format than were college and university libraries. In all cases with one exception, whether in type or size of collection, the hardbound format ranked third.

This exception was government libraries that reported the purchase of an equal number of loose-leaf and hardbound formats. Government libraries were also the exception to the idea that small libraries favour the paperback format that was ranked third. Perhaps this can be attributed to the necessity of doing original cataloging for many government documents when derived records for these materials are not available. While treated as separate categories for the purposes of the present research, government libraries are sometimes considered to be a subset of special libraries. As table 3 reveals, the loose-leaf format was acquired in equal numbers by government ($N = 24; 36.9\%$) and special ($N = 24; 38.1\%$) libraries. When the acquisition of hardbound and paperback formats was compared using Pearson’s Chi-square test, purchase patterns differed significantly ($p = 0.024$). Government libraries were more likely to acquire the hardbound format than were special libraries, while the opposite was true for the paperback format.

**Format Satisfaction**

A large percentage of respondents were satisfied with the AACR2R format they acquired. Satisfaction ratings by type of library are in tables 5–7, and size of collection appear in tables 8–10. The loose-leaf format had the highest percent of “very satisfactory” ratings at 47.8\% (table 5), followed by the hardbound format at 37.5\% (table 6), and the paperback format at 28.3\% (table 7). When the percentages for the “very satisfactory” rating and the “satisfactory” rating were combined, the ranking changed to the hardbound format at 95.5\%, the paperback format at 93.3\%, and the loose-leaf format at 85.3\%.

It is obvious that the “dissatisfied” rating and the “very dissatisfied” rating were low for all formats. School libraries were the only type of library that expressed no dissatisfaction about any type of format. Government libraries mentioned dissatisfaction only about the paperback format.

**TABLE 5**

Satisfaction with AACR2R Loose-Leaf Format by Type of Library

<table>
<thead>
<tr>
<th>Library Type</th>
<th>Very Satisfied</th>
<th>Satisfied</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>College</td>
<td>7</td>
<td>41.2</td>
<td>6</td>
<td>35.3</td>
<td>4</td>
</tr>
<tr>
<td>University</td>
<td>12</td>
<td>38.7</td>
<td>12</td>
<td>38.7</td>
<td>7</td>
</tr>
<tr>
<td>Public</td>
<td>12</td>
<td>46.1</td>
<td>12</td>
<td>30.8</td>
<td>4</td>
</tr>
<tr>
<td>School</td>
<td>2</td>
<td>66.7</td>
<td>1</td>
<td>33.3</td>
<td>0</td>
</tr>
<tr>
<td>Government</td>
<td>17</td>
<td>70.8</td>
<td>7</td>
<td>29.2</td>
<td>0</td>
</tr>
<tr>
<td>Special</td>
<td>9</td>
<td>37.5</td>
<td>13</td>
<td>54.1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>54.5</td>
<td>4</td>
<td>36.4</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>47.8</td>
<td>51</td>
<td>37.5</td>
<td>17</td>
</tr>
</tbody>
</table>

Frequency = 1. Decimals have been rounded.
TABLE 6
Satisfaction with AACR2R Hardbound Format by Type of Library

<table>
<thead>
<tr>
<th>Library Type</th>
<th>Very Satisfied</th>
<th>Satisfied</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>College</td>
<td>4</td>
<td>40.0</td>
<td>6</td>
<td>60.0</td>
<td>0</td>
</tr>
<tr>
<td>University</td>
<td>8</td>
<td>40.0</td>
<td>11</td>
<td>55.0</td>
<td>1</td>
</tr>
<tr>
<td>Public</td>
<td>8</td>
<td>53.3</td>
<td>6</td>
<td>40.0</td>
<td>1</td>
</tr>
<tr>
<td>School</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>100.0</td>
<td>0</td>
</tr>
<tr>
<td>Government</td>
<td>7</td>
<td>29.2</td>
<td>17</td>
<td>70.8</td>
<td>0</td>
</tr>
<tr>
<td>Special</td>
<td>5</td>
<td>38.5</td>
<td>7</td>
<td>53.8</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>25.0</td>
<td>2</td>
<td>50.0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>37.5</td>
<td>51</td>
<td>58.0</td>
<td>3</td>
</tr>
</tbody>
</table>

Frequency missing = 2. Decimals have been rounded.

TABLE 7
Satisfaction with AACR2R Paperback Format by Type of Library

<table>
<thead>
<tr>
<th>Library Type</th>
<th>Very Satisfied</th>
<th>Satisfied</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>College</td>
<td>4</td>
<td>36.4</td>
<td>7</td>
<td>63.6</td>
<td>0</td>
</tr>
<tr>
<td>University</td>
<td>8</td>
<td>36.4</td>
<td>14</td>
<td>63.6</td>
<td>0</td>
</tr>
<tr>
<td>Public</td>
<td>7</td>
<td>22.6</td>
<td>22</td>
<td>71.0</td>
<td>1</td>
</tr>
<tr>
<td>School</td>
<td>1</td>
<td>25.0</td>
<td>3</td>
<td>75.0</td>
<td>0</td>
</tr>
<tr>
<td>Government</td>
<td>6</td>
<td>35.3</td>
<td>9</td>
<td>52.9</td>
<td>2</td>
</tr>
<tr>
<td>Special</td>
<td>6</td>
<td>23.1</td>
<td>19</td>
<td>73.1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>22.2</td>
<td>4</td>
<td>44.5</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>28.3</td>
<td>78</td>
<td>65.0</td>
<td>6</td>
</tr>
</tbody>
</table>

Frequency missing = 1. Decimals have been rounded.

TABLE 8
Satisfaction with AACR2R Loose-Leaf Format by Collection Size

<table>
<thead>
<tr>
<th>Collection Size</th>
<th>Very Satisfied</th>
<th>Satisfied</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>&lt; 100,000</td>
<td>32</td>
<td>45.7</td>
<td>28</td>
<td>40.0</td>
<td>7</td>
</tr>
<tr>
<td>100,000–500,000</td>
<td>19</td>
<td>52.8</td>
<td>11</td>
<td>30.5</td>
<td>6</td>
</tr>
<tr>
<td>500,001–1,000,000</td>
<td>4</td>
<td>57.1</td>
<td>2</td>
<td>28.6</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 1,000,000</td>
<td>10</td>
<td>43.5</td>
<td>10</td>
<td>43.5</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>47.8</td>
<td>51</td>
<td>37.5</td>
<td>17</td>
</tr>
</tbody>
</table>

Frequency missing = 1. Decimals have been rounded.

The loose-leaf format (table 5) had the most critics, with 12.5% dissatisfied and 2.2% very dissatisfied. College, university, and public libraries appear to be the most critical. All the “very dissatisfied” ratings for the loose-leaf format come from libraries with a collection size of fewer than 100,000 volumes. When overall levels of
TABLE 9
Satisfaction with AACR2R Hardbound Format by Collection Size

<table>
<thead>
<tr>
<th>Collection Size</th>
<th>Very Satisfied</th>
<th>Satisfied</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>&lt; 100,000</td>
<td>21</td>
<td>36.2</td>
<td>34</td>
<td>58.6</td>
<td>2</td>
</tr>
<tr>
<td>100,000–500,000</td>
<td>10</td>
<td>55.6</td>
<td>7</td>
<td>38.9</td>
<td>1</td>
</tr>
<tr>
<td>500,001–1,000,000</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>100.0</td>
<td>0</td>
</tr>
<tr>
<td>&gt; 1,000,000</td>
<td>2</td>
<td>18.2</td>
<td>9</td>
<td>81.8</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>37.5</td>
<td>51</td>
<td>58.9</td>
<td>3</td>
</tr>
</tbody>
</table>

Frequency missing = 2. Decimals have been rounded.

TABLE 10
Satisfaction with AACR2R Paperback Format by Collection Size

<table>
<thead>
<tr>
<th>Collection Size</th>
<th>Very Satisfied</th>
<th>Satisfied</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>&lt; 100,000</td>
<td>21</td>
<td>26.9</td>
<td>50</td>
<td>64.1</td>
<td>5</td>
</tr>
<tr>
<td>100,000–500,000</td>
<td>8</td>
<td>29.6</td>
<td>18</td>
<td>66.7</td>
<td>1</td>
</tr>
<tr>
<td>500,001–1,000,000</td>
<td>2</td>
<td>40.0</td>
<td>3</td>
<td>60.0</td>
<td>0</td>
</tr>
<tr>
<td>&gt; 1,000,000</td>
<td>3</td>
<td>30.0</td>
<td>7</td>
<td>70.0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>28.3</td>
<td>78</td>
<td>65.0</td>
<td>6</td>
</tr>
</tbody>
</table>

Frequency missing = 1. Decimals have been rounded.

satisfaction (combining “very satisfied” and “satisfied”) and overall levels of dissatisfaction (combining “very dissatisfied” and “dissatisfied”) were compared between libraries having collection sizes of fewer than 100,000 volumes and those holding more than 100,000 volumes, no association between collection size and the level of satisfaction or dissatisfaction with the loose-leaf format (table 8) was detected (Pearson’s Chi-square test). Using the same combinations outlined above, but applying Fisher’s Exact Test (to accommodate for the sparse response in categories), no association between collection size and level of satisfaction/dissatisfaction for either the hardbound (table 9) or paperback (table 10) formats was detected. It is further noted in tables 9 and 10 that most of the dissatisfaction expressed about all formats came from libraries with a collection size of fewer than 100,000 and secondarily from libraries with 100,000-500,000 volumes.

It is interesting that the only new format introduced when AACR2R was published, the loose-leaf format, elicited the highest “very satisfactory” ratings and the highest “very dissatisfied” ratings.

THE ACQUISITION NEXT TIME
At the time the 1992 survey was circulated catalogers had used various formats of AACR2R for three and one-half years, ample time to consider the formats’ merits and demerits. What format would catalogers acquire if they had to purchase it again? These format preferences are shown by type of library on table 11 and by collection size in table 12. The loose-leaf format was clearly the winner with approximately one-half to two-thirds of every collection size and every type of library, with the exception of college libraries (close at 48.5%) selecting it as the preferred choice. The hardbound format was much less favored with a preference...
TABLE 11
FUTURE REFERENCE FOR AACR2R FORMAT BY TYPE OF LIBRARY

<table>
<thead>
<tr>
<th>Library Type</th>
<th>Looseleaf</th>
<th>Hardbound</th>
<th>Paperback</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>College</td>
<td>16</td>
<td>48.5</td>
<td>10</td>
<td>30.3</td>
<td>7</td>
</tr>
<tr>
<td>University</td>
<td>26</td>
<td>54.2</td>
<td>9</td>
<td>18.8</td>
<td>10</td>
</tr>
<tr>
<td>Public</td>
<td>31</td>
<td>50.8</td>
<td>16</td>
<td>26.2</td>
<td>14</td>
</tr>
<tr>
<td>School</td>
<td>4</td>
<td>57.1</td>
<td>1</td>
<td>14.3</td>
<td>2</td>
</tr>
<tr>
<td>Government</td>
<td>35</td>
<td>63.6</td>
<td>15</td>
<td>27.3</td>
<td>5</td>
</tr>
<tr>
<td>Special</td>
<td>29</td>
<td>53.7</td>
<td>14</td>
<td>25.9</td>
<td>9</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>60.0</td>
<td>2</td>
<td>10.0</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>153</td>
<td>55.0</td>
<td>67</td>
<td>24.1</td>
<td>53</td>
</tr>
</tbody>
</table>

Decimals have been rounded.

TABLE 12
FUTURE PREFERENCE FOR AACR2R FORMAT BY COLLECTION SIZE

<table>
<thead>
<tr>
<th>Collection Size</th>
<th>Looseleaf</th>
<th>Hardbound</th>
<th>Paperback</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>&lt; 100,000</td>
<td>94</td>
<td>54.3</td>
<td>47</td>
<td>27.2</td>
<td>30</td>
</tr>
<tr>
<td>100,000-500,000</td>
<td>54</td>
<td>85.7</td>
<td>14</td>
<td>22.2</td>
<td>14</td>
</tr>
<tr>
<td>500,001-1,000,000</td>
<td>7</td>
<td>70.0</td>
<td>1</td>
<td>10.0</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 1,000,000</td>
<td>18</td>
<td>62.1</td>
<td>4</td>
<td>13.8</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>153</td>
<td>55.6</td>
<td>66</td>
<td>24.0</td>
<td>52</td>
</tr>
</tbody>
</table>

Frequency missing = 3. Decimals have been rounded.

rate of 24%, followed by the paperback format with 19%. Five respondents indicated a wish for other formats, generally CD-ROM or online. Fifty-eight of the 336 responses received to the survey instrument did not indicate a preference.

Although over one-half (N = 51.1%) of all respondents who purchased the looseleaf format ranked it their preferred choice for re-purchase, a statistically significant number (McNemar matched pairs test; p < 0.05) indicated otherwise. A similar pattern of dissonance was observed among those who purchased, but would not prefer, hardbound and paperback formats respectively (McNemar matched pairs test; p < 0.001). It might be that the interpretation of the question dissuaded respondents from choosing for re-purchase a format they already had. Similarly, the number of non-respondents (58 out of 336, or 17.3%) might suggest difficulties with answering the question of preference. Since such dissonance occurred relative to all three formats (notwithstanding general overall satisfaction with purchase across all formats), there might be some element of "the grass is always greener" for those who purchased one format, but would prefer another. Such speculation cannot be substantiated one way or another.

Table 13 is a list of some of the reasons why respondents might purchase a particular format in the future. Many respondents stated more than one reason.

The loose-leaf format was chosen, in descending order, for ease of updating, ease of use, and ease of annotating, and to a lesser extent the ability to remove pages for photocopying or circulation. The nine respondents who cited its durability might
have been referring to the binder rather than the pages. One curious response was "inexpensive" for the most expensive format. Did this person see value received for money well spent?

The hardbound format won on durability, followed by ease of use, with smaller size and portability as less significant factors.

"Inexpensive," the main reason for the paperback format purchase, might have been expected. This was followed by ease of use, durability, and smaller size. The responses in two categories were, on the other hand, not expected: the nine respondents who mentioned "durable" for the cheapest and, therefore, the format JSC intended as the least durable; and only one "portable" response for the lightest and, therefore, the most portable format.

"Ease of use" was the second choice for all formats. The first choice for each was predictable: "ease of updating" for the loose-leaf, "durability" for the hardbound, and "inexpensive" for the paperback.

CONCLUSIONS

Purchasers appeared, for the most part, to find their AACR2R formats satisfactory. The proposed loose-leaf format, which was so strongly supported in the 1985 survey, was purchased by a majority of respondents to the 1992 questionnaire. More purchasers indicated they were "very satisfied" with the format, though in overall satisfaction loose-leaf ranked third behind hardbound and paperback formats respectively. A statistically significant ($p < 0.05$) number of purchasers indicated that loose-leaf would not be their preferred format for future acquisition. While it might be that for some the perceived benefits of a new loose-leaf format were not sustained through actual purchase and use, the same kind of purchase versus preference dissonance ($p < 0.001$) was also observed with hardbound and paperback formats. Nonetheless, the hardbound format, a format that received the lowest rating in the 1985 survey, had a surprising strength of support in 1992 achieving second place in the final test of success, the format that would be purchased next time.

However, the publication of the first package of revisions in the latter part of 1993 will be the real test of each format's usefulness, and perhaps its popularity. This revisions package consists of pages of single revisions in a loose-leaf format suit-
able for insertion in the AACR2R binder and a list of revisions to be corrected manually on existent pages. These revisions have not appeared in the manner JSC recommended when AACR2R's publication was discussed. JSC wanted substitute pages containing revisions to be published so that a cataloger could easily replace pertinent pages, thereby creating a clean, easily understood text.

For the hardbound and paperback formats these revisions will start to cause the same problems that occasioned the outcry about the messiness and difficulty of use regarding AACR2. For the loose-leaf format the additional pages will create a bulkier volume and some messy pages. As more revisions packages appear, these problems will be exacerbated.

Electronic versions of AACR2R have played a very small part in this survey. They will be much more important in any future studies of AACR2R's formats.

WORK CITED

CATALOG LIBRARIAN POSITION
Assistant Professor rank, Tenure Track, 12 month, faculty status. Reports to the dean of Library Services. Responsible for managing the Cataloging Department and coordinating its activities. Duties: supervising personnel in the Cataloging Department; original cataloging of library materials; interfacing OCLC records with OPAC and automated circulation system (ULISYS); preparing written reports and statistics; participating in library governance and decision making. QUALIFICATIONS: MINIMUM: ALA accredited MLS, or equivalent; five years professional academic library cataloging experience, or equivalent cataloging experience at other larger library (preference will be given to academic cataloging experience); knowledge of and experience with AACR2, LCSH, LC classification, and OCLC; working knowledge of one foreign language; experience in cataloging different kinds of materials; demonstrated strength in written and verbal communication; strong administrative and supervising skills. DESIRABLE: Advanced degrees; experience with online integrated library systems; participation in professional organizations. Annual salary, depending upon qualifications, $36,766 - $42,621. TIAA-CREF, 22 days vacation. Applications must be postmarked by Friday, September 16, 1994. This position is contingent upon funding. Send letter of application, resume, and the names, addresses, and telephone numbers of three current professional references to:

Thomas Y. Yeh, Search Committee Chair
Documents, Maps, and Microforms Department
Central Washington University Library
400 E. 8th Avenue, Ellensburg, WA 98926-7548
EEO/AA/AFFIRMATIVE ACTION • TDD 509-963-3323
Book Reviews

Lawrence W. S. Auld, Editor


This seems to be the first book published dealing with audio-book selection and utilization for public and school librarians. The authors are well qualified to venture into this specialized area. Hoffman is a public librarian serving as the “Booksounds” columnist for Wilson Library Bulletin and a former reviewer for Library Journal; Osteyee is a former university professor currently working as an elementary classroom teacher.

The book begins with a glossary of terms, followed by an introductory chapter that provides a minihistory of the spoken-word recording, including a rationale for including this format as part of library collections. The relative merits of complete works versus abridged versions in library collections are presented in chapter 2, and in chapter 3, written by public library audiovisual librarian Kathy Sippen, selection is dealt with, providing a sample selection policy and a rationale for collection building along with some of the review sources and reference tools. The various uses of audio books in education for children and adults at a variety of levels are discussed in chapter 4. In chapter 5 we learn the results of a survey of librarians in small to medium-sized public libraries dealing with various aspects of production from eight major producers of audio books. The survey includes data such as reading quality, technical quality, durability, packaging, prices, and replacement policies. Chapter 6 is an annotated bibliography of over 200 outstanding recordings, provided as a guide for beginning a library collection. The final chapter is a critical directory of audio-book producers and distributors, with fax numbers and 800 numbers included if available. A bibliography and index complete the volume.

The authors have filled a void and provided a useful tool for both librarians and teachers interested in building a collection in an important and often overlooked area of audio recordings.—Ron Sigler Dr. Ron Sigler and Associates, Rowland Heights, California


In this brief thirty-two page report, the authors perform a masterful feat of presenting before us a sweeping survey of the varied and complex issues relating to the national information network. The report begins with a “Technology Primer,” laying the foundation for a discussion of the “Policy Issues” that need to be addressed as the network evolves, and continues with a discussion of the network’s potential impact on preservation and access. Experts in communications technology will probably wish to bypass the primer and proceed to the sections of the report in which questions of current import are addressed. Others will find that the primer brings together bits and pieces of information that they might have gleaned already from the literature, placing these
in perspective within a lucid and logical narrative.

Against the backdrop of the electronic network, the authors foresee fundamental changes not only in the publishing environment, but in the functions and relationships of scholars, libraries, and university presses. The suggested “networked enabled model” for publishing would have a profound impact on library acquisitions costs, timeliness, breadth of coverage, and even cataloging. Indeed, the report’s reference to “the informal catalog record developed by the faculty member” (p. 25) will, no doubt, provoke interesting reactions from the cataloging community. Research continues to indicate a positive potential for the application of new technologies to the field of library preservation. See, for example, the January 1994 issue of the commission’s Newsletter, which presents the encouraging conclusions of Cornell University’s report, “A Testbed for Advancing the Role of Digital Technologies for Library Preservation and Access.” As always, the difficulty, which Van Houweling and McGill point out, arises “regarding documents not in continual use” (p. 26). Books in high demand tend to be reprinted; sound recordings in demand are transferred from record to tape to compact disc. The data, at least, are preserved. It is precisely the documents that are most specialized, rare, or out of vogue that must concern those charged with preserving the cultural record. The responsibility for preserving these will, the authors agree, remain the province of academe, and as dazzling technologies absorb our energies and our pocketbooks, it will become an increasingly difficult challenge to argue the case for the curatorial functions of the library profession.

**Evolving National Information Network** is a comprehensive yet concise report written by leaders in the field of information technology who will, in all likelihood, exercise significant influence over far-reaching policy decisions that must affect us all.—**Pearl Berger, Yeshiva University**


Perhaps the most crucial decisions made in libraries concern personnel. The quality and effectiveness of the work accomplished and service provided depend directly upon the merit, competence, and productivity of library staff, while the composition of that staff is determined through the hiring of library employees. Although the hiring of library staff has been addressed in chapters of numerous publications about library personnel administration, and several monographs have been published recently about hiring practices in special libraries, Richard Rubin’s most recent contribution to the literature of library personnel is unique—he explores specifically and in depth the complete topic of hiring library employees. Rubin’s practical guide covers the spectrum of issues surrounding this subject in a format and style that managers will find easily accessible and comprehensible. In a meticulous manner, Rubin covers observing legal obligations in hiring employees, preparing for the hiring process by establishing policies and application procedures, attracting qualified applicants, executing the interview and hiring process, and integrating the new employee into the organization through orientation and training. With each step, Rubin explores pitfalls and provides an analysis including definitions, checklists, and examples, as well as a strong appendix replete with a bibliography and sample forms that allow readers to ascertain quickly where their own policies and procedures might need strengthening.

Of particular interest and helpfulness in this guide are Rubin’s presentations on the legal aspects of the hiring process. Without overwhelming readers with legal jargon, he lays out exactly the kinds of questions an employer can and cannot ask and remain compliant with civil rights, equal opportunity, and disability laws. Rubin explains why certain questions are illegal in the interview process and how to
phrase acceptable questions that can extract useful information. An entire chapter is devoted to exploring the implications of the Americans with Disabilities Act. Additionally, in the appendix, he provides several helpful resources on legal issues for managers, particularly an information sheet of questions that can and cannot be asked during an interview.

Rubin succeeds in his endeavor by providing a practical, useful guide for hiring library staff. Library supervisors, department heads, division chairs, and directors who are faced with the challenging process of hiring effective librarians and support staff will find this manual to be an invaluable resource.—Diane Dates Casey, Governors State University


This volume contains 11 essays that present different visions of what libraries and the services libraries offer might look like in 25 to 30 years. Each essay is focused on a type of library or on a change the author foresees in information technology. Most of the authors are easily recognizable as leaders in our field: Penniman, Molholt, Dowlin, Kilgour, and Lancaster, among others.

It is always interesting to read or hear about the future as predicted by practicing information specialists and futurists. Although I might not share in all of their visions, a futurist can usually stimulate me to think about the status quo in a different light. On the other hand, most of us are still waiting for the paperless society, an example of how hard it is to predict the future with any accuracy. The impact of changes in technology and information delivery on practitioners are immediate and alter the way in which professionals approach their jobs almost daily. Predicting what libraries will be like in 25 years is hard to do when it is impossible to know what they will look like next year.

As an example of how much has changed since these essays were written several years ago, none of the authors mentions the Internet and the fundamental changes in communication that have resulted because of the increased access to that “highway” beyond the academic community. Molholt talks about the National Research and Educational Network (NREN) and common interfaces to databases, while in 1994, Gopher clients and servers are commonplace and some librarians are already using powerful tools like Mosaic and the World-Wide Web to locate and deliver information to users. Other libraries have installed the Z39.50 search interface and use the local online catalog command language as a common interface for other databases that are offered to users. These changes took place in only a few years.

Seiler and Surprenant hedge their bets by forecasting for the 21st century. They touch on the potential of interactive multimedia, but they also begin their essay by saying “the end of the print library is in sight. Print-on-paper is becoming extinct and by the end of the twenty-first century, all information will be stored as digits” (p. 157). They have pushed the paperless society to 100 years from now—not hard to predict that far ahead, is it?

The authors are not out of touch with the current state of libraries and librarianship—that is far from the case. Each essay is well written and makes the reader ponder the author’s ideas and think about small local changes that could be made during the transition from today to tomorrow. The authors have voiced opinions on the courses they think libraries and librarianship will take in the next twenty-five years. Those of us still in the profession in 2020 can reread the book and make judgments then about who came closest to the realities of that future day.

Users will not find this book unless they can search the online catalog or other databases by title words, linking the word libraries with the word future, because the Library of Congress has assigned the book the broad subject heading LIBRARY SCIENCE.—Margie Eppl Fieks, Rutgers University Libraries

By the year 2000 a third of America's citizens will belong to ethnic minorities, and the majority of California's population will no longer be white. The library profession as a whole has been somewhat slow to respond to this phenomenon, even though the American Library Association and many individual libraries have made concerted efforts to do so. Consequently, a book about multicultural acquisitions is both timely and welcome.

Karen Parrish's brief introduction indicates that the objective of this volume is to make librarians aware of the importance of multiculturalism and to inspire them to "think about the importance of a multicultural approach to librarianship" (p. 2). Following the introduction, the book is composed of twenty separate contributions organized into five main sections.

The first section, titled "In General," begins with a contribution by Gillian D. Leonard. After a brief historical review of the relationship between libraries and minorities, as well as the role of multiculturalism in education, Leonard contends that librarians must provide collections and services in response to multicultural needs while remaining neutral on social issues. Then Vladimir F. Wertsman's review of more than twenty reference sources concerning American ethnic groups finds these works to be generally outdated and incomplete. He recommends a comprehensive encyclopedia covering all American ethnic groups. Next, Barbara L. Flynn offers evaluation guidelines for the selection of 16mm film and videocassettes for a multicultural clientele, followed by a useful bibliography of resource guides and review media. Brenda Mitchell-Powell's personal memoir concerning the founding of the journal Multicultural Review seems of marginal relevance to the book's themes and of little or no practical value to librarians.

Lois Olsrud and Jennalyn Chapman Tellman explore inconsistencies in terminology for minority groups in the Library of Congress Subject Headings and in some leading periodical indexes. Finally, Debra R. Boyd discusses the creation of signs for multicultural patrons at the Ottawa (Canada) Public Library.

The next section is devoted to children's and youth services. It begins with Nancy D. Padak's and Timothy V. Rasinski's discussion concerning how librarians can use children's literature to promote multicultural learning. Four models are presented along with an elementary school case study involving Japanese Americans. Motivated by her experience in a "culturally nondiversified community," Lorna C. Vogt describes how numerous formats, e.g., videocassettes, cable television, books, etc., can be used to increase multicultural awareness in high school students. Then, Lyn Miller-Lachmann's thoughtful essay argues that a combination of three factors threatens to impede access to multicultural children's books: (1) decreased library purchasing power, (2) reductions in qualified library staff, and (3) fewer multicultural books due to publisher downsizing. Finally, in a rambling and poorly focused chapter, Karen Parrish reports on a "survey" of three unnamed suburban public libraries in which short lists of children's and young adult books covering black, Hispanic, Asian, and Native American literature were checked against the holdings.

The third section is titled "At the Academic Level." In the first piece, Louise Greenfield, Atifa Rawan, and Camille O'Neill narrate a funded project at the University of Arizona Library that resulted in eight "research guides" for introducing library resources supporting diversity to undergraduate students. Monica Foderingham-Brown follows a description of specific programs to recruit minority students and faculty at various U.S. schools of library and information science with recommendations for further action. Then, apparently drawing on a survey by E. J. Josey, she lists, school by school, courses dealing with multiculturalism. In a lengthy, empirically based chapter, Lorene B. Brown presents five tables of statistical data on library holdings, expenditures, and staff plus enrollment and
faculty for the 1988-1989 academic year at 68 historically black colleges and universities. This contribution appears to be based primarily on a reworking of data originally compiled by Robert E. Molyneux, who is cited as the source.

The next section, "The Government," contains a single chapter in which Linda Bowles-Adarkwa and LaVonne Jacobsen describe how to identify and acquire U.S. government publications concerning ethnic groups. A list of government agencies and a bibliography are appended. Several of the items cited in their footnotes have been superseded by more recent editions.

The volume's final section is called "For Other Cultures." Drawing on the Chicago Public Library's experience, Mary Ellen Quinn describes the unique problems (e.g., the language barrier, the Hispanic community's diverse nature, and the difficulties in the Latin-American book trade) encountered in building Hispanic collections. Special strategies for obtaining Spanish materials are depicted, including direct buying at bookstores, book fairs, and gifts and exchanges. Particularly fascinating is an agreement with the Mexican government, termed a comodato, whereby 5,000 books were received on a 99-year lease. Theresa Salazar and Maria Segura Hoopes describe the University of Arizona's collecting activity concerning the U.S.-Mexican border area, followed by an annotated bibliography of sources pertaining to the Borderlands. In the section's best contribution, Donna E. Norton and Saundra E. Norton perceptively analyze criteria in the selection of adult and children's material for Native American studies, e.g., are characters depicted as Indians or as members of a particular tribe? They cover literature in both general and specific genres, while citing numerous works. Such issues as stereotyping, sovereignty (i.e., does an author have to belong to a group to write about it?), translation, interpretation, and censorship are also addressed. Annette Salo then briefly recounts the St. Paul (Minnesota) Public Library's efforts to reach out to ethnic minorities in the Twin Cities, paying particular attention to a group of Laotian political refugees, the Hmong. Jean Kemble offers a "selective, partially annotated" bibliography on U.S. women's history, organized into more than a dozen subdivisions, e.g., "immigrant women," "pioneer women," and "the twentieth century." It contains approximately 100 entries for books, mostly published during the 1980s. Slightly less than half the entries, those that are "more accessible," are annotated. This reviewer feels that this bibliography would possess much more credibility if all of the entries were annotated. Finally, Laura Pattison reports a checklist evaluation of the feminist holdings in four unnamed community college and fine unnamed public libraries, based on two core women's studies bibliographies. Even the author seems to wonder whether the bibliographies were appropriate checklists for the types of libraries under evaluation, as the majority of the checked titles were not held by any of the nine libraries. Moreover, one bibliography, published in 1979, is now fifteen years old.

This volume is mistitled, because it casts a far wider net than acquisitions or even collection development. Library services, education for librarianship, and multiculturalism in general are also addressed.

The contributions are usually well written. The authors are genuinely committed to multiculturalism, and several are exceedingly knowledgeable about their topics. All major groups are covered here: African American, Native Americans, Asian American, Hispanics, gays and lesbians, and women.

The authors of this book achieve the rather modest goal outlined in the introduction: readers will be inspired to think about the importance of multiculturalism to librarianship. Quite frankly, the book offers little beyond this point. It contains only a few research pieces, and these display a minimal level of rigor. Many of the chapters fall into the "how we do it good in our library" category. Some are little more than pep talks for multiculturalism. In the final analysis, multicultural librarianship is an important topic that deserves a better book.—Thomas E. Nisonger, Indiana University

In The Nation's Great Library: Herbert Putnam and the Library of Congress, Jane Aiken Rosenberg recounts one of the more fascinating eras in the history of the Library of Congress, the forty-year period of Herbert Putnam's tenure as that institution's librarian. Largely through his efforts, the Library of Congress was transformed from a library for the nation's lawmakers into a library for the nation itself, serving not only the needs of scholars throughout the country but those of the American library community as well. How this transformation took place is the main theme of Rosenberg's book.

George Herbert Putnam (1861-1955) was well qualified to assume the position of Librarian of Congress. A Harvard graduate who also studied law at Columbia, Putnam discovered within himself an aptitude for administration that he chose to put to use in the field of librarianship. He was city librarian in Minneapolis from 1888 to 1891, and, in 1895 he became director of the Boston Public Library. An active member of the American Library Association, he recognized the association's goals of improving library services and furthering the professional standing of the nation's librarians. With Putnam's appointment in 1899, an experienced librarian was chosen to lead the Library of Congress for the first time ever.

Putnam brought with him a broad new vision of the role of the Library of Congress. As Rosenberg states in her introductory chapter, "Herbert Putnam's desire to have the Library of Congress recognized as the national library was the driving force in his relations with Congress, libraries and librarians, scholars, other governmental agencies, and the public" (p. 3). This desire led to an impressive number of achievements. Because the library's collection lacked clear organization, Putnam directed the cataloging division to develop a new classification schedule, thus bringing about the LC classification scheme. He hired professional librarians for positions whenever possible. He organized the national card service, which "became the first successful centralized library cataloging service" (p. 2). He provided the Legislative Reference Service to meet congressional needs. He began a limited interlibrary loan service. During World War I the library, under his leadership, cooperated with the ALA in the ALA Library War Services.

In the 1920s he allowed the library's role as a cultural institution to expand through sponsorship of a yearly series of chamber music recitals. Under his administration, the collection grew enormously. For example, in 1930 the library acquired a 3,000-volume collection of rare books from a German industrial chemist named Otto Vollbehr; this collection included a vellum copy of the Gutenberg Bible. "In 1933," Rosenberg writes, "Putnam assured Congress that LC had become the world's largest library, surpassing both the British Museum and the Bibliotheque Nationale" (p. 129). Thus, by the time he retired in 1939, Putnam had made his vision a reality: the Library of Congress had become the national library of the United States.

Yet the library was plagued with numerous problems during Putnam's tenure, of which the most acute was salaries. Because their salaries were below the national average, many of the library's best and brightest professionals chose to seek positions in better-paying academic libraries. All too often the vacancies at the library were filled by employees lacking a library science degree or even library experience. Training of new employees took time, especially in cataloging; as the years went by the cataloging arrearage grew. The arrearage, in turn, affected the card service, which fell behind in supplying American libraries with...
needed cataloging cards. As Rosenberg notes, "by the late 1930s operations had all but broken down. The Library had over 1.6 million unprocessed items, and the arrearage was growing at the rate of 30,000 volumes annually" (p. 151).

The Nation's Great Library is a model of impeccable scholarship. As evidenced by her numerous citations (pp. [167]-218) and useful bibliographic essay (pp. [219]-226), Rosenberg has drawn upon a seemingly inexhaustible mine of primary sources to document the events of Putnam's administration. She also places these events within a broader historical context. In particular, she shows how the tenets of post-Civil War American thought, which included universal education, increasing emphasis on specialized knowledge, and the rise of professionalism, were influential on the ALA and Putnam himself. Above all, Rosenberg's book is a pleasure to read. Quite often one eagerly turns the page to find out how Putnam plans to organize the national card service, or to see whether he will receive an increase in appropriations from Congress. Anyone interested in library history will find The Nation's Great Library an invaluable account of the evolution of the Library of Congress from provincial library to a national cultural institution.—Margaret E. Doubt, East Carolina University


The broadening and deepening of knowledge of preservation of library materials has brought a recognition of the need for handbooks and single-volume resources summarizing the field. Also, teaching and study in particular have created a continuing need for collections of articles and excerpts from longer publications, many of which are not readily found outside institutions in which preservation collections have been formed. These two volumes represent an effort to fulfill both of these needs. The compiler, Ross Harvey, teaches in the Graduate Department of Librarianship in Monash University in Australia.

The "Principles" volume opens with a one-chapter "Overview" of preservation and, in the nine succeeding chapters, deals systematically with causes of deterioration, surveying libraries to determine the condition of materials, controlling the environment, handling materials, disaster preparedness, maintenance and repair procedures, reformatting, technological solutions, and the development of a preservation program. The "Reader" follows the same outline, presenting in a similar sequence reprints of articles and excerpts from longer publications to enable the reader to delve more deeply into the preservation literature. The two volumes contain little new information and reveal few new or different insights into the nature of the field or solutions to the problems of preservation.

The "Principles" volume may be compared with John DePew's A Library, Media and Archival Preservation Handbook, and the "Reader" is essentially quite similar to the seven-volume Preservation Planning Program Preservation Guides, each of which is a collection of reprints relating to a particular aspect of preservation.

The differences between Harvey's and DePew's volumes are in tone, organization, and emphasis more than in content or purpose. Harvey's tone is didactic throughout. He seems never very far from the lecture room, and, as compared to DePew, is much more prone to refer his reader to another source rather than to include details of a problem or its solution. The use of Harvey's volume as a ready source of information or as a handbook of preservation is complicated by his division of his coverage of major topics between the introductory overview chapter and the succeeding chapters with their greater depth of coverage. His table of
contents also lacks the detail and clarity of that in DePew’s volume, which provides logical and detailed access to the text.

The “Reader” contains a broadly based collection of materials that might not be readily available in many institutions. Harvey’s selection is somewhat more British than is the ARL collection, but there is little difference in overall coverage. A major difference is in appearance. Where the ARL editors depend heavily upon photocopying the original publications, Harvey and his editors chose to reset their selections in a common format and typeface to fit them into the relatively narrow page size selected for their volumes. The result is the loss of white space and of identifying features such as institutional logos and publisher’s identifying marks, robbing at least some of the contents of marks of authenticity.

In working through these volumes, one is impressed with the strong dependence upon North American and European sources and data, and one can only conclude that such differences in preservation needs, problems, and solutions as exist in different parts of the world are primarily differences in degree rather than fundamental differences among the materials collected or the libraries and archives represented.—William T. Henderson, University of Illinois at Urbana-Champaign

**Works Cited**


This volume is a selection of papers presented at the International Seminar, Kanazawa Institute of Technology, Library Center, Kanazawa, Japan. The international seminar program was begun in commemoration of the opening of the Library Center, and during the decade of 1982–1992, a total of 63 papers were presented at the seminar. Thirty-three of these papers were selected and arranged under seven topics for incorporation in this collection. William J. Welsh, retired deputy Librarian of Congress, brought the editorial project to completion following the deaths of the library director, Dr. Yasuschi Sakai, and Foster E. Mohrhardt, who was honorary director of the Kanazawa Institute of Technology Library Center.

The seven sections of the book include the research library in the twentieth century; information access in the new era; new technology, new media, and library buildings; library education; preservation of research materials; the technological university library; and managing knowledge in the twenty-first century. Except for one contributor, the authors represented in the volume are affiliated with American and Japanese libraries. The contributions range from the comprehensive and insightful to the sketchy and minimally adequate. Some of the authors could not have imagined that their oral presentations would have been included in a subsequent collection of essays, and do not fare particularly well in a printed rendition of their presentations. A number of the essays have appeared in other publications in whole or part. Readers browsing the volume might begin with these nominations for outstanding essays: Jay K. Luckner, “The Library as a Place”; Richard M. Dougherty, “Achieving Preferred Library Futures in the 1990s: What is Required?”; Robert M. Hayes, “The Needs of Science and Technology”; Jay K. Luckner, “Technological Advances and the Changing Research Library: From Yesterday to Tomorrow”; James F. Gowan, “American Research Libraries’ Enhancement of Access to Materials, 1965–1990”; Billy E. Frye, “University Priorities and Policies Affecting Library and Information Service”; Robert M. Warner, “Education for Librarianship”; David H. Stam, “The Questions of Preservation”; Patricia

Collectively, these essays reveal a variety of themes and issues associated with the contemporary research library. The rate of technological change, particularly in the areas of computing, distributed files, and electronic networks, is having a major impact on library finances and organization. Strategic planning and assessment are increasingly used to shape library directions. Access has clearly supplanted self-sufficient collections as a new paradigm, and with it, a major emphasis on resource sharing and international cooperation has emerged. Every one of the authors predicts that libraries and librarians will remain viable into the 21st century. The volume would have benefited from a more concise historical treatment of the research library to accompany the more contemporary articles. Conspicuously absent is an essay devoted to the bibliographic control of library materials, a continuing challenge in this age of multiplying formats and electronic resources. There is no bibliography, a serious omission for a volume of this scope and length. The absence of a bibliography is somewhat moderated by the inclusion of an excellent index.

These essays not only celebrate the first decade of the Kanazawa Institute of Technology Library Center but reaffirm the strength of international library cooperation and the exchange of library visions and techniques. The Kanazawa Institute deserves special commendation for its global perspective and proactive commitment to an international dialogue on shared concerns. Library schools might wish to consider these essays as a supplemental text, and practitioners might wish to consult the volume for the writings of senior academic library leaders.—Arthur P. Young, Northern Illinois University


A compilation of lectures that Fugmann gave in an indexing and abstracting course at Indiana University in 1992, the book's goal is to "examine the broader view of indexing as related to . . . the survival power of information systems" (foreword, vii). The author's thesis—that information systems in which little analysis of documents is done at the input stage perform poorly at the output stage and hence are destined to die—might appeal to catalogers, but it is highly debatable. We live with cataloging databases that contain "dirty data" as well as many poorly designed serial indexes. We accept the low recall and precision ratios and sometimes patch the systems, but do not discard them.

The text begins with a reasonable definition of information: "any kind of message that is of interest to the receiver" (p. 2). The bulk of the book is devoted to vocabulary control and Fugmann's five-axiom theory of indexing. He argues that the indexing literature has emphasized synonymy and neglected non-lexical expressions—concepts that can be expressed in many different ways, i.e., for which there is no representational predictability.

These are the most original ideas in the book. The balance of the major topics, such as abstracting and thesaurus structure, are treated better and far more clearly in other sources. Catalogers who know the work of Dykstra (1988) will recognize the incorrectness of Fugmann's statement, "The Library of Congress subject heading list is a typical thesaurus" (par. 722).

D. and A. Cleveland (1990, 2) criticized indexing texts that feature primarily scientific examples. Fugmann takes his from either the unappetizing area of pest control, or from chemistry. It would be difficult for someone without a background in the latter discipline to compre-
hend the concepts of classification illustrated by chemical structures.

A more basic problem with comprehensibility of the text is the apparent lack of copyediting by a native English speaker. Many of the sentences have an underlying German syntax, for example, "By no means can therefore the delegated search substitute one's own subjective, and meandering search and substitute any unfocused information supply" (par. 300).

Although Fugmann states that the usage of words in idiosyncratic meanings leads to miscommunication (par. 250), he is guilty of such usage, which makes it difficult to relate his ideas to earlier writings on indexing or information science. A brief definition will illustrate this: "Query the entirety of search parameters effectively [sic] in retrieval" (p. xiv). The term query usually refers to a user's information need as expressed in natural language, and is distinguished from formal search statements.

The one case history in the book, "Cooperative Information Processing in an Organization" (section 5.5.2), introduces many factors that are extraneous to subject analysis, such as confidential documents and microfilming, and hence the essential concepts do not come through.

A book on the organization of information should be a model of good design. In this work, the sections of chapters are numbered decimally, and there are cross-references among them, but there are no running heads to assist the reader in locating a cited section. The paragraphs of the entire text are numbered sequentially, with large blocks of numbers missing, e.g., 127–152, and decimal subdivision of others (600,3; 600,5).

The order of preliminaries is strange: Contents, Foreword, Preface, Glossary, List of Figures. (The last-mentioned should follow the table of contents.) The List of Figures enumerates the paragraphs in which the illustrations are referenced, but does not provide the most important data element—the page numbers of the figures, which often are not juxtaposed with their first mention.

The majority of the figures are hand-drawn and hand-lettered, including the legends. Some typed figures are reduced to an extent that impedes legibility. The text of the book seems to have been reproduced from word-processed copy. There is no hyphenation on the right-justified margins, and hence much unequal spacing.

Within definitions in the glossary, there are numbers in parentheses, which are not explained in a preliminary note. They refer to the sequentially numbered headwords. A sequential reading of the glossary seems to be assumed. For example, the definition of Polycategoriality includes the terms descriptor and concept without reference to their entry numbers in the glossary.

The bibliography is skimpy. The term "Cutter's rule" [of specificity] is bandied about, with no formal credit to its author. The sources of recent ideas such as "search thesaurus" (par. 387) and "hedges" (par. 388) are not cited. There are, ironically, no references for the section on citation indexing (4.2.1.3). For the passages that are documented, the author-date system of citation is used, but with poor control: "Rush and Landry, 1970," cited on p. 51, has no matching reference, for example. Davis and Rush's Guide to Information Science is listed twice in the one-page bibliography of textbooks (p. 220)—once out of alphabetical order.

The Experimental Basic Index must be experienced to be believed. The entry for Wellisch (no forename) is used here to illustrate the index's convoluted structure. The boldfaced locator is #256,5. This is neither a page number nor a paragraph number; it refers to the position of the heading in the Experimental Systematic Index, arranged hierarchically, which in turn refers to the paragraph number in which Wellisch is cited. I grant the advantages of hierarchical display of descriptors (Weinberg 1993), but the index to a book should complement the logical arrangement of the text, not replicate it; an index should also not require triple lookup.

A one-page sample Alphabetical Subject Index is included (p. 250), with references to the hierarchy from main headings, and to paragraph numbers from subheadings. This dual system of locators is unexplained in the headnote, which an-
nounces that “The complete alphabetical [sic] index can be ordered from the publisher at cost price.”

Questions seem to have been appended to the chapters to justify calling this a textbook. Most of the questions are interrogative transforms of declarative sentences, e.g., “What is the typical feature of polyhierarchies?” (p. 31). The book is not recommended as a textbook for introductory courses on indexing and abstracting. For “theoretical foundation,” to quote Fugmann’s subtitle, Lancaster (1991) is far clearer; for “practical advice,” Wellisch (1991) is more authoritative and much wittier. (My students attest to the readability of both.)

Fugmann’s text might be considered for advanced courses in the theory of information organization. Although not a professional production, the book has a low price, and the generous gutter margin will permit rebinding of this paperback for library-information science collections.

In articulating axioms for indexing, Fugmann seems to aspire to the status of Ranganathan (whom he cites often) in the field of classification theory. Although the ideas in the book are valid for the most part, few are truly innovative. Lancaster (1991, 28) has already shown that the axioms, which Fugmann previously publish-
ed in journal articles, do not constitute a theory of indexing. As for the broader Information context, Fugmann is wrong in claiming, for example, that the difference between relevance and pertinence “has almost completely been disregarded in the literature of the more recent past” (par. 292); information science journals are full of articles on this topic.

Discounting originality, the main problem with the book is that its complex subject matter is not clearly presented. Only die-hard indexing theorists will be motivated to wade through this treatise.—Bella Hass Weinberg, St. John’s University

WORKS CITED

INDEX TO ADVERTISERS

| ALA Editions | 274 |
| Baker & Taylor | 209 |
| Brodart | cover 3 |
| Central Washington University Library | 315 |
| Gaylord | 280, 286 |
| Library Technologies | 256 |
| Neschen | cover 2 |
| Todd | cover 4 |
| WLN | 210 |

In Memoriam

Donald C. Cook, RTSD President, 1970–1971

Professor Emeritus Donald C. Cook of the Faculty of Library and Information Science, University of Toronto, died unexpectedly on April 4, 1994, at the age of 70, at his home in Toronto, Canada. Born in Scottsbluff, Nebraska, he was raised in Torrington, Wyoming, where he completed his high school education. In 1945 he graduated Phi Beta Kappa from the University of Arizona with a major in English literature. He completed his education at the Columbia University School of Library Service, from which he was awarded a bachelor’s (1946), master’s (1956) and doctorate (1977).

Don Cook’s professional career began in the Cataloging Department of the Columbia University Libraries, and he continued to work in various departments of that system until 1969, except for the years 1947–52. Those years were spent in Switzerland working as documents librarian for the United Nations Library in Geneva. During that time he broadened his horizons internationally. He took courses at the Université de Geneve to improve his French, learned to ski, and began a pattern of travel that continued for the rest of his life, taking him through much of Europe and Asia, into North Africa, and around most of North America.

In 1969 Don Cook left Columbia University and went to Toronto, Canada, where he continued to live until his death. His first position in Toronto was as research and planning officer for the Ontario Universities Bibliographic Centre Project, a project devoted to planning cooperative activities among Ontario university libraries. From this position, in 1971, he was appointed director of the Office of Library Coordination, Council of Ontario Universities. In 1972 he began to teach part-time in the Faculty of Library and Information Science, University of Toronto. In 1974 he was appointed to a full-time position; he was awarded tenure in 1979 and was promoted to full professor in 1984. During his academic career, he taught courses in the organization of information and materials, advanced cataloging, subject analysis, and technical services. He was also involved in the design of a simulated online cataloging system called SIMCOE, which was used to teach students in the early days of online cataloging support systems.
Throughout his career, Don Cook maintained a very active and productive professional life, participating in library and information science associations in Canada and the United States and internationally. He was a life member of the American Library Association and was deeply involved in ALA divisions, sections, and committees. Perhaps his greatest ALA commitment was to the Resources & Technical Services Division (RTSD), now the Association for Library Collections & Technical Services (ALCTS). He was chair of the Cataloging & Classification Section in 1965–66 during the time when the Anglo-American Cataloguing Rules, North American Text (1967) was going through its final review and approval. From 1965 to 1972 he served on the RTSD Board of Directors and was president of the division in 1970–71. Don took an early interest in automation and in 1967–1968 served on the Machine-Readable Cataloging Format Committee of ALA's Information Science and Automation Division, the committee that represented the U.S. library community in reviewing and approving the adoption of the format now known as MARC. In Canada he was active in the Canadian Library Association and the Canadian Association for Graduate Education in Library and Information Science, and he served on the Canadian Committee on Cataloguing from 1986 to 1989. He attended eight International Federation of Library Association (IFLA) conferences and was a member of IFLA's Standing Committee of the Section on Cataloguing from 1981 to 1989.

Don Cook contributed widely to professional publications through his work as an editor, as the author of journal articles, and through his research on the Anglo-American Cataloguing Rules. Among his many contributions was his work on “The Use of the Library of Congress Classification,” the proceedings of the ALA Preconference Institute on the LC Classification held in New York in 1966, which he edited with Richard Schimmelpfeng, and his compilation of the “AACR2 Decisions and Rule Interpretations.” He was founder and editor of Cataloging & Classification Quarterly (1978–82) and served as Library Resources & Technical Services assistant editor for cataloging and classification (1967–70).

Don was a devotee of opera, ballet, and the theater. However, his major hobby was his lifelong admiration of the life and work of Frank Lloyd Wright. He collected his works, attended lectures and exhibitions, and followed every possible avenue to Wrightiana on his travels, whether it was in the United States, Japan, London, Paris, or some other part of the world. At the time of his death he was working on a book-length bibliography of Wrightiana that he hoped to publish in the near future.

Don Cook was buried in Torrington, Wyoming, where he grew up. A memorial service is planned to be held in Toronto in late May, at a time yet to be announced. He will be greatly missed by his colleagues and friends in Canada and the United States and around the world.
When You Don’t Have Time

To Catalog and Process

Your Books

Turn to Brodart.

Brodart's Circ-Serv™ and Tech-Serv™ offer cataloging and processing flexibility to meet your time sensitive needs.

Brodart's Circ-Serv gives you complete U.S. MARC records, bar code number, call number and book price. In your book shipments you will receive diskettes, as well as corresponding accession reports. Each book will also receive a laser-printed bar code label.

Tech-Serv provides you with first-quality cataloging components that follow your specifications. Brodart's processing options include: Plasti-Kleer™ protective covers attached or loose, paperback protection with our exclusive Lyfguard™ or Duralam™ systems, theft detection, pre-sorted cards and customized laser-printed catalog card kits attached or shipped unattached in your book.

If it is impractical to process your books yourself, turn to Brodart for truly shelf-ready books that meet your timely requirements.

800-233-8467, ext. 784
In Canada: 800-265-8470

Brodart, Ltd., 109 Roy Blvd., Brantford, Ontario N3T 5N3
CD-ROMs

- security keylocks
  for public access areas

- expandable towers
  with the capacity to daisy chain

- networking solutions
  for your workstation environment

- massive optical servers
  up to 64 CD-ROM drives

- single desktop CD-ROMs

- space-saving combined
  computer and CD-ROM unit

- multimedia
  CD-ROM units

- accessories

- CD-ROM discs

- reference libraries

Todd products use an Hitachi mechanism with the fastest access time available—under 300 msec.

When you buy a Todd product, it is with technical support. Our 800 number is available whenever you need assistance. Todd products are remarkably reliable and are warranted. Whether you are an expert in computer systems needing detailed specifications, or someone needing basic orientation to CD-ROMs... WE CAN HELP.

TODD ENTERPRISES INC.

For additional information, call... 800 445-TODD

718 343-1040 • FAX 718 343-9180 • BBS 516 829-0212

224-49 67th Ave., Bayside, NY 11364