# CONTENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Study of Performance of Five Book Dealers Used by Louisiana State University Library. <em>Sandra L. Stokley</em> and <em>Marion T. Reid</em></td>
<td>117</td>
</tr>
<tr>
<td>The Principle of Uniform Heading in <em>Library of Congress Subject Headings</em>. <em>Lois Mai Chan</em></td>
<td>126</td>
</tr>
<tr>
<td>The Adequacy of Library of Congress Subject Headings for Black Literature Resources. <em>Doris Hargrett Clack</em></td>
<td>137</td>
</tr>
<tr>
<td>Punctuation in Library of Congress Subject Headings. <em>Hilda Steinweg</em></td>
<td>145</td>
</tr>
<tr>
<td>A Rationale for the Use of Split Files for Subject Headings. <em>Pamela Walker</em></td>
<td>154</td>
</tr>
<tr>
<td>Poland Is Not Yet Defeated, or: Should Catalogers Rewrite History? With a Discourse on When Is an Island Not an Island? <em>Hans H. Wellisch</em></td>
<td>158</td>
</tr>
<tr>
<td>Conference Publications: Serials or Monographs? <em>Jim E. Cole</em></td>
<td>168</td>
</tr>
<tr>
<td>An Adapted Library of Congress Classification for Children’s Materials. <em>John W. Perkins</em></td>
<td>174</td>
</tr>
<tr>
<td>Multiscript and Multilingual Bibliographic Control: Alternatives to Romanization. <em>Hans H. Wellisch</em></td>
<td>179</td>
</tr>
<tr>
<td>Recommended Data Elements for the Descriptive Cataloging of Computer-based Educational Materials in the Health Sciences. <em>Becky Lyon-Hartmann</em> and <em>Charles M. Goldstein</em></td>
<td>191</td>
</tr>
</tbody>
</table>
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Editors: The courtesy of citation to the original publication is requested when material is reprinted. Publication in LRTS does not imply official endorsement by the Resources and Technical Services Division nor by ALA, and the assumption of editorial responsibility is not to be construed necessarily as endorsement of the opinions expressed by individual contributors.
A study was conducted by the Order Department of the Louisiana State University Library to measure the performance of five domestic book dealers during the 1975-76 fiscal year. The data were obtained through a detailed analysis of 400 purchase orders from each of the five dealers. The results showed that certain dealers do give greater discounts and have shorter turn-around times than others, but these services must be weighed against problems encountered. These results have been used by Order Department personnel in determining which book dealer to use in a given situation.

In a time of rising costs and reduced budgets, the acquisitions departments in libraries must determine which book dealers are serving them most effectively. Positive and negative aspects of the dealers' services can be weighed thus enabling personnel to decide which dealers to use in particular situations. No rigid rules can be established. Instead, guidelines can be formed for the purposes of ordering, hopefully resulting in services that meet the needs of a particular library.

Purpose of the Study

The Louisiana State University Library Order Department initiates orders for approximately 15,000 monographs each year. The majority

Manuscript received March 1977; accepted for publication May 1977.
of orders placed are sent to book dealers (jobbers). The Order Department attempts to use the best dealers in terms of service and discounts.

The purpose of this study was to determine both quantitative and qualitative data on the performance of five domestic book dealers used by the Order Department of the Louisiana State University Library during the 1975-76 fiscal year in order to assist department personnel in determining which dealers to use in the future. Specific information included the following items: number of days between purchase order date and invoice date, number of days between purchase order date and receipt of book, average amount of discount, average amount of service charge, numbers and types of problems with orders, amounts of postage and handling charges, and any other data that might be used to measure quality of service.

Methods

Four hundred purchase orders from each of the five dealers (hereafter identified as Dealer A, Dealer B, Dealer C, Dealer D, and Dealer E) were chosen for the study, representing the first 400 titles ordered from each of these dealers during the 1975-76 fiscal year. Dealer A is located in the south central part of the United States and has an inventory of more than 200,000 titles. Dealer B is located in the Midwest and has an inventory of 50,000 titles. Dealer C, also located in the Midwest, maintains a very small inventory. Dealer D, located in the northwestern part of the country, has a stock of 15,000-16,000 books representing 10,000-12,000 titles. Dealer E is located in the northeastern part of the country and maintains a very small inventory. Table 1 indicates the imprint dates for the samples taken.

<table>
<thead>
<tr>
<th>Dealer</th>
<th>76</th>
<th>75</th>
<th>74</th>
<th>73</th>
<th>72</th>
<th>71</th>
<th>70</th>
<th>65-69</th>
<th>60-64</th>
<th>Before 1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>195</td>
<td>119</td>
<td>35</td>
<td>48</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>B*</td>
<td>141</td>
<td>134</td>
<td>45</td>
<td>50</td>
<td>23</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>C*</td>
<td>157</td>
<td>110</td>
<td>54</td>
<td>46</td>
<td>22</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>10</td>
<td>261</td>
<td>62</td>
<td>22</td>
<td>13</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>E</td>
<td>31</td>
<td>227</td>
<td>56</td>
<td>17</td>
<td>18</td>
<td>8</td>
<td>8</td>
<td>13</td>
<td>7</td>
<td>13</td>
</tr>
</tbody>
</table>

*Because the samples for these dealers were taken before January 1976, they did not include 1976 imprints.

Invoices from each of the five dealers were examined in order to obtain the needed information. The purchase order date was already indicated on the purchase order. From the invoice the following items were obtained and noted on the individual purchase orders: the date
of the invoice, the date the book was received, any discount given, and any service charge on an individual book. Further notes already on some of the purchase orders indicated problems, cancellations, or rerouting.

A list was made for each of the five dealers with the following column headings: date of purchase order, date of invoice, number of days between purchase order date and invoice date, date the book was received, number of days between purchase order date and receipt of the book, imprint date, cost of book, discount, service charge, and miscellaneous. The information was transferred from the purchase orders to the lists. A period of six months was allowed for receipt of a book; for a book not received within that period, the reason, if known, was noted in the miscellaneous column.

Then averages were computed for the number of days between the purchase order date and the invoice date and between the purchase order date and the date of the receipt of the book. In addition, a delivery rate was ascertained for each dealer. The delivery rate shows the percentage of books received at specific time intervals. Averages were computed for amounts of discounts and service charges as well as for cost per title.

An additional study was made of eight invoices from each dealer in order to compare amounts charged for tax, postage, and handling. Invoices with similar total amounts were examined.

Invoice format was also evaluated. Three staff members who handle invoices as a part of their daily duties were interviewed, and their opinions were considered in the qualitative aspects. The staff members also offered other comments regarding the service of the five dealers.

Results

Table 2 reveals dealer performance in terms of receipt of books.

Because the number of orders reported out-of-print varied greatly among the five dealers, an analysis was made of the imprint dates for

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Orders Received</th>
<th>Cancelled</th>
<th>Out of Print</th>
<th>Orders Cancelled</th>
<th>Out of Stock</th>
<th>Dealer Unable to Locate</th>
<th>Orders Rerouted</th>
<th>Orders Cancelled</th>
<th>Publication Received</th>
<th>No Information Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>368</td>
<td>10</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>B</td>
<td>342</td>
<td>29</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>C</td>
<td>364</td>
<td>20</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>D</td>
<td>371</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>E</td>
<td>361</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22</td>
</tr>
</tbody>
</table>

Table 2: Analysis of Receipt of Books
those titles reported out-of-print. Table 3 shows the results of this analysis.

**TABLE 3**

**Imprint Dates of Out-of-Print Cancellations**

<table>
<thead>
<tr>
<th>Dealer</th>
<th>76</th>
<th>75</th>
<th>74</th>
<th>73</th>
<th>72</th>
<th>71</th>
<th>70</th>
<th>65–69</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td>5</td>
<td>12</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td>C</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>E</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 4 presents data on the average turnaround time (the number of days between the date of the purchase order and the date of the invoice) and the average receipt time (the number of days between the date of the purchase order and the receipt of the book) for each dealer. These figures are rounded to the nearest whole number.

**TABLE 4**

**Turnaround Time and Receipt Time**

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Turnaround Time</th>
<th>Receipt Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>29 days</td>
<td>45 days</td>
</tr>
<tr>
<td>B</td>
<td>44 days</td>
<td>58 days</td>
</tr>
<tr>
<td>C</td>
<td>38 days</td>
<td>57 days</td>
</tr>
<tr>
<td>D</td>
<td>55 days</td>
<td>70 days</td>
</tr>
<tr>
<td>E</td>
<td>53 days</td>
<td>70 days</td>
</tr>
</tbody>
</table>

Computations were made for delivery rates. Table 5 shows the percentage of books received from each of the five dealers after three weeks, four weeks, six weeks, eight weeks, twelve weeks, sixteen weeks, and twenty weeks.

**TABLE 5**

**Delivery Rates (in Percentages)**

<table>
<thead>
<tr>
<th>Dealer</th>
<th>3 wks</th>
<th>4 wks</th>
<th>6 wks</th>
<th>8 wks</th>
<th>12 wks</th>
<th>16 wks</th>
<th>20 wks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>31.5</td>
<td>45</td>
<td>56.5</td>
<td>65.75</td>
<td>75.5</td>
<td>90</td>
<td>92</td>
</tr>
<tr>
<td>B</td>
<td>0</td>
<td>2</td>
<td>19.5</td>
<td>48.5</td>
<td>80</td>
<td>82.25</td>
<td>85.75</td>
</tr>
<tr>
<td>C</td>
<td>0.5</td>
<td>1.5</td>
<td>22.5</td>
<td>51</td>
<td>85.75</td>
<td>89.5</td>
<td>91</td>
</tr>
<tr>
<td>D</td>
<td>0</td>
<td>1.75</td>
<td>5</td>
<td>19</td>
<td>80.75</td>
<td>87.75</td>
<td>94</td>
</tr>
<tr>
<td>E</td>
<td>0.25</td>
<td>1.25</td>
<td>6</td>
<td>30.25</td>
<td>69.75</td>
<td>85</td>
<td>90</td>
</tr>
</tbody>
</table>

*120*  

*Library Resources & Technical Services*
Table 6 enumerates the average discounts given by each of the five dealers. Of the five dealers, three added service charges ranging from $1 to $3. The majority of the service charges of Dealers C and E were on books from university presses and from associations. Dealer D added service charges for each multiple volume supplied on an order for a title.

### TABLE 6
**Average Discounts (in Percentages)**

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Average Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>16</td>
</tr>
<tr>
<td>B</td>
<td>10.5</td>
</tr>
<tr>
<td>C</td>
<td>5.29</td>
</tr>
<tr>
<td>D</td>
<td>10.08</td>
</tr>
<tr>
<td>E</td>
<td>9.47</td>
</tr>
</tbody>
</table>

An analysis was done to determine if there was a definite pattern regarding discounts on books from particular publishers. The analysis included discounts given by dealers for the nineteen publishers who had a minimum of twenty titles included in the sample. It was found that, indeed, in most cases one particular dealer did give a greater discount on a particular publisher's books. A chart was constructed for local use in assigning dealers.

The types of problems that occurred are summarized in table 7.

### TABLE 7
**Summary of Problems**

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Wrong Price</th>
<th>Wrong Book</th>
<th>Defective Book</th>
<th>Incomplete</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>D</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>E</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 8, which presents data on tax, postage, and handling charges, indicates that Dealer A (the only one to charge sales tax) levies the highest charge, followed by dealers E, D, C, B in that order.

The average cost per title was computed for each of the five dealers. The results are shown in Table 9, an analysis suggested by one of the dealers in the study in order to determine whether any dealer had consistently marked up the prices of books.
TABLE 8
SUMMARY OF TAX, POSTAGE, AND HANDLING CHARGES

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Average Amount of Invoice</th>
<th>Average Amount of Tax, Postage, and Handling</th>
<th>Percentage of Extra Charges per Invoice</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$158.46</td>
<td>$7.13</td>
<td>4.49%</td>
</tr>
<tr>
<td>B</td>
<td>$159.18</td>
<td>$2.39</td>
<td>1.5%</td>
</tr>
<tr>
<td>C</td>
<td>$160.20</td>
<td>$3.20</td>
<td>1.9%</td>
</tr>
<tr>
<td>D</td>
<td>$157.36</td>
<td>$3.25</td>
<td>2.1%</td>
</tr>
<tr>
<td>E</td>
<td>$161.09</td>
<td>$5.31</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

Claiming is a time-consuming duty of the Order Department staff. If a book has not been received within a certain period of time, an inquiry must be sent to the dealer to determine whether an order has been received and, if so, what the status of the order is. Sometimes a dealer will send a report to a library concerning a particular book,

TABLE 9
AVERAGE COST PER TITLE

<table>
<thead>
<tr>
<th>Dealer</th>
<th>All Books Received</th>
<th>Books Less Than $40</th>
<th>All Books with Service Charge Subtracted</th>
<th>All Books Less Than $40 with Service Charge Subtracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$ 9.00</td>
<td>$ 8.61</td>
<td>†</td>
<td>†</td>
</tr>
<tr>
<td>B</td>
<td>$ 8.93</td>
<td>$ 8.93*</td>
<td>†</td>
<td>†</td>
</tr>
<tr>
<td>C</td>
<td>$10.65</td>
<td>$10.06</td>
<td>$10.59</td>
<td>$ 9.99</td>
</tr>
<tr>
<td>D</td>
<td>$10.16</td>
<td>$10.16*</td>
<td>$10.06</td>
<td>$10.06</td>
</tr>
<tr>
<td>E</td>
<td>$10.57</td>
<td>$10.40</td>
<td>$10.55</td>
<td>$10.37</td>
</tr>
</tbody>
</table>

*Each book received cost less than $40.
†No service charges were added.

thus eliminating the need for a claim. Table 10, indicating the number of claims made and the number of reports received for each dealer, shows that Dealer A demanded no staff time for claiming. The reason for this is that Dealer A provides a computer printout showing the status of orders, a service not offered by the other four dealers. The number of reports refers only to the number of titles reported on. If multiple reports were sent on the same title, this was counted as just one report.

An additional aspect of service was studied through a comparison of the formats of the invoices of the five dealers. Table 11 indicates the information included on the invoices of each dealer.
TABLE 10
SUMMARY OF CLAIMS MADE AND REPORTS RECEIVED

<table>
<thead>
<tr>
<th>Dealer</th>
<th>Claims</th>
<th>Reports</th>
<th>Total Titles</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>B</td>
<td>16</td>
<td>25</td>
<td>41</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>23</td>
<td>28</td>
</tr>
<tr>
<td>D</td>
<td>33</td>
<td>20</td>
<td>53</td>
</tr>
<tr>
<td>E</td>
<td>30</td>
<td>21</td>
<td>51</td>
</tr>
</tbody>
</table>

The invoices of Dealer A are lined horizontally with two alternating colors. This enables invoice processors to read across all columns most easily. A major drawback to Dealer A’s invoices is that the purchase order number for each book is not included. This had been done in previous years but was discontinued by the dealer. A request was made to Dealer A asking that titles be listed in alphabetical order on the invoices. This request has been complied with only on occasion. In addition, only a small space is left for the invoice processor to write in the purchase order number and the name of the fund for each title.

The invoices of Dealer B have a special advantage in that they include the Louisiana State University Library fund from which the book is being purchased. If this is not included, the invoice processor must write this on the invoice for each title. Another advantage of Dealer B’s invoices is the convenience of having the purchase order number listed in close proximity to the price. This greatly aids the bookkeeper.

The invoices of Dealers C and D are easy to read because of their

TABLE 11
INFORMATION INCLUDED ON INVOICES

<table>
<thead>
<tr>
<th>Information</th>
<th>Dealer A</th>
<th>Dealer B</th>
<th>Dealer C</th>
<th>Dealer D</th>
<th>Dealer E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Title</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Author</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Publisher</td>
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Volume 22, Number 2, Spring 1978
distinct columns. They contain identical information. The invoices of Dealer E are not easily read, that is, the columns are not distinct. However, Dealer E's invoices have the advantage of including the Louisiana State University Library fund.

Other aspects of service were mentioned by the three staff members who have a great deal of contact with the book dealers. Dealers A, B, D, and E furnish credit memo forms to the Louisiana State University Library Order Department. This is a great convenience when books must be returned for various reasons or when a price discrepancy occurs. Dealer C does allow the return of books without permission; however, a letter must be written to accompany the books. Dealer D has furnished the Order Department with a list of publishers whose books may be returned without permission.

Dealer B provides a toll-free telephone line to its customers. This is a very helpful service, and it has been utilized several times by the Louisiana State University Library Order Department. Dealer E is in frequent telephone communication with the Order Department.

**Conclusions**

**Specific Observations.** In terms of turnaround time as well as receipt time, Dealer A provided the most prompt service. However, if staff time spent to resolve dealer problems is considered, Dealer A's service deserves the lowest rating.

In regard to discounts, Dealer A gave the greatest discount. However, Dealer A also charged sales tax, while Dealers B, C, D, and E did not. None of the dealers has to charge sales tax because Louisiana State University requires that the total amount of money allocated for books be subject to a set amount of sales tax to cover cases where the state sales tax is not billed by the vendor. This addition of a 3 percent sales tax to the invoices of Dealer A would cause the ultimate discount to be little more than that of Dealer B. (As a result of this study, Dealer A eliminated the sales tax from its charges.)

A major advantage of the use of Dealer A is the printout showing the status of purchase orders. This eliminates the need for claiming by the staff of the Order Department. Dealer D sent the fewest reports and, consequently, demanded the greatest number of claims.

The study shows great variation in discounts offered for books of specific publishers among the five dealers, making it necessary to consult the special chart in order to receive the greatest discount.

The invoices of Dealer B contain more information and seem to be more practical and useful than those of Dealers A, C, D, and E.

**General Observations.** The ideal way to compare dealers, of course, is to order the same title from each dealer on the same day in volume. However, in times of reduced budgets, this is not practical. Indeed, not many libraries would want five copies of many books. Even though the study was not done in an ideal manner, it is possible to draw some general conclusions that may be useful to others.
Each dealer should be notified concerning his services in comparison with those of the other dealers. The dealer may be able to provide some services of which the library is not aware and may have some reason for poor service. An opportunity should be given each dealer to demonstrate that its performance can be better.

It appears to be good business practice to send purchase orders to several dealers instead of just one. If any of the dealers being used should go out of business, the library would still have others on which to rely. Also, through the use of several dealers, competition will be encouraged, resulting in better service to the library. The decision of which dealer to use will depend on the priorities concerning the particular title being ordered. If receipt time is of the essence, Dealer A should be used. If discounts are of prime importance, the dealer giving the greatest discount should be used, noting in particular those publishers for which a dealer gives greater discounts. If problem-free service is a high priority, Dealer E should be utilized.

Each acquisitions librarian must decide whether a study such as this is valuable to his/her library. If the librarian has access to or is able to manipulate computer derived management data, the time taken should not be as great as if it were done manually, as this study was. Each librarian must determine to what lengths he/she will go in deciding which title to send to which dealer. Time taken for the decision process must be weighed against the results. The present study has been judged to be valuable to the library, to a small extent for monetary savings and to a large extent for improved service resulting from competition among dealers.
The Principle of Uniform Heading in Library of Congress Subject Headings

Lois Mai Chan
Associate Professor
University of Kentucky
College of Library Science
Lexington, Kentucky

The recent policy of the Library of Congress to adopt split files and its increasing use of duplicate entries represent a relaxation of the principle of uniform heading that has been a major principle in Library of Congress Subject Headings since the beginning of the dictionary catalog. Split files entail the use of a new heading for an existing subject while maintaining a separate file for entries already cataloged under the old heading without recataloging. In order to understand the ramifications and implications of this recent development, a discussion of the origin, rationale, and application of the principle of uniform heading seems to be appropriate.

Introduction

THE PRINCIPLE OF SPECIFIC AND DIRECT ENTRY has generally been recognized as the underlying principle of the Library of Congress Subject Headings (LCSH). On the other hand, the principle of uniform heading, which is another important and significant feature of LCSH, has seldom been discussed in the literature. This principle requires that each subject appear in the catalog under one name and in one form only.

The principle of uniform heading is most closely associated with descriptive cataloging. It is stated in the Paris Principles to the effect that the entry for an author's name should be made under a uniform heading in order that all works by the same author are grouped together in the catalog. Cutter states a similar function for the subject heading, i.e., "to show what the library has on a given subject." In order to do so, each subject appears in the catalog under one name and one form only. Haykin calls it the principle of unity: "A subject catalog must bring together under one heading all the books which deal principally

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or exclusively with the subject.”² It is also discussed in the introduction to Sears List of Subject Headings: “One uniform term must be selected from several synonyms and this term must be applied consistently to all works on the topic.”³

It is generally recognized that a subject often has more than one name. The English language, in particular, is full of synonyms derived from different linguistic traditions. Different names for the same object or expressions for the same concept often occur in different geographic areas. In such instance, one of the names is chosen as the subject heading. For example, in LCSH, the heading Striped bass is chosen among these synonymous terms: “Striped bass,” “Greenhead,” “Rockfish,” “Squidhound,” “Streaked bass,” and “Striper.” Oral medication is chosen in preference to “Drugs by mouth” or “Medication by mouth.”

In many cases, after one of several synonyms has been chosen as the subject heading, a further choice is necessary if the term includes more than one word, e.g., Oral medication instead of “Medication, Oral,” or Diagnosis, Surgical instead of either “Surgical diagnosis” or “Surgery—Diagnosis.” In these cases, the problem is very similar to the choice of entry element for author headings.

The main reason stated by Cutter and the other authors for grouping all material on a subject under one term is to prevent the scattering of materials on the same subject. Regardless of which term an author may use in a work about striped bass, the work is listed in the catalog with other works on the same subject under the same term. However, the purpose of achieving this objective can be fulfilled by listing all works on the subject under each possible term. In other words, if a library has twenty books on striped bass, it is possible to list them repeatedly under each of the six possible terms. This is not economically feasible, although it is physically possible. Therefore, economy is the other overriding reason for the principle of uniform heading.

Following is a discussion of the principle and practice of uniform heading as manifested in three types of headings in LCSH: synonyms, phrase headings, and headings with subdivisions.

**Synonyms**

In order to group together all material on the same subject, it is necessary to select a single term from among the synonymous terms representing the subject to be used for all of the subject entries, with see references from the others. The economic factor in this approach is that each see reference is made once for all regardless of how many times a heading is used in the catalog.

There are at least three considerations concerning synonyms: (1) different words or phrases with the same meaning, e.g., “Subways” or “Underground railroads”; (2) different spellings for the same word, e.g., “Aesthetics” or “Esthetics” and “Marijuana” or “Marihuana”; and
(3) the same word in different languages, e.g., "Bonsai" or "Miniature trees."

Regarding the criteria for the choice of a heading among several possible terms, writers on subject headings have provided certain general guidelines. Cutter’s rule states:

#169. In choosing between synonymous headings prefer the one that—
(a) is most familiar to the class of people who consult the library.
(b) is most used in other catalogs.
(c) has fewest meanings other than the sense in which it is to be employed.
(d) comes first in the alphabet, so that the reference from the other can be made to the exact page of the catalog.
(e) brings the subject into the neighborhood of other related subjects.

Of these criteria, the first two relate to usage, the third aims at providing a distinctive term for a subject, the fourth concerns mainly the printed catalog and has been generally ignored in card catalogs, and the last betrays Cutter’s desire to achieve, whenever possible, subject collocation in a dictionary or alphabetical subject catalog.

With regard to usage, Mann advises: “Use common rather than technical terms . . . . it is desirable that the name of a subject should be the one in common usage, that is, the form generally used in common parlance, in printed indexes, encyclopedias, and other reference guides.” Haykin also states a criterion based on common usage:

In the case of choosing between a popular term and a scientific one, Haykin believes that the popular term ought to be chosen for use in a library serving a general public, while the scientific one would be preferred in a special library serving a scientific or professional clientele.

In the question of English vs. foreign terms, Haykin prefers English terms with two exceptions: “(1) when the concept is foreign to Anglo-American experience and no satisfactory term for it exists, e.g., Réallast, Précieuses; and (2) when, especially in the case of scientific names, the foreign term is precise, whereas the English one is not, e.g., Ophiodon elongatus, rather than ‘Buffalo cod’ or ‘Blue cod’; Pityrosporum ovale, rather than ‘Bottle bacillus.’ ”

The general consensus of these writers is that common usage should be the criterion for choosing among synonyms. However, in practice, there are at least two problems: how to determine common usage and the ever-changing nature of usage. Dictionaries provide valuable information. However, Haykin warns against the use of dictionaries as the source of headings: “Dictionaries record both older terms no longer in use and terms in use at the time of the compilation of the dictionary. They do not usually indicate a choice on the basis of

• 128 •  Library Resources & Technical Services
currency." He indicates that the “surest sources” of usage are periodicals, since they carry the most current literature on various subjects. This guideline works well in the cases where there is scholarly consensus. However, it is sometimes of little help in dealing with new subjects. For example, until recently, the heading Hygiene, Public was used in LCSH for public health and Insurance, Social for social security. When a new subject is developed, a heading is required immediately, and it is often difficult to predict which of several terms will eventually be established as the standard name for the subject.

Furthermore, common usage does not remain stable. Many terms once in common usage become obsolete. Others acquire different meanings. For example, Negroes and Blacks refer to the same ethnic group, but the former term has acquired a pejorative connotation in the social context and has become an objectionable term.

In order to cope with semantic changes, constant revision is necessary. Haykin has clearly pointed out such a need:

[The cataloger] must use the term in the sense in which it is currently used, regardless of the older literature in and out of the catalog. This leads inevitably to a policy of constant change in order to maintain the catalog up to date. To put this policy into effect the cataloger must substitute the latest heading for the one which is obsolescent or obsolete and must refer the reader to the current heading from the headings which have fallen into disuse.

However, there is another side to the problem—economic consideration. It is extremely costly to revise headings in a manually operated catalog. Out of practical considerations, the Library of Congress, until recently, had been rather conservative in revising headings to keep up with current usage. As a result, many obsolete terms remain in LCSH. Berman has made a thorough analysis of certain aspects of this problem. In recent months, however, the Library of Congress has shown greater alacrity in updating obsolete terms. For example, the heading Aeroplanes has been replaced by Airplanes. The term Negro(es) is no longer used in headings and is replaced by either Black or Afro-American(s), depending on the context. Nonetheless, because of the cost of re-cataloging, the obsolete heading remains in the catalog in cases where there is a large amount of library material already entered under that heading. The new heading and the defunct heading are then connected by explanatory or see also references. This practice, called “split files,” represents a relaxation or suspension of the principle of uniform heading.

In a computerized catalog, on the other hand, replacing old headings with new ones does not create the same kind of economic burden as in a manual system. Malinconico has pointed out that in a computerized catalog, it is possible that “the change of the form of a heading would need to be done only once, and all bibliographic records previously linked to the old form of the heading would automatically be linked to the new form of the heading.”

Volume 22, Number 2, Spring 1978

- 129 -
When a heading contains more than one word, there is also the question of which word is to be used as the entry element if the principle of uniform heading is to be observed. In this regard, LCSH adheres to the principle, while PRECIS, the subject indexing system used by the British National Bibliography, does not. In PRECIS, the operation known as "differencing" brings each significant word in a compound term to the initial position, thereby producing multiple entries for the same term. For example, in LCSH, the heading Military architecture appears in the direct form with a see reference from "Architecture, Military," while in the British National Bibliography based on PRECIS the subject is listed under both terms, Military architecture and Architecture.

As explained above, in LCSH, the reason for adhering to the principle of uniform heading in headings containing more than one word is mainly economy. By choosing one form of a heading only, the number of subject entries in a catalog is kept to a minimum. The main problem is, then, how to decide which term is to be used as the entry element and how to maintain consistency in the choice of the entry element.

Two types of headings contain more than one word: phrase headings and headings with subdivisions. In both types, the problem of the entry element exists.

Phrase Headings. The form of phrase headings in LCSH, including both adjectival and prepositional phrase and compound headings, is notoriously inconsistent. A phrase heading may be entered either in its natural word order or in the inverted form. The terms "Chemistry, Analytic" and "Analytic chemistry" refer to the same subject. In this type of heading in LCSH, the principle of uniform heading is observed without exception. A phrase heading appears in either the direct or the inverted form, but not both. For example,

Differential equations, Partial
Partial differential equations

(From this point on, the traditional symbol "x" is used to designate a word or phrase from which a see reference is to be made to the word or phrase below which the "x" term appears.) The same heading appears in three forms in PRECIS, a multiple-form system:

Partial differential equations
Differential equations
Equations
Partial differential equations
tival, prepositional phrase, and compound headings) has been discussed elsewhere.\textsuperscript{15} The lack of specific guidelines for the determination of the entry element in these cases has resulted in many inconsistent forms in LCSH. If the principle of uniform heading is to be continued, rigorous rules concerning these forms must be developed in order to ensure consistency and predictability of form.

See references are usually made from the form not used to the one chosen as the heading, e.g.,

\begin{itemize}
  \item Chemistry, Organic
  \item Foundry chemistry
\end{itemize}

but the practice has not always been consistent in LCSH, e.g.,

\begin{itemize}
  \item Botanical Libraries
  \item Botanical museums
\end{itemize}

\textit{Theology, Doctrinal}

\textit{Theology, Practical}

\textit{Politics, Practical}

\textit{Botanical Libraries} x Libraries, Botanical

\textit{Botanical museums} [no see reference]

\textit{Theology, Doctrinal} x Doctrinal theology

\textit{Theology, Practical} [no see reference]

\textit{Politics, Practical} x Practical politics

\textit{Headings with Subdivisions.} A heading with a subject or topical subdivision resembles closely a classed heading, i.e., a heading consisting of a string of terms that form a hierarchical relationship, typical of entries in a classed catalog or an alphabetico-classed catalog. However, not all subject headings with topical subdivisions are classed headings. They are frequently an alternative of the phrase form. \textit{Vehicles—Taxation} is another way of saying “taxation of vehicles” and does not mean that taxation is a subordinate kind or part of vehicles. \textbf{Subject headings—Aeronautics} means subject headings used in the field of aeronautics. The principle of uniform heading also operates in this type of headings. For a particular subject, either the phrase form or the subdivision form is used as the heading, but not both. The question is then, when to use which form. In general, Haykin advises against the use of topical subdivisions that result in a class-inclusion relationship:

The use of topics comprehended within a subject as subdivisions under it is to be avoided. It is contrary to the principle of specific entry. \textellipsis\textsuperscript{16}

\ \n
On the other hand, he recognizes that under certain circumstances, the use of topical subdivisions cannot be avoided:

Many headings \textellipsis employ the form of subdivision by topic only where the broad subject forms part of the name of the topic and a convenient phrase form sanctioned by usage is lacking, or, for the purposes of the catalog, where it is desirable to conform to an existing pattern.\textsuperscript{17}

\textit{Volume 22, Number 2, Spring 1978}
However, in practice, perhaps because of the inherent difficulty in determining usage and as a result of changing policies over the years, the phrase form and the subdivided form seem to have been used indiscriminately in LCSH for similar types of headings, e.g.,

Farm produce—Taxation
Luxuries—Taxation

but

Taxation of advertising
Taxation of articles of consumption
Taxation of personal property

Current policy favors the subdivided form for newly established headings of this type.

While Haykin indicates reservations about the subdivided form, Coates sees disadvantages in the phrase form. For one thing, the same concept can often be expressed by different forms of the phrase, e.g., Child psychology or Psychology of children, and it is not practicable to use either form in the catalog exclusively because some subjects can be expressed clearly in one or the other form only. As a solution, he advocates the use of the "subheaded" form such as Children, Psychology (i.e., Children—Psychology). The advantage of this form, Coates explains, is that it can "replace both of the possible alternative forms of phrase heading, thus obviating the enquirer's uncertainty as to the form in which the subject should be couched in order to match with a possible heading." The difficulty with this proposal is that there are some phrases, e.g., General strike, which cannot be readily converted into a subdivided form.

There is no satisfactory solution to the problem. To use either the phrase form or the subdivided form exclusively creates problems. Both forms have been used in LCSH, with no stated guidelines or criteria for the decisions. Over the years, policies regarding choice of form have not been consistent.

LCSH seldom employs a subdivision to express the genus-species relationship. Hence, species of birds are not used as subdivisions under the heading Birds, and kinds of vehicles appear as separate headings rather than as subdivisions under the heading Vehicles. Among the few exceptions of subject headings consisting of hierarchically-related terms are the following:

Shakespeare, William, 1564-1616—Characters—Jews
Wages—Minimum wage

but

Jews in literature
Retirement income [instead of Income—Retirement income]

The hierarchical relationship in the first example is most obvious between the two subdivisions, as Jews in this case are a type of characters.

Parts of things, on the other hand, may be expressed either as subdivisions under the headings for the things themselves, e.g.,
Airplanes—Motors—Carburetors
Airplanes—Tires
Airplanes—Wings
or as direct entries, e.g.:
Elevators (Airplanes)
Flaps (Airplanes)
Tabs (Airplanes)

Frequently, the choice must be made among more than two forms. Haykin has given examples that show three forms of the same idea:
Stability of ships
Ships’ stability
Ships—Stability
Rotation of crops
Crop rotation
Crops—Rotation

In addition to the three forms, there is also the fourth possibility of an inverted phrase heading, Ships, Stability of and Crops, Rotation of. Examples of all of these forms can be found in LCSH:
Representation of groups
Factor tables
Multiplication—Tables
Squares, Tables of

In the majority of cases, though not always, see references are provided from the other forms.

Further, the choice of entry element in headings employing subdivision to represent an action relationship or geographical subdivision is often difficult because the meaning is clear in either form of expression, e.g.,
Surgery—Elbow
or
Elbow—Surgery

Birds—California
or
California—Birds

With regard to headings including geographical representation, Cutter has stated his preference and in this case is very careful not to violate the rule of specific entry:

Put Flagg’s “Birds and seasons of New England” under New England, and under Ornithology say See also New England. As New England ornithology and Ornithology of New England are merely different names of the same specific subject, it may be asked why we prefer the first. Because entry under Ornithology of New England, though by itself a specific entry, is, when taken in connection with the entries that would be grouped around it (Ornithology, Ornithology of America, Ornithology of Scotland, etc.), in effect, class-entry; whereas the similar grouping under New England does not make that a class, inasmuch as New England botany, New England history, New England ornithology are not parts of New England, but simply the individual New
England considered in various aspects. Of course, the dictionary catalog in choosing between a class and an individual prefers the latter.\textsuperscript{19}

Interestingly, in LCSH, the heading used is \textit{Ornithology—New England}.

The introduction to the Sears List of Subject Headings provides some guidance, explaining that in the fields of science, technology, and economics, subject headings are subdivided by place where applicable and that in the fields of history, geography, politics, and social sciences, names of places are subdivided by subject.\textsuperscript{20}

In this matter of the choice between the subject and the place as the main heading, the recent action of the Library of Congress in establishing patterns for “free-floating subject subdivisions” (“those form or topical subject subdivisions which LC subject catalogers are authorized to use at will for the first time under a particular subject or author heading without establishing the new usage editorially”)\textsuperscript{21} will contribute toward ensuring a greater degree of consistency than before. These patterns may be seen in the introduction to the eighth edition of LCSH.

\textit{Duplicate Entry}

Strict observance of the principle of uniform entry for headings with subdivisions is not always desirable. When two components of the heading are equally significant and a reasonable choice between the two cannot be made, each component is listed as an entry element in LCSH. Haykin\textsuperscript{22} discusses the practice of double entry, which is made for headings that express a mutual opposition of two interests or points of view, e.g.,

1. U.S.—Foreign relations—France
2. France—Foreign relations—U.S.
   1. Literature, Comparative—English and German
   2. Literature, Comparative—German and English
   1. English literature—Translations from Chinese
   2. Chinese literature—Translations into English

Another type of duplicate entry, Haykin explains, is used “when a heading for which local subdivision is not provided must be used for a topic which is treated definitely with reference to a place.” In this case, a duplicate entry is made under the next broader heading that admits of local subdivision, e.g.,

1. Gnatcatchers.
2. Birds—California

As a matter of fact, this practice does not violate the principle of uniform heading, since these are two different headings rather than two different forms of the same heading.

In recent years, there has been an increasing use of this type of duplicate entries on LC cataloging records and the Library recently an-
nounced the practice of assigning duplicate entries to the following categories of headings:

Bibliography—Bibliography—[topic]
  e.g., 1. Bibliography—Bibliography—Outdoor recreation
  2. Outdoor recreation—Bibliography
Bibliography—Best books—[topic]
  e.g., 1. Bibliography—Best books—Economics
  2. Economics—Bibliography

Special language imprints—[place]
  e.g., 1. English imprints—India
  2. India—Imprints
Reference books—[topic]
  e.g., 1. Reference books—Chemistry
  2. Chemistry—Bibliography

Introducing duplicate or multiple entries for the same subject will no doubt provide additional access points in the catalog. However, it also means multiplication of the number of entries or cards in a card catalog. One must also weigh the implications in terms of economy and congestion. This is perhaps the reason why duplicate or multiple entries for the same heading have been introduced into LCSH sparingly and in a piecemeal fashion.

Conclusion

The main purposes of the principle of uniform heading are the grouping together of materials on the same subject and the prevention of multiplication of subject entries in the catalog. The latter is desirable for two reason: economy and minimizing the bulk of the catalog. In a card catalog, for which LCSH was designed primarily, such advantages are important. On the other hand, the major disadvantage is in the limit of access points in the catalog. Particularly in phrase headings and headings with subdivisions, the entry element is of paramount importance, because the card catalog provides a manual linear system in which each entry provides only the one access point determined by the entry word. Additional access points are provided by means of see references. However, this places a great burden on the cross-reference structure. In a day of emphasis on fast cataloging and shared cataloging, one wonders how much time and effort are expended locally on maintaining the necessary cross-references. Duplicate entry is a partial solution but a very costly one.

In a computerized catalog, on the other hand, the problem must be viewed differently. The access point is not necessarily the entry or leading word of the bibliographic record. Furthermore, the mechanism of revising or changing headings is different in the two systems. Economic factors, the capacity of the catalog, and the user's approach should all be taken into consideration in determining the course of the development of the catalog and its structure. Now that the Library of Congress has announced its intention to "freeze" its
card catalog, the principles underlying LCSH should be given very serious examination and reconsideration. Among these is the principle of uniform heading.

References

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17. Ibid., p.36.
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The Adequacy of Library of Congress Subject Headings for Black Literature Resources

DORIS HARGRETT CLACK
Associate Professor
School of Library Science
Florida State University
Tallahassee, Florida

Subject analysis for black literature resources is a neglected area in research. This initial investigation of Library of Congress subject headings assigned to black literature resources is concerned with determining the adequacy of subject analysis of these materials in terms of specificity of headings. The extent to which these subject headings are coextensive with the subject treated in the works is a determining factor in the ease or difficulty experienced in subject catalog searches and is thus examined. The question of adequacy is explored. The study concludes with a description of prescriptive measures necessary for the resolution of the problem identified.

Subject analysis is basic to information retrieval in libraries. The tool most widely used for subject analysis in academic libraries is the Library of Congress list, Library of Congress Subject Headings. These subject headings are the most widely used of the controlled precoordinated vocabularies primarily because of their presence on bibliographic records disseminated through the varied Library of Congress cataloging services directly to individual libraries or indirectly to them through commercial processing services and networks. Quantitatively this widespread use is impressive, but qualitatively it should not be interpreted as reflecting general approval of the headings. Numerous inconsistencies, anomalies, and other inadequacies have been documented and widely publicized by a number of critics. Daily² identified problems in the structure of the subject headings; Lilley³ and Taube⁴ were concerned about specificity. Perreault⁵ and Sinkankas⁶ identified the syndetic structure as a serious problem. Berman⁷ has

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Volume 22, Number 2, Spring 1978 · 137 ·
identified terminology as another basic problem. Berman, Clack, and Cazort have called for reforms in the subject headings for black Americans, while Marshall has pointed out the need for changes in subject headings relating to women. Despite some major adjustments made by the Library of Congress in recent years, serious problems continue to exist and the list of critics and criticisms continues to grow. This trend may be expected to continue if the Library of Congress system is incapable of accommodating the increasing demands made upon it as library collections continue to grow and library users continue to become more diverse in their informational needs.

Angell agrees that improvement of the list of Library of Congress subject headings is needed and suggests that a review be based on the following topics: (1) terminology, (2) specificity, (3) qualifications, (4) subdivisions, (5) accommodations of complex subjects, (6) form and structure of headings, (7) reference provisions, (8) general complexity, (9) size, and (10) maintenance.

The purpose of this study is to determine to what degree Library of Congress subject headings are adequate for analyzing black literature resources, defined as those documents that deal with some aspect of the unique experiences of Afro-Americans evolving out of their historically unique status in American society. The hypothesis holds that subject analysis provided through Library of Congress subject headings varies in degree of adequacy.

As a theoretical concept in subject analysis, specificity is a difficult attribute to define in terms that would be completely acceptable to all theorists and practitioners. It is generally agreed that subject headings should be as specific as possible, in the sense that there should be an equivalence between the subject treated in a document and the word or phrase used in the heading to express that subject. Ideally, the two should be coextensive.

This definition is not far removed from that espoused by Cutter and Haykin in their concept of “specific entry.” Cutter defines specific entry as registering a book under a heading which expresses its special subject as distinguished from entering it in a class which includes that subject.

To him it meant above all not class entry, defined as “registering a book under the name of its class; in the subject-catalog used in contradistinction to specific entry.” In his further attempt to distinguish between “subject” and “class,” Cutter concedes that in a dictionary catalog—as opposed to a classed or logical catalog—the two may not always be uniformly distinguishable or mutually exclusive. A term naming a general class may, indeed, identify the general class under which a more specific subject is subsumed or it may identify the specific subject of a general treatise. The distinction between class versus specific entry is thus made clear only in application. Haykin defines specific entry as
the entry of a book under a heading which expresses its special subject or topic as distinguished from the class or broad subject which includes that special subject.\textsuperscript{16}

He also states that

The heading should be as specific as the topic it is intended to cover. As a corollary, the heading should not be broader than the topic. . . . If the subject catalog were to consist of a predetermined number of more or less broad headings, a work on a specific topic would have to be entered under the broader one. The broader heading would thus be used for works as comprehensive as the heading, as well as for works on all the topics comprehended by it. To find out whether the library possesses a book on a specific topic, the reader would, in the first place, need to know how broad a heading might be used for it, and, in the second place, would have to scan all the entries under the broader heading in order to select those which are of interest to him. Even then he would be able to identify only those of which the titles clearly indicate the subject.\textsuperscript{17}

To Cutter and Haykin the ideal requires that the subject heading be no broader than the subject matter of the books to which the heading is assigned.

Specificity for black literature resources requires that a heading assigned to a work reflect the fact that the work is related to the black experience and, if necessary, the subject or context of that relation. In this study, the term “race association” is used to refer to the identification of the black experience in the heading and two types of “indicators” are identified: type one, which indicates race through use of the word \textit{Afro-American(s)} or \textit{Black(s)}, and type two, in which the indicator includes a word that, when used in the context of American culture, implies black people or the black experience, e.g., \textit{Freedmen}, \textit{Mulattoes}, \textit{Gullah}, etc.

Adequacy in subject analysis provided through Library of Congress subject headings is herein determined by the degree to which headings are used that provide specificity, including a race association indicator. It is measured on a graduated scale ranging from one to six.

\textit{Methodology}

Adequacy in subject headings cannot be determined by the examination of a list in isolation since a single term may be either broad or specific depending on the subject of the work to which it is assigned. Because application is such a vital determining factor in the study of adequacy in subject headings, it was necessary to examine a unified collection of black literature resources to which Library of Congress subject headings had been assigned. The Schomburg Collection in the New York Public Library was chosen as a definitive collection that is accessible through a published catalog.\textsuperscript{18} A thorough examination of the basic catalog and its first supplement revealed 2,282 titles that met the following criteria: (1) monographic (music scores, phonodiscs, art objects, periodicals, and analytical entries were excluded), (2) con-

\textit{Volume 22, Number 2, Spring 1978}
cerned with the black experience in the United States, (3) represented by LC subject analysis, either in the Schomburg catalog or in the National Union Catalog. A copy of each of the 2,282 works was examined to determine the subject of the book in order to analyze the adequacy of the subject headings assigned.

The subject headings assigned by the Library of Congress were analyzed and classified into six levels of adequacy ranging from completely adequate to completely inadequate, according to predetermined criteria. The criteria for determining the various levels are as follows:

**Level One** is represented by a single subject heading that is coextensive with the major subject treated in the work, including a race association indicator represented by a type one indicator. Example:

Hughes, Langston.  
Famous Negro musicians. 1955.  
1. Afro-American musicians.

**Level Two** is represented by a single subject heading that is coextensive with the major subject treated in the work, including a race association indicator represented by a type two indicator. Example:

Dumond, Dwight Lowell.  

**Level Three** requires two or more complementary subject headings to display specificity, at least one of which includes a race association indicator. Example:

Calver, Ambrose.  
Vocational education and guidance of Negroes. 1938.  
1. Afro-Americans—Education.  
2. Vocational education—U.S.  
3. Vocational guidance.  

**Level Four** provides race association with a type one indicator but no specificity. Example:

Du Bois, William Edward Burghardt.  
The Negro American family. 1908.  
1. Afro-Americans.

**Level Five** provides race association with a type two indicator but no specificity. Example:

Weld, Theodore Dwight, 1803-1895.  
The Bible against slavery . . . . . . . 1970.  
Level Six is lacking in specificity. Example:

Archer, Elsie.
Let's face it, a guide to good grooming for Negro girls. c1959.
1. Beauty, Personal.

Findings

Table 1 presents figures on the distribution of titles by level of adequacy of indexing. It will be noted that of the 2,282 titles, 487 or 21 percent represented the first level of adequacy; 624 or 27 percent represented the second level; 628 or some 28 percent represented the third level; 323 or 14 percent represented the fourth level; 148 or 7 percent represented the fifth level; 72 or 3 percent represented the sixth level.

An analysis of the subject headings used reveals that a total of 1,426 different headings was assigned to the 2,282 titles. The heading Afro-Americans was used 385 times, more often than any other single heading. Other frequently used headings include United States—Race question (236), Afro-Americans—Biography (251), Slavery in the United States—Controversial literature (217), Afro-Americans—Education (108), Race problems (78), Afro-Americans—Moral and social conditions (77), and Slavery in the United States (73).

It will be noted that only 48 percent of the titles may be considered to have a high degree of adequacy in subject analysis, as measured by the criterion of specificity, including a race association indicator. It will also be noted that 28 percent of the titles are analyzed at the third level of adequacy, that is, the search terms assigned to the documents are adequate but not precoordinated so as to achieve specificity. The fact that at this level both subject and a race association indicator are available, though in separate headings, suggests adequate subject analysis; however, the lack of precoordination of these elements presents serious problems to the user. Each of the subject headings used

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of Titles</th>
<th>Percent of Total</th>
<th>Number of Entries</th>
<th>Percent of Total</th>
<th>Average Number of Entries per title</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>487</td>
<td>21</td>
<td>511</td>
<td>12</td>
<td>1.1</td>
</tr>
<tr>
<td>Two</td>
<td>624</td>
<td>27</td>
<td>1,084</td>
<td>25</td>
<td>1.7</td>
</tr>
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<td>628</td>
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<td>1,848</td>
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<td>1.6</td>
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<td>7</td>
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<td>72</td>
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<td>106</td>
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<td>100</td>
<td>4,268</td>
<td>100</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Volume 22, Number 2, Spring 1978 • 141 •
for a search will be incomplete—it will fail either to indicate the subject of the document or will fail to indicate its relation to black literature resources. The following entry illustrates the application and the resulting problem of analysis at level three.

Walton, Sidney F 1934-
72-86724

The subject heading Afro-Americans denotes race association but does not adequately identify the specific topic treated in the work. In a subject catalog, a searcher would have to inspect every entry in a potentially long file of entries on a wide variety of topics under this term to find works on black migration. If the searcher chose rather to look under the second subject heading, there would still be difficulties. The second subject heading Migration, Internal—United States is specific in terms only of topic—it does not include a race association indicator. Again a searcher must read the title of every entry in the sequence under this term to locate materials relating to Afro-Americans or the black experience. The precoordination of topic and a race association indicator would permit the collocation of all materials on the specific subject—black migration—in one place in the subject catalog to be selected or rejected. As a result the patron's search would be facilitated. No longer would specific subjects be scattered in more than one place in the catalog or buried under general headings such as Afro-Americans. No longer would time be wasted in inspecting entries in long files to locate specific subjects relating to Afro-Americans. The present structure of Library of Congress subject headings does not automatically provide for the precoordination of the two elements. The primary function of subject analysis is to facilitate retrieval of documents from a collection. Analysis at the third level of adequacy fails in this primary function because specific topics and race association indicators are not precoordinated in the same subject heading.

Also significant is the fact that entries analyzed at adequacy levels four, five, and six, representing 24 percent of all entries, are not specific, lacking either a race association indicator or indication of topic or both. If we add the 28 percent of entries analyzed at level three, more than half of the entries in the collection have been assigned subject headings that are not coextensive with the subject treated in the work and thus may be considered to be inadequately analyzed.

Summary and Conclusions

This study was designed to test the adequacy of Library of Congress subject headings for black literature resources. The findings support
the hypothesis that subject analysis provided through Library of Congress subject headings varies in degree of adequacy and lead to the following conclusions:

1. Because more than half (52 percent) of the titles have received inadequate analysis, prescriptive measures are necessary if black literature resources are to be analyzed adequately so that users may identify them readily.

2. The Library of Congress should create new subject headings as appropriate to provide specificity reflecting topic and race association rather than relying on complementary headings as in the following examples:

Hodgman, Eileen Callahan.
Nursing in a community action agency—an experience with ghetto teenagers. c1970.
1. Public health nursing—United States. 2. Social work with youth. 3. Afro-Americans.

Kronus, Sidney.
The Black middle class. 1971.
1. Afro-Americans. 2. Middle classes—United States.

3. More emphasis should be placed on research in the area of subject analysis for black literature resources to provide an adequate foundation for the improvement of present practices or to enable the design of a system that will more adequately meet the needs of users.

References

13. As of July 1976, with the advice of the ALA Black Caucus and the RTSD Subject Analysis Committee, the Library of Congress agreed to update all subject headings involving the word “Negro.” “Afro-Americans” is now used for all permanent residents of the United States of black African ancestry. The heading corresponds to the former heading “Negroes.” “Blacks” is now used for all persons of the black race outside the United States. “Black race” is used for theoretical works that discuss the race from an anthropological standpoint. The heading corresponds to the former heading “Negro race.” For this study all headings have been revised to reflect this policy.
15. Ibid., p.17.
17. Ibid., p.9–10.
      ———. First Supplement, 1967. 2v.
      ———. Second Supplement, 1972. 4v.
Punctuation in Library of Congress Subject Headings

HILDA STEINWEG
Retired
Madison, Wisconsin

An analysis of the punctuation of the subject headings presented in the eighth edition of Library of Congress Subject Headings reveals that the punctuation marks most often used are the comma, parentheses, and hyphen. Examples of their various uses are presented and discussed.

A careful study of the form of subject headings reveals a diversity of punctuation with resulting filing problems and probable information retrieval problems. This descriptive study of subject heading punctuation, with an occasional personal comment, is concerned mainly with topical subject headings. It is based, in the case of hyphens, on a complete "reading" of the eighth edition of Library of Congress Subject Headings (LCSH). That is, each heading was examined to determine the presence of a hyphen. In the case of parentheses and apostrophes, it is based on an examination of the headings on each page whose number ended with the digit 3, yielding approximately one-tenth of all headings. It is therefore referred to as the "10 percent sample." Comments on the other marks of punctuation are based on general observations and impressions derived from the examination of the list.

Comma

Inspection of LCSH indicates that the comma is probably the most frequently used punctuation mark in the subject heading list. The most frequent usage is in inverted headings, in which the first word is qualified by a word or phrase following the comma. An inverted heading may include one or more words before the comma and one or more words after the comma, resulting in many interesting variations.
When one word follows the comma, it is often a national, linguistic, or ethnic adjective. Sometimes it denotes a historical period. The qualifying portion of the heading following the comma may include a preposition. Examples of the various combinations follow:

Arches, Concrete
Catalogs, College
Hymns, English
Mythology, Roman
Civilization, Medieval
Astronomy, Prehistoric
Differential equations, Linear
Electric lamps, Portable
Panel painting, Dutch
Historical drama, English
Spanish wit and humor, Pictorial
Monasticism and religious orders for women, Anglican
Clothing, Cold weather
Indians, Treatment of
Light, Wave theory of
Grammar, Comparative and general
Electronic apparatus and appliances, Effect of radiation on
Motor bus drivers, Physically handicapped
Inversions may also occur in subdivisions:
—History, Local
—Maps, Outline and base
—Statistics, Vital
Occasionally the inversion consists of the single word “The” following the heading and a comma:
Comic, The
Exodus, The
Another common use of commas is to separate the parts of a series.
Series occur in various heading constructions:
Heading itself a series:
Pancakes, waffles, etc.
Speeches, addresses, etc.
Part of a prepositional phrase:
Oil pollution of rivers, harbors, etc.
Taxation of bonds, securities, etc.
Nouns modified by a single adjective in direct order:
Camp sites, facilities, etc.
Comic books, strips, etc.
Nouns or adjectives within parentheses:
Staffs (Sticks, canes, etc.)
Chants (Plain, Gregorian, etc.)
Prepositional phrase in parentheses:
Survival (after aeroplane accidents, shipwrecks, etc.)
Ravens (in religion, folk-lore, etc.)
Nouns in a subdivision:
—Addresses, essays, lectures
—Handbooks, manuals, etc.
Gloss in parentheses within a subdivision:
—Language (New words, slang, etc.)
A less frequent but helpful use of commas is to set off dates in headings:
Campaign songs, 1840
Saxon emigration, 1838–1839
Two uses of the comma may occur in the same heading, as when the qualifier in an inverted heading is a series:
History, Comic, satirical, etc.
Cities and towns, Ruined, extinct, etc.
The exact meaning of such headings may not be readily deciphered when there is no distinction in typography, as when subject headings are typed in capital letters. Another version of this problem occurs when the first part of an inverted heading has the appearance of a series:
Keys, etc., Mailing of
Sometimes the comma is used in headings for historical events both to indicate inversion and to set off dates:
Austrian Succession, War of, 1740–1748
Henry, Fort, Battle of, 1862
In the second example there are two inversions: Fort Henry is inverted, and this is followed by the further inversion Battle of.

Parentheses

Parentheses are used frequently in subject headings. Their principal uses are to establish context when the terminology in the heading may apply to more than one area of interest, to explain what the subject is, and to make the subject heading more specific. There are other less common uses of parentheses.
Some words in the English language, known as homonyms, have come to have several meanings or uses, a good example being “Stocks.” The term as used in the field of finance is listed without a gloss, and four other usages are indicated by qualifying terms:
Stocks (Cookery)
Stocks (Geology)
Stocks (Horticulture)
Stocks (Punishment)
Sometimes a specialized use may be covered by a reference to other terminology:
Scales (Botany)
Scales (Fishes)
Scales (Weighing instruments)
but Scales (Music) see Musical intervals and scales.

Volume 22, Number 2, Spring 1978 • 147 •
Sometimes a term is used only with the meaning of a specialized field:

- **Faults (Geology)**
- **Folds (Geology)**

Sometimes a distinction is made between single and plural forms, such as **Neck** for part of the anatomy but **Necks (Geology)** for a specialized meaning. In the case of **Horn**, the singular form is followed by **(Musical instrument)** while **Horns**, a distinctive feature of some animals, is not followed by a gloss. When the word is used to denote music, the terminology resolves any doubt as to the context:

- **Horn music**
- **Horns (2) with orchestra**

Many headings have a gloss to indicate the meaning of the term, especially when the term is not an established word in the English language:

- **P-40 (Fighter planes)**
- **MAP (Computer program language)**
- **EMIS (Information retrieval system)**
- **Cueca (Dance)**
- **Panguingue (Game)**
- **Oz (Artificial language)**

Terminology for the title of a parable or miracle is likewise followed by its appropriate gloss:

- **Pearl of great price (Parable)**
- **Healing of the ten lepers (Miracle)**

Often a word or words in parentheses is used to make a heading more specific:

- **Catalogs, Classified (Dewey decimal)**
- **Chants (Buddhist)**
- **English drama (Comedy)**
- **Manuscripts, Greek (Papyri)**
- **Mythology, Australian (Aboriginal)**

Subjects that are legal in orientation have the system of law added in parentheses:

- **Aliens (Greek law)**
- **Leases (Roman law)**

In **Cookery** headings, inverted headings are used to designate ethnic methods, and parentheses are used to designate cooking a particular food:

- **Cookery, Greek**
- **Cookery, Jewish**
- **Cookery (Asparagus)**
- **Cookery (Bacon)**

In a few headings the gloss consists of a prepositional phrase instead of a single word:

- **Air-sacs (of birds)**
- **Collar (in heraldry)**
Dedications (in books)

On the other hand, some headings have a single word gloss that implies a prepositional phrase and for which the phrase might be substituted:

Abnormalities (Animals)
Colorfastness (Textiles)

The heading Interviewing (Journalism) is used, but other headings use the prepositional phrase without parentheses:

Interviewing in corrections
Interviewing in ethnology

There are many headings with the parenthetical prepositional phrase (in religion, folk-lore, etc.) but the same heading may be followed by in art or in literature without parentheses:

Bread (in religion, folk-lore, etc.)
Bread in art
Bread in literature

When a word or number is the subject, it is followed by the appropriate explanation:

Church (The word)
Forty (The number)

In the 10 percent sample of headings examined for parentheses, there was only one in which parentheses were used to enclose dates:

Korean reunification question (1945–).

A variety of forms is used to distinguish the sense in which a heading is used. Seals (Animals) employs a noun to indicate that the heading refers to specific animals; Seals (Christmas, etc.) employs an adjective modifier that could be separated from the noun by a comma; Seals (Law) and Seals (Numismatics) indicate two other contexts of the word “seal.”

Hyphen

In the 2,026 pages of the eighth edition of LCSH, there are 2,917 authorized headings that include hyphens. This number does not include geographical subject headings and headings derived from them, such as events in history typified by names of wars and treaties, tribes of people, and repetitions of inverted headings unless the adjective is a hyphenated word. The number does include many repetitions of hyphenated words used in headings. For example, sixty-five headings begin with the word Moving-picture or Moving-pictures, while an additional thirty-seven headings include one of the words later in the heading, such as Dogs in moving-pictures, Journalism and moving-pictures, and Revere moving-picture camera. The term is also found in a few instances in the unhyphenated form, as in Children in motion pictures. No attempt was made to count see references from hyphenated words in the LC list, but observation suggests that there may be as many references as authorized headings.

The hyphenated word occurs often not as the first element in the
heading but as part of a phrase. In addition to the thirty-seven examples of moving-picture(s), the hyphenated word may represent an ethnic or cultural modifier separated from the heading by a comma, or a gloss in parentheses following the heading:

- Folk-songs, French-Canadian
- Gods, Assyro-Babylonian
- Interest and usury (Roman-Dutch law)
- Rolling (Metal-work)
- The hyphen is commonly used in headings in which a single letter or numeral is separated from a letter, numeral, word, or initialism:
  - 4-H clubs
  - L-form bacteria
  - A-5 rocket
- Another common use is to separate the names of two people whose names are associated with a product, concept, etc.:
  - Austin-Healey automobile
  - Clebsch-Gordan coefficients
  - Lee-Enfield rifle
  - Sacco-Vanzetti case
- Some hyphenated headings denote interaction:
  - Parent-teacher conferences
  - Father-son farm operating agreements
  - Man-machine systems
- Prefixes may constitute a source of hyphenated words:
  - Ex-clergy
  - Infra-red astronomy
  - Non-commissioned officers’ wives
  - Pre-trial procedure
  - Anti-freeze solutions
- Some hyphenated headings are phrases:
  - Do-it-yourself work
  - Know-it-all persons
  - No-par-value stocks
- Some hyphenated headings have come from other languages:
  - Jiu-jitsu
  - Fleur-de-lis
- The field of life sciences accounts for many hyphenated headings:
  - Golden-fronted woodpecker
  - Humming-birds
  - Peach-tree bark-beetle
  - Poison-ivy
- Substances resulting from the combining of two or more elements may be named by a hyphenated phrase. There are numerous examples of this usage in alloy headings:
  - Gold-copper alloys
  - Chromium-cobalt-nickel-molybdenum alloys
- The combination of two phrases in hyphenated form may result in

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Library Resources & Technical Services
a heading whose meaning is not readily apparent, as in **High interest-low vocabulary books**.

In the heading **Left- and right-handedness**, the modified noun is understood in the first part of the heading.

The great bulk of hyphenated words in *LCSH* are compound words, requiring a decision concerning the form: separate words, a hyphenated word, or a single word. It is sometimes difficult to discern a consistent pattern—for example, **Cod-fisheries** and **Salmon-fisheries** (hyphenated) but **Hake fisheries** and **Mullet fisheries** (not hyphenated). Some kinds of oil are hyphenated, such as **Olive-oil** and **Palm-oil**, but others are not: **Peanut oil** and **Pine oil**.

A check against common usage reveals some variations: **Egg-plant** (*LCSH*) and “Eggplant” in two seed catalogs; **Corn-starch** and **Baking-powder** (*LCSH*), “corn starch” and “baking powder” on the cartons, “cornstarch” and “baking powder” in three cookbooks. (Incidentally, two cookbooks used the one word “cookbook,” while two others divided the term into two words, “cook book”; LC makes references from **Cook-books** and **Cookbooks to Cookery**; *Webster’s New Collegiate Dictionary* (1976 edition) prescribes “cookbook.”) Library of Congress uses **Meadow-larks** as a hyphenated word; seven books on birds use the one-word form “meadowlark.”

Manuals of style devote quite a bit of space to guidance in compound words. That of the Government Printing Office² devotes chapter 6 to 52 rules for compound words, followed by a “Guide to compounding” in chapter 7, which includes approximately 250 examples, including “eggplant,” “cornstarch,” and “meadowlark” but no form of “baking powder.” The rules call attention to the fluidity of the English language by which the accepted usage for a particular word may change.

The University of Chicago manual devotes three pages to ten rules for compound words, of which the last is, “There are literally scores, if not hundreds, of other rules for the spelling of compound words. Many of them are nearly useless because of the great number of exceptions.”³ The rules are accompanied by a four-page spelling guide for compound words.

**Period**

For the most part, periods are used in subject headings in the same way as they are used in ordinary text and do not constitute or cause any particular problems. The period is used after abbreviations for names of states and countries after the name of a city or other geographical unit. The only other abbreviation noted was “instr.” typified by **Bassoon with instr. ensemble**. However, the abbreviation is used only occasionally; more often the word is spelled out.

**Apostrophe**

The only other punctuation mark used often is the apostrophe, primarily to indicate genitive case. While some apostrophes denote
ownership, others indicate a for or of relationship, and some proper names with apostrophes indicate usage derived from association.

Addison's disease
Henslow's sparrow
Foucault's pendulum
Taylor's comet
Children's songs
Horsebreeder's societies
Marriage of the king's son (Parable)

In the 10 percent sample, the only other use of an apostrophe was one example of an apostrophe to indicate an elision: D'Alembertian operator.

Dash

The most frequent use of the dash is to set off subdivisions:
Architectural Designs and plans
Birds, Protection of—Laws and legislation
A single heading may include a succession of subdivisions: World War, 1939-1945—Campaigns—Normandy—Juvenile literature.

Other Marks of Punctuation

No use of quotation marks, the interrogation point, the colon, or the semicolon was seen in LCSH. At one time a colon was used in the parenthetical gloss used for books of literary excerpts, as in American poetry (Selections: extracts, etc.), but there is neither a listing nor mention of this usage in the current LCSH.

Headings for music merit consideration as a special case because they are formulated in great detail to reflect the medium, including the number of instruments and the musical form, in great detail. For example, there are twelve pages, three columns to a page, of concerto headings. Following the word Concertos is a statement in parentheses indicating the instrument or instruments for which the music was composed. When there are several instruments named, they are separated by commas, as in a series, and such designations as 1 hand are set off by a comma. When the music is written for more than one of a particular instrument, the number is indicated in parentheses, making a parenthetical statement within a parenthetical statement. The parentheses may be followed by a comma and Arranged in an inversion. In other headings such as Choruses, the heading may be modified and inverted with a comma, which is followed by the kind of voices and the number of parts in parentheses, which is followed by the statement of the accompaniment or by a comma and the word Unaccompanied.

Choruses, Sacred (Mixed voices, 9 pts.), Unaccompanied
Choruses, Secular (Men's voices, 8 pts.) with instr. ensemble
Concertos (Bassoon, flute, horn, oboe with string orchestra)
Concertos (Flutes (2), glockenspiel with string orchestra)

• 152 •

Library Resources & Technical Services
Concertos (Piano, 1 hand)
Concertos (Pianos (2)), Arranged

Other music headings such as Quartets, Songs, and Suites have their own appropriate specifications.

Conclusion

What difference does it make how subject headings are punctuated? The paramount consideration should be the ease with which a user can consult the catalog. The patron using either a separate subject catalog or a dictionary catalog is looking for headings in a conventional alphabetical order, which makes no provision for reading headings in context. Frequently the user seeks references quickly and lacks the patience necessary to decipher the structure and meanings of headings. To this end the usage of the catalog should conform to the usage in the literature of a particular subject. In the case of compound words, this is not always easy to determine, and it may change from time to time. Awkward inverted headings should be avoided, especially those in which the modifier is a series separated by commas. Appropriate cross-references should be supplied for such heading form problems as inverted headings and compound words. There should be some thought given to consistency, there being no good reason why the phrase “in religion, folk-lore, etc.” should be in parentheses while “in literature” is not. In the LC subject heading list, headings with these phrases do not file consecutively. However, this difficulty is overcome by disregarding punctuation in filing.

References

A Rationale for the Use of Split Files for Subject Headings

PAMELA WALKER
Houston, Texas

Based on the assertion that the point of view of subject headings should be descriptive rather than prescriptive, a logical rationale for split files for subject headings is presented. It is asserted that the use of split files will help to resolve some of the controversies relating to headings for races and other groups of persons.

THE SUBJECT CATALOGING DIVISION of the Library of Congress (LC) has recently announced that it will use split files (defined by the division as files resulting from a policy of “maintaining cards under both the old and new headings”) in subject cataloging on practical criteria, based on factors of “time, staff, and maneuverability and space for relocating large groups of cards in two 20-million-card catalogs.”¹ That these criteria should weigh heavily in the division’s decision to use split files is understandable since they are concerns likely to be present in any library, although generally in lesser magnitude. An even stronger case for such a policy can be derived by consulting the value for scholars of retaining old subject headings for old entries rather than routinely relocating them under new headings. The basis for such a theoretical approach to the split file decision was set forth by John B. White in 1972.² He argued that retaining old subject headings and linking them to the new ones with brief explanatory references not only provides catalogers with a practical solution to keeping subject terminology current but also provides an invaluable historical dimension to the catalog. Although White does not discuss the retention of older headings explicitly in relation to scholarly historical value, these concerns are implicit in his observations on how headings reflect the prevailing attitudes of the time in which they are coined.

White asserts that “books pertaining to a subject which has

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Library Resources & Technical Services
parameters in time ought to have headings consistent with the climate of knowledge of that time”3 [i.e., the time at which the book was written]. On the assumption that the user of the catalog will use or should learn the current terminology relating to a subject, the cataloger has traditionally sought to reflect the current terminology in the subject headings, albeit with some reluctance to change headings quickly to reflect changes in the terminology used in the literature.

As attitudes change, they are reflected in changes in language. Or, to use White’s term, during different “climates of knowledge,” different biases prevail. Accordingly, subject headings reveal these biases and, if well applied, provide a more or less accurate index to a given work at the time of analysis. As White observes, “headings must fit the material being cataloged. . . . What many now see as bias was to them [earlier catalogers] a description of society as they perceived it.”4 One need neither praise nor deplore such biases but merely identify and describe them in order to make use of them in providing subject access. For example, it was not until 1974 that the American Psychiatric Association removed homosexuality from its list of mental illnesses. The change may also be seen in LCSH. In the seventh edition (effective date 1964), the user of the heading Sexual perversion is led by a see also reference to Homosexuality and Lesbianism; in the eighth edition (effective date 1973), the user of Sexual perversion is directed by a see reference to Sexual deviation, from which there is no further reference. In this situation the historical perspective has been lost, failing a detailed explanation of the history of the references of a sort not usually found in the catalog.

The same problem exists with certain other subject headings including those relating to women. As women’s roles change and as social attitudes toward women change, catalog terms should reflect those changes. Consider the subject treatment given by LC to two books: Virginia Woolf’s A Room of One’s Own and Elizabeth Hardwick’s Seduction and Betrayal. Woolf’s book discusses the problems faced by women in seeking independence and relates economic independence to intellectual and artistic independence. When it was first cataloged in 1929, one of the five subject headings assigned was Women as authors. For Hardwick’s book, quite similar in subject matter, cataloged in 1974, LC uses the heading Women authors. It is easy today to see the prejudice reflected in Women as authors, assuming as it does that women are not ordinarily authors and that their usual roles preclude such activities, and we may forget that Women as authors reflects the majority thinking of at least the first thirty-five to forty of the forty-five years separating the two works and thus more directly reflects the problems addressed by Woolf. Taken together, the two headings tell us something about the prevailing attitudes of society toward women authors at points in time separated by something like one-half a century.

It is usually difficult to establish a point in time at which a consen-
sus shifts, and there is usually a time lag between changes in general usage and corresponding changes in index terminology. But the specific dates of subject heading changes are known, and note cards in the catalog can indicate dates of change. The time at which a subject term changed also may be of historical interest, to scholars in sociology or history and to curious general readers as well. Further, students of library history may find the dates of change relevant in attitude studies of the library profession, because, whatever the general usage, it is the catalog librarians who construct subject headings. A study of the procedures involved in these changes may well indicate a certain degree of professional consensus and may be useful in studies comparing attitudes of LC librarians with those of other groups on specific topics or in studies tracing the library profession's treatment of a certain topic.

The use of split files, then, provides students and scholars with a historical and scholarly tool and at the same time enables catalogers to save time and money by not reassigning every work to a new heading when a change occurs. Further, as White states in his conclusion, the use of split files should encourage catalogers to change headings more frequently, thus reflecting more accurately the contents of current works. The burden of existing files should no longer be cited as an obstacle in changing terms. It may indeed be argued that the use of different terms for a given subject provides a greater number of "search keys" for that subject.

If White's principle were borne in mind by catalogers, it might also serve as an appropriate response to the constant controversy over subject headings relating to races and other groups of people. More than any other kind of heading, these are the objects of attempts by groups of different ideological persuasions to revise subject headings according to their particular points of view, whether or not the headings reflect the larger sphere of current opinion or accurately convey the contents of the work in the broader social context. The major example of such an attempt is Sanford Berman's Prejudices and Antipathies, which asserts that the catalog should be purged of subject headings based on terms that are now seen to be prejudicial to the groups in question. Berman's work may be seen as an attempt to change earlier value judgments to current ones or to prescribe one set of contemporary values in favor of some other. It may be compared with the views of those who, asserting a prescriptive function for dictionaries, object to the inclusion of commonly used words judged by them to be obscene. Those others who view the function of dictionaries as descriptive and as reflecting common usage will of course find the inclusion of these words quite appropriate. Subject headings should be interpreted as descriptive of the contents of a work, reflecting the language of the work, rather than be construed as prescriptive, dictating a given social attitude or viewpoint.

In White's view, subject headings should describe the contents of a
work in language consistent with that content. An example of a failure to do so may be seen in LC's treatment of gays and the gay movement. The Library has recognized the widespread use of the term "gay" by adopting the headings Gay bars and Gay liberation movement but continues to refer most works on gays to either Homosexuality (see reference from Gays, Male) or Lesbianism (see reference from Gays, Female). Thus, of necessity, Jonathan Katz's Gay American History is entered under Homosexuality and Lesbianism (each subdivided "U.S.—History") rather than under a more accurate and contemporary heading such as "Gays."

A descriptive approach, then, more nearly enables us to convey accurately the contents of a work than does a prescriptive approach, which in effect trades one set of viewpoints, if not "prejudices and antipathies," for another. To approach subject cataloging in the latter manner would be to revise the subject catalog continuously according to ideological fashion or whim, with a resulting loss of the current and historical value of describing the works with headings consistent with the thinking of the time.

References

The revised instructions of the Library of Congress on indirect subdivision of topical headings are analyzed from the points of view of the feasibility of the instructions, their cost-effectiveness, and their usefulness for users interested in historical and/or geographical aspects of a topic. It is asserted that the new practices will lead to subject headings that are incongruous and unpredictable for users not familiar with the decisions made by LC catalogers. It is proposed instead to use direct subdivision of topical headings for all countries or regions in keeping with previous LC practice for cities, counties, and regions in the United States.

Early in 1976, the Processing Department of the Library of Congress announced the following policy for "Indirect Subdivision Involving Several Sovereignties":

... when interposing the country between a subject heading and a subordinate geographic unit which in the past existed under several sovereignties, assign the country in which the subordinate geographic unit is currently situated, regardless of the political situation existing during the period covered by the work in hand. For example, a work describing educational conditions in Leipzig in 1900 would receive the following heading:

Education—Germany, East—Leipzig.

* A free translation of the first words of the Polish national anthem, Jeszcze Polska nie zginęła. It was written by Józef Wybicki in 1797, after Poland had ceased to exist as an independent state, having been divided in 1795 between Austria, Prussia, and Russia.

Note: For technical reasons, the slashed “L” used in Polish orthography could not be set, and a regular letter L has been substituted.

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- 158 -

Library Resources & Technical Services
Another illustration, a work describing education conditions in Breslau, Germany, in 1900 would receive the following heading:

Education—Poland—Wroclaw.¹

One year later, this decision was further amplified by instructions and examples given under the heading “Indirect Subdivision Practice”:

1) When a heading is coded (Indirect), subdivide locally by interposing the name of the country between the topical heading and the name of any entity falling wholly within that country’s territorial limits, including subordinate political jurisdictions (e.g., provinces, counties, cities), historic kingdoms, geographic features and regions, and islands.

2) When subdividing locally, always use the latest name of any entity whose name has changed during the course of its existence, regardless of the form of the name used in the work cataloged, e.g.:

Title: The Banks of Leopoldville, Belgian Congo. 1950.
1. Banks and Banking—Zaire—Kinshasa.

3) Subdivide locally only in accordance with the present territorial sovereignties of existing nations, regardless of the past territorial divisions described in the work cataloged. For a region or jurisdiction which existed in the past under various sovereignties, always interpose the name of the country now in possession, as long as the region or jurisdiction is located wholly within that country, e.g.:

Title: The Present Status of Education in Alsace. 1910.
1. Education—France—Alsace.

4) Exceptions.

(b) Assign directly the name of any jurisdiction or region which does not lie wholly within a single existing country . . . [such as] historic kingdoms, empires, etc. . . .

(c) Assign directly names of islands or groups of islands which are situated some distance from land masses. . . . Assign indirectly islands which lie close to a large land mass (usually within the territorial limits of a country) and are politically a subdivision of the country, e.g., Agriculture—Italy—Sicily. Assign indirectly an individual island within an island group situated some distance from a land mass, even if the group is not an independent nation, e.g., Water Supply—Canary Islands—Teneriffe.²

These new instructions for subdivision of subjects by geographical units, which will affect large numbers of entries, raise some questions of interest not only to the cataloger but also to patrons of libraries who happen to be historians, sociologists, geographers, or even “general readers”:

1. What does “the country now in possession” and “the present territorial sovereignty” mean?

2. If another country comes into possession of a city or region at a later time (say, a year from “now,” or ten years from “now,” or in the year 2000) will all entries containing the name of the city or region as a subheading have to be changed by interposing the name of the country that is “then” in possession?

3. If so, how is this to be done?

Volume 22, Number 2, Spring 1978 · 159 ·
4. Are the new instructions more cost-effective for libraries?
5. Will the new instructions be useful in reference work or for a person interested in a topic treated from the point of view of a particular time and a particular place?
6. Is it the business of catalogers to "invent" countries and places for periods in which they did not exist?
7. What is "some distance" from a land mass, and what is "close" to it?

These questions are of more than academic or purely professional interest because through the medium of MARC tapes and centralized cataloging systems (both in the form of conventional cards and even more through automated networks such as OCLC) the decisions made by the Library of Congress affect thousands of libraries in North America and, through international exchange of bibliographic data, a large number of libraries in other countries that use Library of Congress subject headings.

First, an analysis of the questions from the point of view of the cataloger as well as from the point of view of the users of subject catalogs, based on LC's published instructions and supplemented by an official response by the Library to an inquiry on the issues involved. Except as indicated otherwise, the following analysis presents my interpretations and views. As to question 1, the terms "now" and "present" are quite vague. "Now" may mean 1976 or 1977 (the years in which the instructions were published), or it may mean "from now and until some (major?) change occurs." This seems to imply that the present map of the world will remain stable for the foreseeable future, an assumption by no means warranted either by past history or present political realities. The relative stability of political boundaries enjoyed by the peoples of the North American continent is now challenged by the threat of the secession of Quebec from Canada; the boundaries of states in the Middle East are apt to change in the next few years; developments in South Africa may result in the creation of new countries; even in Europe, changes in the political frontiers are possible, quite apart from the phenomenon of divided cities, representing a political "solution" to territorial problems invented in our own times and now proliferating in various parts of the world. In short, the belief that the present political map of the world will remain static is unrealistic. Yet, some such belief must have been at the root of the new instructions, because the Library of Congress is not known for its rapid response to political change expressed in new names for old countries, as witness the heading "Russia" for what has "now" been the Union of Soviet Socialist Republics for some sixty years, and would not find it any easier to make changes in headings for other territorial entities once their former names have become established in the catalog, even if the country in question is "now" no longer "in possession" of a city or region.

The fact that a heading is normally not changed once a considera-
ble number of entries has been made under it answers question 2, at least as long as a card catalog is maintained. (The recently announced closing of the card catalog at the Library of Congress as of 1 January 1980 will not eliminate the more than three dozen million cards that will have accumulated by that time, nor will all other libraries that rely on the Library of Congress for their cataloging automatically also close their catalogs. Even assuming that, once a city or region has come under the sovereignty of another country, the Library of Congress would immediately change all headings to the status prevailing “now,” we come to question 3, “How is this to be done?”

The topical subject headings assigned to a work are entered in field 650 of the MARC format, with a subfield code designed to retrieve the name of a geographical unit by which the topical subject is subdivided. But this method can retrieve only those subject headings assigned to English-language works after 1969 and to foreign-language works after 1973 or later, depending on the language; moreover, it is useful only for those libraries that have their own MARC data base. For all works cataloged before 1969 or otherwise not covered by MARC, the alternative is a manual search of the catalog to find all subject headings that are subdivided geographically—a task that the Library of Congress would find to be Herculean. Other libraries, which receive MARC products (mainly cards) but do not have the data base itself, will probably not be able to extract from their catalogs all entries that have to be changed because “now” another country “possesses” a city formerly known by another name. Imagine the plight of a library with a large collection of books on south Africa if sometime in the near future Rhodesia becomes Zimbabwe with a concomitant renaming of its capital. All entries from Abbeys to Zoological Gardens subdivided by—Rhodesia—Salisbury must be found by diligent search (manually or by machine) and duly changed. Additional library assistants and typists must be hired and filers work overtime to refile the new or overtyped cards, while the patrons are confused for several months while the great changeover is made because many references to Salisbury cannot be found, but eventually everything is in place according to “the country now in possession.” Then, after a few years, Zimbabwe decides to form a union with Botswana, to be named Zimbwana—and the merry chase begins again, keeping catalogers, filers, and typists around the country busy finding the same entries and all the new ones under the new names.

This not-quite-imaginary scenario (remember Tanganyika and Zanzibar, now Tanzania?) virtually answers question 4 on cost-effectiveness. It may well be that one of the motives for the new LC policy was to save money by eliminating lengthy searching for historical facts, thus resulting in faster and cheaper cataloging. But the possible gain at the present time, when simple look-up in an up-to-date gazetteer will show the cataloger unencumbered by intricate knowledge of the checkered history of a city or region under which sover-
eighty to put the place will surely turn into a tremendous loss of time and money when entries will have to be changed in the future to keep up with the instruction to have them recorded under the country "now in possession."

But perhaps these organizational and administrative problems can somehow be overcome, and perhaps libraries are willing to pay the price to keep up with the changing political conditions in the world. Even so, there remains the question: is a person following a geographic approach to a topic served correctly and adequately by subject headings constructed according to the new instructions? Let us focus first on the examples given by the Library of Congress. The instructions tell us to assign the heading Banks and Banking—Zaire—Kinshasa to a work on banking in Leopoldville, Belgian Congo, published in 1950. A scholar interested in the financial institutions of the Belgian Congo may or may not necessarily be interested in what happens now in one of its successor states, Zaire, but the fact remains that the status, the scope of activity, the influence on the economic life of the country, even the names of the banks in Belgian Congo and in Zaire are quite different. Most important of all: Kinshasa in Zaire is not what the author of the book dealt with, because it did not exist when he wrote the book. By the same token, a work on the school system in Breslau in 1900 is by no stretch of the imagination a work about education in Poland, for the simple reason that Poland did not exist in 1900, and the city of Breslau, which had not been under Polish rule since the fourteenth century, was in 1900 a part of Germany, becoming the Polish Wroclaw only after World War II, in 1945. A historian of German education at the turn of the century would certainly miss the book on Breslau, because it would not occur to him to look under the heading Education—Poland, knowing that there was no country named Poland at the time in question, nor would he be likely to look for additional material under Education—France—Alsace, because he would know that the province in question belonged at that time to Germany and not to France. Conversely, the investigator of the subject of education in Poland is also badly served: if, during his search under the heading Education—Poland he encounters the further subheading Wroclaw and finds there a book on education in Breslau in 1900, he will be puzzled or annoyed, but he will certainly not wish to use the book, since it is clearly on education in Germany and has nothing whatsoever to do with Polish education.

On this issue the Library’s answer was that “it is more in line with LC subject heading philosophy to keep material on the specific (in this case, the city) together rather than scatter material on the specific to collect at a more generic level.” This argument misses the point entirely. Unless all material on Wroclaw is given a heading beginning with the name of that city, e.g., Wroclaw (Poland)—Education, works “on the specific” cannot be kept together anyway. What is being kept together in this instance is the topic Education—Poland, and to pre-
tend that a book on the German school system of Breslau in 1900 is a book on Polish education is simply untenable. One might as well say that a book on mammoths should have the subject heading Elephants because these animals are “now” the representatives of that extinct species.

The new instructions provide varying treatments for “historic kingdoms,” one method being prescribed for those “falling wholly within that [existing] country’s territorial limits” (paragraph 1) and another for those that “do not lie wholly within a single existing country” (paragraph 4b). This artificial dichotomy is also untenable on historical grounds and will lead to incongruous results if followed to the letter. Consider the Kingdom of Navarre, which was entirely within what is now northern Spain in the twelfth century but comprised a part of southern France in the mid-fourteenth century. Is a work on agriculture in fourteenth-century Navarre to be entered as Agriculture—Spain—Navarre (Kingdom) or as Agriculture—Navarre (Kingdom)?

East Prussia, with its capital at Königsberg, covered before 1918 a territory at present divided between Poland and the Soviet Union, is now to be designated as the “Russian Republic,” replacing the earlier “Russia (1917—R.S.F.S.R.).” Is a work on education in East Prussia in 1910 to be entered as Education—East Prussia or Education—Russian Republic—Kaliningrad Oblast (perhaps on the theory that a territory is to be placed where its capital city happens to be “now,” that is to say, pars pro toto), or perhaps Education—Kaliningrad Oblast (according to the provision that direct subdivision is used for units not falling within a single existing country)?

It is clear that these mutually contradictory provisions for subdivision of a topic by territorial entities will lead to arbitrary decisions, based on what a cataloger considers to be “wholly” or “partially” within or without the boundaries of an existing country, not to mention the fact that contemporary boundaries can and do change, as discussed above. The result will be, all too frequently, completely misleading subject headings of no use to anyone except perhaps the cataloger who created them so as to satisfy a certain “philosophy” of subject cataloging.

This brings us to the question that gave rise to the idea for the title of this article. While the valiant struggle of the Polish people for more than 120 years to reestablish their sovereign country has the admiration of most people, including catalogers, it ought not to be the business of subject indexers to retroactively invent a Polish state for a period during which it did not exist, or to make people think that Alsace belonged to France during a time when it was actually part of the German state.

The new instructions regarding local subdivisions of topics, when those subdivisions were under different sovereignties during their history, have the effect of completely falsifying the representation of the subject matter of a book, thus negating the most fundamental rule of
subject cataloging, so succinctly formulated by Cutter: “To enable a person to find a book of which . . . the subject is known” and “to show what the library has on a given subject.”

The Library of Congress seeks to justify the new practices as being dictated by the limitations of the card catalog:

This is just one more example of the failure of a system to give direct access to all users without (1) duplicate entries in a card catalog with excessive catalog size or (2) machine access where entry storage remains less of a problem.\(^7\)

The problem is, however, not at all one of making “duplicate” entries (presumably meaning multiple entries providing different access points to a work on a complex subject). First of all, it is arguable that even in a card catalog of very large size two access points (i.e., Subject—Geographical subdivision and its inversion) are not excessive if users are to be adequately served. Second, and more important, the new single entries providing direct subject access are often misleading, as demonstrated above. It is true that “machine access” would allow for more entry points, but as long as the entry points are couched in misleading terminology the confusion will only be compounded electronically and at great speed. “Cataloging data that doesn’t communicate with the public now will not, merely through a change of medium, communicate any better in the future.”\(^8\)

When Is an Island Not an Island?

The last part of the new instructions (paragraph 4c) deals with islands, which evidently are not easily amenable to the techniques of indirect subdivision. However, with the help of vague definitions and some juggling of the concept of political affiliation, islands seem to fall into six categories, graphically displayed in figure 1. (Some of the decisions in this matrix are inferred from the text of the instructions and are not explicitly stated.)

<table>
<thead>
<tr>
<th>Not an autonomous unit</th>
<th>Autonomous political unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some distance from a land mass</td>
<td>Close to a large land mass</td>
</tr>
<tr>
<td>Indirect</td>
<td>Direct</td>
</tr>
</tbody>
</table>

Figure 1

Categories of Islands

The authors of the rules have not defined “some distance” and “close to a large land mass.” (The latter term is itself a vague concept: is not Greenland, an island, also a “large land mass”?) Let us look at some actual cases. The islands of Samos, Kos, and Rhodos belong politically to Greece but are very close to the land mass of Turkey, while being between 200 and 400 miles distant from the mainland; is
that "some" or a "close" distance? Sicily, we are told, is "close"; but Sardinia (also belonging to Italy) may not be—and then, again, it may, depending on whether a distance of 150 miles from the Italian peninsula is considered "close" or "some distance." And so it goes. Now, catalogers in the Library of Congress can, of course, arbitrarily decide what is to be an island in its own right, entered directly, and what is to be subordinated to another geographical entity. But the more important question is: how can users (other than specially trained reference librarians) know what decision has been made? Does not use of Agriculture—Italy—Sicily lead one to expect Agriculture—Italy—Sardinia? Assuming there is no such heading, will the user know or be able to guess that the heading is Agriculture—Sardinia (because the distance from the mainland has been arbitrarily designated as "some")? In short, what purpose is served by making such arbitrary decisions on the basis of concepts unknown to the science of geography, to scholars in other disciplines, or to the proverbial "man in the street"?

The Solution: Direct Subdivision

Problems arise in the case of political or geographic entities smaller than a whole country or state as subheadings under a topical heading only when the principle of indirect subdivision is invoked. For those provinces, regions, islands, cities, and towns entered directly after a topical heading, no intricate instructions about their political dependency, sovereignty, or historical location are needed. At most, a see also reference must be made when the name of a country or a city has changed, as in the case of Belgian Congo/Zaire, Breslau/Wroclaw, or Leopoldville/Kinshasa. In addition, when the same name is common to two or more cities or regions, the name of the country must be added in parentheses so as to avoid ambiguities, e.g., Water Supply—London (England) and Water Supply—London (Ontario), or Agriculture—Galicia (Poland) and Agriculture—Galicia (Spain).

This practice is neither new nor unproven. It has been used by LC for decades when American cities, counties, and regions (as well as those of certain other countries) were involved. Advocates of indirect subdivision may argue that a book on banking in Kinshasa is also a book on banking in Zaire; very true, but so is a book on banking in Cleveland also a book on banking in Ohio, and yet the heading in this case has always been Banks and Banking—Cleveland, leaving it to the inquirer on matters pertaining to banking in Ohio to find relevant material under individual cities, counties, etc. If this is good practice for Ohio, why is it not also acceptable for Zaire?

A generalized practice of direct subdivision with no exceptions for certain countries or states, past or present, would greatly facilitate the work of subject catalogers, thus actually saving money. It would also be helpful to users of library catalogs, because only one rule has to be learned: look for your subject, then for the geographic unit in which

*Volume 22, Number 2, Spring 1978* • 165 •
you are interested. The fear that this would lead to a proliferation of catalog entries is unfounded. In most cases, no more than one subject heading would have to be made, e.g., Water Supply—Teneriffe (although it might be useful, of course, if entries Teneriffe (Canary Islands)—Water Supply and Water Supply—Canary Islands could also be made; but these are optional). When a work deals comprehensively with the history of a topic concerning a city or region that existed under several sovereignties with resulting name changes, a few more entries might have to be made, but this would be the exception rather than the rule.

The important task of keeping material on one territorial entity together while still having the topical subject as “lead” term can be taken care of by general cross-references of the type Education—Poland, see also Education—[Cities and provinces of Poland].

It would of course also be desirable to provide access to a work on a topic with geographical subdivision under the name of the geographical entity, e.g., Wrocław—Education or Poland—Education. Such “reversed subject headings” have recently been introduced by LC for maps, even though they are for some reason “not considered official LC subject headings” (but are included in the MARC records and are traced on cards). In principle, such “reversed” geographical headings could also be assigned to subjects that are dealt with in documents other than maps. Their use in catalogs would be optional, but their inclusion in the MARC record would make them retrievable if and when needed.

The decision to apply indirect subdivision as a general policy, first announced as a “trend,” was made effective November 1976, although there will be a number of rather intricate exceptions, and present instructions in LCSH to divide directly will not be changed (thus, in effect, telling catalogers and users “do as we do not as we say”). This decision, and particularly the one dealing with territorial entities that changed sovereignty and/or name would seem to be based on a rather nebulous “philosophy” that unfortunately has not been expounded publicly, either in the introduction to LCSH or in any other official publication by LC.

The lack of any consistent policy in assigning LC subject headings that are subdivided geographically (or, conversely, geographical headings subdivided by subject) was demonstrated and criticized as long ago as 1962 by B. Brinkler. The Library of Congress spokesman acknowledged at that time the validity of the criticism but said, in effect, that nothing very much could be done about it. There is indeed now, sixteen years later, no discernible consistency in the assignment of subject headings involving geographical units, and if the new instructions will be applied, they will only add to the existing confusion, sometimes generating entirely misleading subject headings, as our examples have shown. The whole issue ought therefore to be reconsidered before too many such headings are created and perpetuated through their inclu-
sion in MARC, to be disseminated by OCLC and other public or private enterprises based on MARC data. "The present flaws of LC cataloging may end up magnified and multiplied in the networking process."\(^{13}\)

Now that any decision made by LC automatically affects a large number of individual libraries, it must be duly considered that neither catalogers and reference people in those libraries nor users of their subject catalogs are privy to the special kind of inside information and in-house directives available to their counterparts on Capitol Hill, where "users" include also the Library's own reference librarians and the staff of the Congressional Research Service, in addition to the general public consulting the subject headings in the reading room.

It is hoped that this paper will contribute to a better understanding of the problems involved in geographical subdivision of a topic—an issue, incidentally, that is not limited to LCSH but may arise also in other subject indexing systems.

References

The publications of conferences may be handled either as serials or monographs. There are at present no definitive guidelines for their treatment. After considering the problem, the author favors treatment as monographs.

Reports, proceedings, and other publications emanating from congresses and conferences present the cataloger with a special problem: under what conditions should they be considered serials? The variation in practice presently found in the United States may perhaps be ascribed to a lack of guidance from the Anglo-American Cataloging Rules (AACR). In this matter contradictory practices seem to be prescribed in ISBD(M): International Standard Bibliographic Description for Monographic Publications and ISBD(S): International Standard Bibliographic Description for Serials.

AACR on Conferences

AACR defines a serial as “a publication issued in successive parts bearing numerical or chronological designations and intended to be continued indefinitely. Serials include periodicals, newspapers, annuals (reports, yearbooks, etc.), the journals, memoirs, proceedings, transactions, etc., of societies, and numbered monographic series.” No mention is made of conferences in this definition, although certain features of the definition can readily be applied to their publications. Conferences are often numbered, and the numbering of the conferences may be considered to be a source for the numbering of their publications. When one knows that future meetings are planned, one can suppose that the publication will be continued. The result is a tendency to consider conference publications as serials whenever possible.
Rules 87–91 of AACR, which are concerned with headings for conferences, apply most directly to single meetings. The general rule (87) states that the name of the conference is followed “in many instances” by one or more identifying elements: number, place, date. No attempt is made in this rule to enumerate the circumstances under which all of these elements would be included; however, rule 91 states that the year is added only if the heading is for a single conference. It is clear that if a conference publication is to be cataloged as a serial, the heading for the conference cannot include the number of the conference and probably not the place.

Thus the thrust of rules 87–91 is toward cataloging conference publications as monographs, although the option of treatment as serials is at least suggested in rule 91. These five rules include no examples illustrating serials cataloging.

To be sure, conferences and meetings are mentioned in rules 162C, 167G, and 172A in the AACR chapter on serials. The 1967 edition does include an example that, from its format, illustrates how to catalog these publications as serials: “Congrès international des moteurs à combustion interne. [Compte rendu] l-.” However, this is found in rule 133E, concerning additions to titles of monographs, not serials.

The ISBD's

The definition of a serial found in ISBD(S) is quite similar to that of AACR. It states that serials include “periodicals, newspapers, annual publications (or publications appearing less frequently), reports, transactions and proceedings of private or public institutions and of conferences, and monographic series.” Finally here is a clear attempt to solve the problem. And yet it is apparently contradicted by examples in ISBD(M), which defines a monograph as a “non-serial publication. . . .” Paragraph 1.3.12 of ISBD(M) includes the Communications scientifiques et techniques of the ninth International Congress on Glass as an example; the tenth English-language example illustrating the application of ISBD(M) is “Seventh meeting / Federation of European Biochemical Societies, Varna (Bulgaria), September 1971.”

The Library of Congress and the University of Iowa Libraries

Examples of the problem can be easily found in the National Union Catalog under such headings as “Conference,” “International Congress,” or their foreign equivalents. Examples of both the monographic and serial approaches will be found, at times, for the same conference. For instance, the Library of Congress cataloged the Actas of the first International Congress of Hispanists as a monograph (NUC 1963–67, v.26, p.146, card number 66-5883), revised the card to an open entry (NUC 1968–72, v.44, p.545, card number 72-256051), and at the same time cataloged the Actas of the second and third congresses as monographs (same reference, card numbers 72-
In the same cumulation one finds two entries for the Second Symposium on Damage in Laser Materials, one as a monograph (73-609162) and one as a serial (77-181048), with the second symposium designated as the first issue (the first symposium having had a slightly different title). At times the Library of Congress has cataloged as a monograph a conference publication that other libraries have considered as a serial. In the April-June 1976 issue of New Serial Titles is the entry “Lunar Science Conference. Lunar science: abstracts of papers submitted”; the Library of Congress however cataloged each of the publications “Lunar Science V,” “Lunar science VI,” and “Lunar science VII” as monographs, under the heading “Lunar Science Conference,” subdivided by number.

The first two situations are evidently caused by conflicting decisions at the Library of Congress; the last is due to varying interpretations of the definition of a serial. They clearly point out the need for standardization in this area.

The University of Iowa Libraries has maintained a separate serials catalog since the early 1960s, and great care has been taken to include in it the works of numbered congresses and other recurring conferences. Difficulties are frequently encountered, mainly with conferences that publish several monographs. Such publications are not generally cataloged as serials; but each situation must be handled individually, oftentimes by different catalogers, and thus different decisions may result. The serials catalog contains complete descriptive cataloging for all serials, including monographic series, and so those conference publications that have a “theme” title receive both serials cataloging and monographic cataloging. Examples of such publications are “Integration in internal medicine; proceedings of the ninth International Congress of Internal Medicine, Amsterdam, 7–10 September 1966” and “Recent developments in graphic arts research; proceedings of the tenth International Conference of Printing Research Institutes held in Krems, Austria, 1969.” The first of a series of conferences is frequently unnumbered, and its proceedings may be cataloged as a monograph; when the library receives the proceedings of a later conference in the series, recataloging may be required.

Arguments Against Treatment as Serials

Let us look once again at the AACR definition of a serial: “a publication issued in successive parts bearing numerical or chronological designations and intended to be continued indefinitely.” The numerical or chronological designations are clearly stated to pertain to the publication itself.

It is appropriate to ask whether conference publications can form a serial, or whether the conferences themselves merely form a series. This may be a philosophical question, rather than a practical one, but it is clear that it is the conference as an event, rather than the publication, which is numbered. If this indeed is the case, then such publica-
tions do not meet the conditions of the definition.

Frequently the type of publication originating from a congress changes with time: the "proceedings" may give way to "papers" and finally to "abstracts," none with any assurance of indefinite continuation. Financial, managerial, and editorial conditions determine the type of conference publication. If there is no intended continuity to the publications, they do not meet the definition of a serial.

Some Practical Considerations

A number of problems, some of which have already been mentioned, may be encountered when conference publications are cataloged as serials. These problems may be divided into three groups: (1) problems of title (including both theme titles and generic titles), (2) problems of conference name, and (3) difficulties pertaining to other bibliographic data.

The titles of conference publications are especially subject to variation. Each publication may have a theme title—a title proper that varies with each conference, although it may occasionally be used again at a later date. Theme titles seem to be of increasing popularity; they are frequently of special importance to the patron, and entries must be found for them in the catalog. The simplest method of cataloging such publications is as monographs. If they are cataloged as serials, the theme titles must be recorded in a note and added entries made for them. This may necessitate recataloging the serial each time a conference is held.

Generic titles of conference publications are also subject to change, either because of a variation in the type of publication (transactions, papers, abstracts) or because of a change in the language of the text (Berichte, atti, travaux). Although English is now the major language of scientific communication, one still encounters international congresses whose publications are each issued in other languages. Little is gained by cataloging these works as serials since each significant title change will necessitate a separate entry.

If conference publications are cataloged as serials, the choice of entry is very restricted: it must be the most stable element, and this is usually the name of the conference. In the past, many German libraries that cataloged conference publications as serials found it advantageous to use the names of international conferences more or less as uniform titles, since the Prussian Instructions did not in general provide for corporate authorship. Such treatment is found in Gesamtverzeichnis ausländischer Zeitschriften und Serien (GAZS), compiled by the Staatsbibliothek Preussischer Kulturbesitz, and the Hallesches Zeitschriftenerverzeichnis, issued by the Universitäts- und Landesbibliothek Sachsen-Anhalt. In both lists international conferences will be found under the German heading "Internationaler Kongress...." Of course this same principle may be applied when the publications are cataloged as monographs, as Weber recommended in 1962.5 Any ad-
vantage gained through cataloging these materials as serials is soon lost if the conference name changes too frequently, resulting in the generation of several sets of catalog cards, one for each name. The works become dispersed throughout the catalog, and history cards or other appropriate references must be made linking the conference headings.

Another problem arises when, in addition to the general series name of the conference, each conference has also a specific name. Examples of this are found in rule 88B of AACR, which recommends using the specific name as the heading for the conference. In such instances cataloging as monographs is the best way to present these names.

Other bibliographic data frequently vary with each conference in a series. The imprint, sponsoring bodies, and editors are likely to change frequently. The conferences of the Institute of Electrical and Electronics Engineers are a prime example. Variations in imprint can be handled through the use of “v.p.,” but the sponsoring bodies and editors are often of such importance that each time they change, additional notes must be appended to the serials cataloging and new added entries made. It then becomes a question of whether the patron is better served by this complicated cataloging or by the simpler monographic cataloging for each publication.

Conclusions

AACR and the international standards provide little guidance and apparent conflicts regarding the cataloging of conference publications. The need for standardization in this area has long been apparent; it is needed even more so today because of increasing national and international cooperation.

The various problems attendant upon cataloging conference publications as serials lead one to conclude that the monographic approach is undoubtedly better. As recommended in the Regeln für die alphabetische Katalogisierung, the works of individual congresses in a series should be cataloged separately. If a library desires to catalog the publications of a series of conferences as a serial, two conditions must be met: (1) the conferences must have the same name and be differentiated only by number, place, and date; and (2) the titles proper of the publications themselves must vary only slightly, if at all.

For the same reasons, it is recommended that the Library of Congress follow the example given by the Staatsbibliothek Preussischer Kulturbesitz in Gesamtverzeichnis der Zeitschriften und Serien in Bibliotheken der Bundesrepublik Deutschland einschließlich Berlin (West) (the successor to GAZS) and Gesamtverzeichnis der Kongress-Schriften in Bibliotheken der Bundesrepublik Deutschland einschließlich Berlin (West), remove conference publications from the scope of New Serial Titles, and establish a new “Union List of Conference Publications” that would include works of all conferences, both those held only once and those held
periodically. With the proper indexing this would be an invaluable reference tool, particularly for interlibrary loan activities.

References

An Adopted Library of Congress Classification for Children's Materials

JOHN W. PERKINS
Library Director
City of Inglewood Public Library
Inglewood, California

After the Inglewood (California) Public Library had converted its adult subject collection to the Library of Congress Classification, it developed an adapted LC classification for children's library materials. The new system uses a two-letter classification, followed by one or two numbers when more detail is required. The system has been in use for more than five years and has received a gratifying response from children's librarians. Materials are readily located, class numbers are easy to remember, and the adaptation prepares children for a transition to the use of adult LC.

The Inglewood Public Library began to convert its adult subject materials from the Dewey Decimal Classification to the Library of Congress (LC) Classification in 1966. The changeover proved most successful. The next question was what to do with children's materials. We could either leave them in Dewey (as almost all school and public libraries have done) or use LC. If we retained Dewey, we would have had two classification systems. It seemed that LC would prove too detailed and complicated for children's materials. We then began thinking in terms of devising an LC adaptation, tailoring it to fit the content of children's subject materials.

After much study and discussion involving children's and technical services librarians, we developed an adapted LC for children's nonfiction books. Children's Dewey-classed subject shelflist cards were projected on a screen and our "reclassification committee" assigned the books new classification symbols from the LC adaptation.

We published the first edition of the adaptation in 1971. Study and discussion continued as recommendations and suggestions were made for revision. In 1972 the second edition was published, basically adding more subclasses. In 1973 we published an adaptation of the classification for children's sound recordings. A series of meetings held for more than a year resulted in a third edition of the basic classifica-

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tion, modified to include sound recordings, thereby becoming a multimedia classification, and with many changes in the index.\textsuperscript{3}

The adaptation is based on LC's "A to Z" schedules, using one- and two-letter subclasses (Q SCIENCE—GENERAL, QA MATHEMATICS, QB ASTRONOMY, etc.) that conform as closely as possible to the adult LC classification. In addition a new schedule, X SPORTS AND RECREATION, was developed because the adult GV could not be expanded to meet the requirements of the voluminous literature in this area. Letter-number subclasses are used when additional detail is required: DS ASIA—GENERAL, DS6 FAR EAST—GENERAL, and DS62 CHINA. The adapted LC classification has 407 subclasses, including 100 one-number subclasses and 86 two-number subclasses. The two-number subclasses are used for geographical divisions of the United States, Canada, Asia, and Africa.

Table 1 presents information on the subclasses in the twenty-two main classes.

**TABLE 1
CLASSES AND SUBCLASSES IN THE ADAPTED LC CLASSIFICATION**

<table>
<thead>
<tr>
<th>Class</th>
<th>Letter Subclasses</th>
<th>Letter-Number Subclasses</th>
<th>Total Subclasses</th>
</tr>
</thead>
<tbody>
<tr>
<td>A General Works</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>B Philosophy, Psychology, &amp; Religion</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>C Auxiliary Sciences of History</td>
<td>7</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>D History &amp; Topography (Except America)</td>
<td>17</td>
<td>37</td>
<td>54</td>
</tr>
<tr>
<td>E America (General) &amp; North America—History &amp; Topography</td>
<td>17</td>
<td>87</td>
<td>104</td>
</tr>
<tr>
<td>F Latin America—History &amp; Topography</td>
<td>18</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>G Geography &amp; Anthropology</td>
<td>9</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>H Social Sciences</td>
<td>10</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>J Political Science</td>
<td>6</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>K Law</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L Education</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>M Music</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>N Fine Arts &amp; Handicrafts</td>
<td>10</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>P Language &amp; Literature</td>
<td>20</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>Q Science</td>
<td>17</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>R Medicine</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>S Agriculture</td>
<td>9</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>T Technology</td>
<td>13</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>U Military Science</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>V Naval Science</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>X Sports &amp; Recreation</td>
<td>23</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>Z Books &amp; Literature</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

| Total | 221 | 186 | 407 |

*Volume 22, Number 2, Spring 1978*
The following two schedules are illustrative of the classification system:

### H
**SOCIAL SCIENCES**
- HB **Economics**
- HE Transportation & communication—general
  - HE 2 Land transportation
  - HE 3 Water transportation
- HF Business & finance
- HM Sociology
- HQ Family
- HS Associations
- HT Communities
- HV Criminology
- HY Addiction

### S
**AGRICULTURE**
- S **Agriculture**
- SB **Plant culture—general**
  - SB 2 Home gardening
- SC Parks
- SD Forests & forestry
- SF Animal culture—general
  - SF 2 Veterinary medicine
- SH Fish culture—general
  - SH 2 Fish as pets
- SK Outdoor life and camping
- SP Conservation of natural resources
- ST Pollution

All the major LC subclasses have been used if at all practicable; that is, if sufficient children's subject materials are available—or if the possibility exists that new materials will be published—to justify the retention of a subclass.

Many of the subjects in some adult LC subclasses do not relate to children's materials. In A General Works, for example, there are ten subclasses that include such specialized subjects as “Academies and Learned Societies” or “History of Scholarship and Learning.” Of these, only the following four were retained: AC COLLECTIONS, AE ENCYCLOPEDIAS, AG GENERAL REFERENCE WORKS, and AY YEARBOOKS. R Medicine is a good example of an adult schedule that contains abundant material, much of which has little application in children's literature. The seventeen subclasses were reduced to the following six: R MEDICINE, RA PERSONAL HEALTH AND HYGIENE, RB PUBLIC HEALTH, RC MEDICAL FIELDS AND PHYSICAL DISORDERS, RS PHARMACOLOGY, and RT NURSING. (PUBLIC HEALTH was taken from RA and RB, which was originally Pathology. Our RC MEDICAL FIELDS AND PHYSICAL DISORDERS was assembled from many other subclasses.)

Our JF POLITICS AND GOVERNMENT (EXCEPT U.S.) includes the original subclasses of JI. British America and Latin America, JN Europe, and JS Asia, Africa, etc. In the case of B PHILOSOPHY, the two subclasses of BG Logic and BD Speculative Philosophy were brought together with B itself to form the single class B PHILOSOPHY.

Two-letter subclassifications were developed for the three one-letter schedules: E, F, and Z. Our LATIN AMERICA—HISTORY AND TOPOGRAPHY, for example, contains the subclasses F LATIN AMERICA, FC INDIANS OF LATIN AMERICA, FF IMMIGRANTS.
IN LATIN AMERICA, FJ MEXICO, FK CENTRAL AMERICA, FL
WEST INDIES, FM SOUTH AMERICA, FN COLOMBIA, FP VEN-
EZUELA, etc.

Several aspects of a single subject are often presented in a single
children's book. Pollution is a good example. The adult LC places air,
water, noise, and solid waste pollution in different classifications; in
our adaptation they are all assembled in ST POLLUTION. Also HY
ADDICTION assembles a variety of subjects widely dispersed in adult
LC.

Some major areas lend themselves to only limited subdivision. QC 2
METEOROLOGY is the only subdivision made in QC PHYSICS—
GENERAL. For the most part, children's books in physics contain sev-
eral subjects that are interrelated and treated together in the text.
Examples of major undivided subclasses are HV CRIMINOLOGY,
HM SOCIOLOGY, and HQ FAMILY.

The volume of material in some cases made it necessary to develop
selected subject areas further. Examples are noted below:

<table>
<thead>
<tr>
<th>LB</th>
<th>CONCEPT FORMATION—GENERAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB 2</td>
<td>SPACE PERCEPTION</td>
</tr>
<tr>
<td>LB 3</td>
<td>VISUAL PERCEPTION, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PR</th>
<th>FOLK AND FAIRY TALES—GENERAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR 2</td>
<td>EUROPEAN FOLK AND FAIRY TALES</td>
</tr>
<tr>
<td>PR 3</td>
<td>ASIAN FOLK AND FAIRY TALES</td>
</tr>
<tr>
<td>PR 4</td>
<td>AFRICAN FOLK AND FAIRY TALES, etc.</td>
</tr>
</tbody>
</table>

One of the features of our adapted classification is a comprehensive,
alphabetically arranged index of terms, each related to its classification
symbol. Catalogers have reported this to be especially useful in deter-
mining classification.

We soon realized that the manual would be significantly enhanced if
we also grouped index terms under their subclasses as indicative of
the contents of those subclasses. This proved to be an excellent
method to insure similarity and consistency in the index describing
subclasses. Examples include:

<table>
<thead>
<tr>
<th>GA</th>
<th>CARTOGRAPHY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlases</td>
<td></td>
</tr>
<tr>
<td>Cartography</td>
<td></td>
</tr>
<tr>
<td>Geographic names</td>
<td></td>
</tr>
<tr>
<td>Globes</td>
<td></td>
</tr>
<tr>
<td>Map making</td>
<td></td>
</tr>
<tr>
<td>Maps</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QT</th>
<th>CETACEANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cetaceans</td>
<td></td>
</tr>
<tr>
<td>Dolphins</td>
<td></td>
</tr>
<tr>
<td>Porpoises</td>
<td></td>
</tr>
<tr>
<td>Whales</td>
<td></td>
</tr>
</tbody>
</table>

Because of its broad subject coverage, HM SOCIOLOGY contains a
wide variety of terms, such as accident prevention, poverty, racial
prejudice, refugee aid, social welfare, and women's liberation move-
ment. Any terms that were not related were immediately conspicuous.
In developing index terms, we had to constantly keep in mind the
content of children’s materials and how various topics are assembled in one text.

One chapter of the manual is devoted to cataloging notes. These notes are designed to supply miscellaneous information not readily discernible from either the classification system or index terms and also serve to amplify or clarify subject areas that might be ambiguous.

Children’s librarians using the adaptation report that librarians, teachers, and children find the system easy to use. During busy periods, when it is not possible to use a subject catalog, librarians can easily direct a child to the classification in which the subject asked for will be found. Because of the brevity of the notation, materials are easily found and readily shelved. They also report that the subdivision of subject areas closely reflects need. QA MATHEMATICS—GENERAL and QT MAMMALS—GENERAL have additional detailed subclasses because of evidenced need; QD CHEMISTRY and QK BOTANY do not, since book titles usually indicate subject, and most books cover many allied aspects of a subject. The classification of folk and fairy tales by area is especially useful.

The adaptation will be reviewed periodically as new materials indicating new subject areas or relationships are received and as comments and recommendations are received from librarians and others using the system. Supplements to the manual will be issued as needed.

References

3. Inglewood Public Library, Library of Congress Classification Adapted for Children’s Library Materials (Inglewood, Calif., 1976). The library has also published Library of Congress Classification Adapted for Children’s Library Materials, a twelve-page brochure outlining the adapted LC classification, which is available upon request.
Multiscript and Multilingual Bibliographic Control: 
Alternatives to Romanization

HANS H. WELLISCH
Associate Professor
College of Library and Information Services
University of Maryland
College Park, Maryland

In response to C. Sumner Spalding's plea for alternatives to the practice of Romanization, the implications of separation of catalogs by script and the separation of entries in non-Roman scripts by language are explored. Data on present book production show that no more than ten scripts produce practically all modern books, the six most productive being Roman, Cyrillic, Japanese, Chinese, Devanagari, and Arabic. Most libraries have extensive collections of books in only a few of the non-Roman scripts. The filing of non-Roman entries in separate parts of a catalog, the specific problems of smaller collections lacking language experts, and the difficulties posed by logographic scripts are also considered. It is proposed to establish separate machine-readable data bases for each script and to produce the National Union Catalog in corresponding separate “registers,” possibly in microform. True universal bibliographic control can only be achieved if direct access to materials, irrespective of script, is provided in library catalogs and bibliographies.

SUMNER SPALDING’S “Romanization Reexamined”¹ was a timely and welcome exposition of one of the murkier aspects of Western cataloging practice, and it was probably the first one to bring the problem to the attention of American librarians of the present generation.² That Romanization, when performed for bibliographic purposes, is an exercise in futility leading to bibliographic chaos rather than bibliographic control has been pointed out many times before,³ but complaints against the practice came mostly from readers, while librarians were either convinced that this was the best possible method of making works written in non-Roman scripts accessible in Western

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Volume 22, Number 2, Spring 1978 • 179 •
catalogs and bibliographies, or did not care too much as long as the smooth working of their libraries was assured by the system.

Only recently have librarians and information scientists spoken out against the follies of Romanization, and I have shown elsewhere that Romanization, even if carried out with the best possible system, is bound to fail as a tool for bibliographic control. It is gratifying to note that so eminent an authority on cataloging and the treatment of non-Roman scripts as Mr. Spalding has now seen fit to join the ranks of those who argue against a continuation of this practice and who seek alternative means for the bibliographic control of works written in scripts other than the one that is dominant in a catalog or bibliography. The generalization from Roman script to dominant scripts is necessary in this context because the problem is universal and not restricted to an environment in which the Roman script is the dominant one whereas all others are dissimilar scripts. The Russians face exactly the same problem with works written in scripts other than the Cyrillic, and Arabic, Hebrew, or Japanese libraries, for example, must cope with books in all scripts other than their indigenous ones. Universal bibliographic control, if it is to be truly universal, cannot be a one-way street or a system in which everything not written in Roman script is being “reduced” to that script by means of Romanization. The reason for the use of the word “reduce” by the advocates of this method is unclear, but in too many cases the resulting “reduction” can only be characterized as a reductio ad absurdum. The untenability of Romanization for bibliographic control becomes obvious when it is realized that the system does not allow for universal applicability: English, French, or German names and titles cannot be Cyrillicized, Arabicized, Hebraized, or Japanized by one-to-one transliteration schemes of the kind used in the Romanization of Greek or Cyrillic script (where reversibility and thus reconstruction of the original is largely possible) but only by phonological transcription, seeking to approximate the sound but not the graphemic image of foreign words.

Separation of Catalogs by Script

Let us begin by assuming the acceptance in principle of Spalding's recommendations by libraries with extensive holdings of works in several non-Roman scripts. The completely “integrated” catalog of such a library is thus assumed to have been recognized as being not only impracticable but also undesirable since it makes access to works written in scripts other than the dominant one in fact more difficult and sometimes outright impossible for a reader who knows any of the non-Roman scripts. Now the question arises: how are Spalding's recommendations to be put into practice?

The obvious alternative to Romanization (by no means a new or revolutionary one, since it has been practiced successfully by many European and Asian libraries as well as in a few American ones) is the arrangement of catalogs by script, as advocated in Recommendation
1." Contrary to popular belief, this does not entail a large number of separate catalogs. As shown in table 1, ten scripts account for 99.2 percent of the world's present book production, and even the largest research libraries could probably accommodate their collections in five or six catalogs arranged by script. For the sake of brevity, I shall here not deal with detailed methods for the bibliographic control of works in minor scripts, namely those in ranks 11 to 14, in which at present less than 1 percent of the world's literary output is being published. In principle, these can be treated by the same methods as works in the six or seven most productive scripts, with suitable adaptations.

**TABLE 1**

**BOOK PRODUCTION BY SCRIPT 1973***

<table>
<thead>
<tr>
<th>Rank</th>
<th>Script</th>
<th>Titles</th>
<th>Non-Roman</th>
<th>Roman</th>
<th>Non-Roman Titles</th>
<th>Roman</th>
<th>Non-Roman Titles</th>
<th>Roman</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Roman</td>
<td>404,000</td>
<td>71.3</td>
<td>98.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Cyrillic</td>
<td>81,000</td>
<td>14.3</td>
<td>98.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Japanese</td>
<td>35,500</td>
<td>6.3</td>
<td>98.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Chinese†</td>
<td>11,200</td>
<td>1.9</td>
<td>99.5</td>
<td></td>
<td></td>
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Subtotal 404,000 162,000
Total 566,000

*Figures are based on the data for book production in 1973 published in Unesco Statistical Yearbook 1974 (the latest with a detailed breakdown by language), except as noted below.
‡Including eleven other Indian scripts closely related or derived from Devanagari.
§Estimated, but probably too high. Includes Amharic, the official script of Ethiopia, for which no data were available.

Separation of Entries by Language

Since catalog entries for works in languages written in the Roman script can relatively easily be "integrated" into an unbroken alphabetical sequence from A to Z (by disregarding diacritical marks as well as alphabetical sequences other than the standard English one), it is often assumed that the same method can also be applied to other scripts. However, this is not always the case. Each of the six Slavic languages written in Cyrillic (Russian, Ukrainian, White Russian, Bulgarian, Serbian, and Macedonian) uses some language-specific letters not found in any of the five others, which makes interfilig of Cyrillic en-
tries in more than one Slavic language somewhat difficult (although there is now a standardized sequence for all fifty-one Slavic Cyrillic letters, including some obsolete ones). The orthographies of more than sixty non-Slavic languages in the Asiatic parts of the Soviet Union and Mongolian (now also written in Cyrillic), which use a large number of diacritical marks and many special letters, make the interfiling of all Cyrillic scripts even more complex. While libraries with only relatively small collections of non-Russian works written in Cyrillic could probably interfile entries with those for Russian (and other Slavic) works, larger collections might find it more useful to establish separate sequences at least for the non-Slavic languages. Entries in languages using the Arabic script (Arabic, Persian, Pashto, Urdu, Ottoman Turkish, and some minor languages) can technically be interfiled, although in large collections it might be better to separate entries for Arabic works and those that belong to other linguistic families. Hebrew and Yiddish, which share the Hebrew alphabet, can also be interfiled, but in author catalogs it would be desirable to separate entries by language, because the name of the same author may be spelled differently in Hebrew and in Yiddish.

At first sight, this may seem to entail formidable organizational and technical problems as well as a fragmentation of the catalog. I shall deal with the technical side of the problem later on, but the splitting of the catalog by script and then by language is in reality neither difficult to achieve nor is it detrimental to the needs of library users. Quite to the contrary, a user who has a reference to a Hebrew work will not necessarily wish to consult simultaneously also the Yiddish section of the catalog, while a reader looking for Bulgarian literature may only be hindered by interfiled entries in Ukrainian or Serbian. In reality, few libraries other than the largest research collections would find it necessary to keep more than about three or four separate catalogs by script and/or language—a number that looks formidable and even frightening only to those who have been brought up on the chimerical idea of an “integrated and unified” catalog as “a key to the literature of all mankind.”

In this context, it is worthwhile to point out that separation of entries by language is now actually performed in the fully Romanized and purportedly integrated catalogs of the Library of Congress, though only very few people are aware of it. For example, the equivalent of the English word central, written as the word stem централ in Russian and Serbian, is transliterated централ- when it is found in a Russian text but централ- when it occurs in a Serbian text. The initial letter of the word, ц, is the same in both languages, but it is differently transliterated according to language! (There are valid reasons for this practice that cannot be explained here for lack of space.) Thus, titles and names of corporate bodies beginning with the word central, identically written in two different languages, are found in Library of Congress catalogs in two widely separated places, namely
under the letters C and T respectively. So much for the unambiguous reversibility of Romanized Cyrillic script.

**Cross-References**

It is, of course, necessary to show in any of the separate catalogs which works are available in the original version, in translations or adaptations, and which works have been written about them (commentaries, critical essays, etc.). Thus, cross-references to names of authors and to titles of works must be made from the dominant script to any of the dissimilar ones and vice versa. Translations of *King Lear* into, say, Russian or Hebrew will have their main entries in the respective separate language catalogs, with English cross-references leading to the headings in the original non-Roman scripts, thus:

Shakespeare, William  
[King Lear Russian] →  
Шекспир, Уиллиам.  
Король Лир.

Shakespeare, William  
[King Lear. Hebrew] →  
שakespeare, ויליאם  
כורה. ליר

(An arrow is suggested instead of *See* to obviate the need for the verbal equivalent in other languages, which might not always be easy to ascertain. The symbol of an arrow for “see” is universally understood and is often used in dictionaries and encyclopedias.) In most instances, such cross-references could simply be made from the name of an author in the original form to a transcribed form, leaving it to the reader to find the desired title; for all but the most voluminous authors this would not be difficult. Conversely, an English translation of a Russian work, say Anton Chekhov’s *Three Sisters*, would be indicated in the Cyrillic catalog after all entries for that work in the original by the cross-reference

Чехов, Антон Павлович.  
Три сестры.→  
Chekhov, Anton Pavlovich.  
Three sisters.

or simply

Чехов, Антон Павлович.  → Chekhov, Anton Pavlovich.

The difference between such cross-references to non-Roman main entries and the conventional Romanized main entries now found in our catalogs is important for several reasons: (a) the main entry in its original script and language is listed only once and can be located in its proper alphabetical place by anyone who knows the language, its script, and its alphabetization rules; (b) those who do not know the language but wish to find out whether an original edition of a work

*Volume 22, Number 2, Spring 1978*  
• 183 •
translated into English (or any other language) exists are led to it by the Romanized cross-reference; (c) if an author has used several different Romanizations of his own name (a phenomenon not at all uncommon today) or if his or her name has been transcribed differently in different translations or editions of the work, as many cross-references as needed can be made from the various forms, all leading to the original form that in most instances is uniform and thus unambiguous. In this manner, “Chekhov,” “Tschecchoff,” “Tchehof,” “Cechov,” “Tjechov,” and other Romanizations in various European languages all will be referred to the original “Чехов.” The often futile discussions of what constitutes the most “correct” or “scientific” transcription will thus become of no consequence for bibliographic purposes and can safely be left to those philologists who still attach any significance to such things.

Filing of Non-Roman Entries

In his “Recommendation 1” Spalding states: “File such a catalog record [i.e., one written in non-Roman script] in a catalog consisting of author and title entries for publications in the given writing system. . . .” This is of course self-evident if catalogs are to be organized by script and/or language, but it poses several problems that go far beyond the mechanical task of arranging entries in a prescribed sequence. As long as all entries are being Romanized, manual filing can be performed by clerical personnel. Mechanized filing is now also possible for all but the most complicated entries, at least if it is done according to logically consistent rules that do not demand to file anything “as if” it were written differently from what appears on the printed record and if diacritical marks in alphabets other than the English one are disregarded.

The filing of entries in non-Roman scripts must obviously be done by people who know the language, its script, and its particular filing rules or by suitably programmed machines. Most of the general principles of alphabetical filing are also applicable to other alphabetical writing systems, but practically every language and script needs at least a few specific filing rules due to the characteristics of the language (e.g., the prefixed definite article in Arabic and Hebrew), the structure of titles, and the nature of the graphemes of its writing system. In national libraries or large university and research libraries, the solution of this problem is relatively easy: the same people previously employed in laborious and highly error-prone Romanization can file entries that they themselves have generated in their own language and script. (This might initially result in a psychological rather than a professional problem: while Romanization is probably considered as an “intellectual” job, filing of entries in a catalog is still thought of as a “clerical” one, so it is likely that some of the former Romanizers will be reluctant to assume the role of “filing clerks.” In that event, it may take some persuasion to make them realize that the artificial trans-
mogrification of their own language and script by way of Romanization is essentially much more of a dreary and routine occupation than the arrangement of the records of their literature in a fitting and useful manner.) As to mechanized filing, large central institutions will find it possible to use computers for the filing of Cyrillic, Greek, and Hebrew; for these scripts, sorting and filing routines already exist, and suitable programs for other alphabetical scripts can be developed if the volume of publications is found to justify the expense.

But these solutions to the filing problem are not readily applicable to small and medium-sized libraries, which now receive most or all of their catalog data for non-Roman scripts from the Library of Congress or other central sources. These Romanized entries can easily be filed in the "integrated" catalog but are often impossible to retrieve other than by sheer serendipity. But how can non-Roman script entries be filed if you do not have experts on your staff? The answer is: they can indeed not be filed. Even more to the point—they probably should not exist. This may turn out to be the most controversial aspect of switching from a single completely Romanized catalog to a multiscript catalog in several parts. It means quite simply that a library that does not have anyone on its staff capable of reading a non-Roman script ought not to have books in that script because it cannot give adequate service to readers knowledgeable in that script. This statement may sound strange at first. Do not our libraries provide books in German, French, and even less well known languages such as Turkish or Albanian without the need for librarians who can read these languages? Why not also books in Russian, Arabic, Hebrew, and Japanese? The answer to this is that in the case of languages written in Roman script the catalog entries are intelligible to readers of those languages without the need for an intermediary or a transformation from one form to another, while the Romanization of entries presents readers of languages written in non-Roman scripts with a completely foreign and often unintelligible jumble of letters forming "words" that cannot be looked up in any dictionary and to which the clue (the Romanization table) is virtually inaccessible. Instead of providing ready access to literature, Romanized catalogs often erect impenetrable barriers for readers. Would an English-speaking reader consider himself to be well served by, say, a Japanese library in which English books were cataloged in Japanese only, and where no one spoke the language or could even read it? Yet it is always blandly assumed that the converse must necessarily be acceptable to readers of foreign literature in Western libraries.

There are at least two possible solutions to the problem of the relatively small collection of books and other documents in non-Roman scripts. One is to discontinue such small collections and to rely rather on centralized collections of works in a particular language and script to which other libraries can apply when such works are needed by their own readers. The central libraries could publish catalogs of their
holdings, would be accessible through on-line terminals for inquiry about their holdings, and would provide desired works through inter-library loan or by means of photocopies. (Such service is actually provided by the British Lending Library for Russian books and periodicals, serving both university and public libraries in the United Kingdom.) The disadvantage of delayed access would in most instances be outweighed by the much larger choice of works offered by a central store as compared even with the holdings of most university libraries. Another solution is to find suitable personnel to file non-Roman entries manually in catalogs, either among the students of relevant languages in a university or among the population served by the foreign-language collections of a large public library in a multiethnic community.

As to bibliographies, the compiler is generally supposed to know and understand the entries included in his or her work. To list, say, Russian or Arabic works in a subject bibliography only by giving Romanized entries that have not been verified with the original but have been copied from some other convenient (namely Romanized) source borders on intellectual fraud. Entries printed in non-Roman scripts must necessarily be given in separate sections (with suitable cross-references from the Roman script part of the bibliography); and if the bibliographer is not sure about the proper alphabetical arrangement, he or she will have to find expert help before submitting the work to the printer and publisher.

The thorniest problems in the arrangement of entries in non-Roman scripts are posed by the logographic scripts of Chinese, Japanese, and Korean. In these languages, it is vital to preserve the image of the logographs and other characters (kana in Japanese, Han-güll in Korean) because Romanization (or Cyrilization or any other rendering in an alphabetic script) is always ambiguous, often misleading, and in many instances completely incomprehensible to native readers. On the other hand, no generally agreed upon or easily performed filing system exists for these scripts: Chinese characters have traditionally been arranged by at least four different methods, and the Japanese and Korean writing systems contain syllabic or alphabetic elements in conjunction with the Chinese characters that make matters still more complicated. In the case of Japanese, Romanization is used for the arrangement of entries in their own modern dictionaries and in many library catalogs, although names or words must also be given in Japanese script to avoid ambiguity and misunderstandings. For both Chinese and Japanese, a numerical system, based on the numbers assigned to logographs in standard Chinese-English and Japanese-English dictionaries, can also be used.

**Subject Catalogs**

Spalding's "Recommendation 2" suggests an arrangement of entries in different scripts under subject headings in the dominant language.
(e.g., English), where each script is given an arbitrary number and arranged in numerical sequence following the dominant Roman script. Other solutions or variants are, however, also possible and may sometimes even be simpler to perform, both manually and in machine-generated catalogs.

Arrangement by Date of Publication. This method of subarrangement under a subject heading is already widely used in special libraries, particularly for scientific and technological subjects in which books become rapidly obsolescent. Often the arrangement is in "inverse chronological order," that is to say, all works indexed under one heading and published in 1977 are filed first, followed by those published in 1976, and so on. If this method is used, it often makes little or no difference in which language or script a work has been written, because in a relatively small collection it does not happen very frequently that works on exactly the same topic are published in several different scripts in the same year. However, in collections with large holdings of works in different scripts the entries must indeed be subdivided by script and/or language.

Arrangement by Numerical Sequence of Scripts. Instead of assigning arbitrary numbers to scripts, it might be useful to arrange them according to their rank by book production (see table 1). Although the absolute number of works published in certain scripts changes from year to year (and is steadily growing), their relative rank is generally unaffected, judging from the data published by Unesco over the past fifteen years. Arrangement of identical subject headings by rank of book production assures automatically that the script with the highest rank, Roman, comes first, followed by Cyrillic, and so forth. In this instance, further breakdown by language is probably not needed but can of course be resorted to if deemed desirable.

Arrangement by Classification. In a classified catalog, the incongruity of having English-language subject headings for foreign-language works is avoided, since classification marks are language-independent and indexes to them can be constructed in as many languages as are needed for the population served. The classified subject catalog, to be sure, has never enjoyed much popularity in the United States; but where a bilingual or multilingual community is to be served, its advantages are obvious. Subarrangement under a particular classification mark can, of course, be performed by any of the methods discussed above.

Separate Machine-Readable Data Bases

Since almost all bibliographical data are now recorded by national bibliographies or national libraries on machine-readable data bases (MARC or its equivalents in other countries), a switch from Romanized entries for books and other documents in non-Roman scripts to entries in the original script will inevitably result in the production of separate data bases by script (and possibly by language).
The technology for the production of such data bases by script is already available. For several scripts, namely Roman, Cyrillic, Greek, and Hebrew, machine-internal codings for the characters have been standardized, and printout in various scripts and type fonts can be produced by means of photocomposition. Computer-coding and printout for Arabic script has also been achieved. Chinese characters and Japanese kana have been made computer-amenable by the National Diet Library in Tokyo for its catalog card production and no longer present a technical problem.

It is thus incorrect to assert that the technical limitations of computers make it mandatory to Romanize everything in order to get it into a machine-readable data base such as MARC. Neither is it mandatory that there be MARC data bases from which only a totally Romanized National Union Catalog (NUC) can be produced. The planned division of the present NUC into several separate "Registers" for various kinds and types of documents provides an outstanding opportunity to separate these registers also by scripts. The present elephantine dimensions of the NUC are caused to no small extent by the inclusion of entries in Cyrillic, Arabic, Greek, Hebrew, and Indic alphabets and in Chinese characters as well as in some lesser known non-Roman scripts, which are probably needed by only a small minority of NUC users yet take up an inordinate and steadily growing part of the catalog. If the main part of the NUC were limited to entries in Roman script, it would not only be less bulky but also much easier to consult, because pages printed uniformly in a single script are easier to scan visually than pages that display a large number of full entries in a variety of scripts, interspersed with Romanized headings that are almost lost among the non-Roman characters. (NUC 1975, v.9, Koj-Lups, p.117, is a good example, taken quite at random. It contains entries in Roman, Cyrillic, Japanese, Gujarati, and Greek.)

Separate sections of the NUC registers could be produced in non-Roman scripts, serving those libraries and scholars specifically concerned with certain languages and scripts. The proposed system of Master Register Numbers would make it particularly easy to insert Romanized references to names of authors and to titles in any of the non-Roman script parts of the NUC. For the lesser known languages and scripts in which relatively little literature is produced and even less is collected in Western libraries, the register sections could perhaps be produced in microform only, with hard-copy printout provided only on demand. How many libraries in the United States or in Western Europe collect literature in Oriya, Georgian, or Uzbek, and how many people read and study these languages? Yet the entries for works in these languages as well as for the quite large number of books and other documents in Russian, Japanese, Arabic, and a number of other languages written in non-Roman scripts, all in very elaborate and often quite useless Romanizations, are found in every one of the 2,013 copies of NUC currently on subscription (assuming...
cataloging of such works during the particular time span).* Consider the savings in printing, binding, distribution, and storage costs if libraries now subscribing to NUC were able to purchase only those sections useful to them. All present subscribers would probably want the Roman script section, but, beyond that, they could limit their subscriptions to those registers in which they have collections in languages using the script in question. And with the reduction in cost would come an increase in retrieval efficiency, resulting from the greater ease in searching a list limited to a single script.

The technical solutions to various problems posed by multiscript and multilanguage bibliographic control tools outlined in this paper are by no means the only possible ones, and they may not be the best or simplest ones. The representatives of the great national libraries and national bibliographies mentioned in Spalding's concluding remarks will certainly encounter problems not touched upon here or might find some of the technical solutions unworkable in their specific environments. But the important thing is not the application of this or that method. Rather, it is the decision to rid our catalogs and bibliographies of the albatross of Romanization. True Universal Bibliographic Control will only be achieved when every reader has direct and unimpeded bibliographical access to the written records of all mankind, no matter in which form or script they have been set down.

References


2. Transliteration problems were discussed during the 1930s by F. E. Sommer, a librarian at the Cleveland Public Library: "Transliteration Problems," Library Journal 58:534-36 (1933); "Books in Foreign Script in the Public Library," Library Journal 59:892-93 (1934); "Co-ordinated Transliteration in Libraries," Library Quarterly 7:492-501 (1937). Some other librarians (including Spalding) dealt with the problem in conference papers delivered during the late 1950s and early 1960s, but these reached only a limited audience of specialists.

3. See, for example, the discussion on transliteration of Cyrillic in Science, v.129, 24 April 1959, p.1111-13; v.130, 28 Aug. 1959, p.482-88; and v.131, 5 Feb. 1960, p.324, by several readers. These and many hundreds of other contributions on the subject are listed in H. H. Wellisch, Transcription and Transliteration: An Annotated Bibliography on Conversion of Scripts (Silver Spring, Md.: Institute of Modern Languages, 1975).

4. One of the most fervent pleas for total Romanization is H. C. Wright's unpublished Ph.D. thesis "Metagraphy and Graphic Priority: A Discursus for Catalogers" (Cleveland: Case Western Reserve Univ., 1969).


7. For a nice example see the Romanization systems for Sanskrit used by the British

Museum and the Library of Congress, respectively, which are virtually identical except for the transliteration of two letters that are rendered as § and sh by BM but s and ş by LC, because of different philological traditions of transcription.


11. N. M. Wolcott, and J. Hilsenrath, *A Contribution to Computer Typesetting Techniques: Tables of Coordinates for Hershey's Repertory of Occidental Type Fonts and Graphic Symbols* (Washington, D.C.: National Bureau of Standards, 1976). This report contains the images and grid coordinates of a large number of Roman, Greek, and Cyrillic type fonts and many graphic symbols that can be generated by a computer using the program (which is also available from the National Bureau of Standards). The Hershey system has also been applied to Chinese characters and to Hebrew script, and it can be used for the reproduction of any other script, ornamentation, symbols, and even for musical notation. The resulting printed image is virtually indistinguishable from conventional printing.


15. In the introduction to the transliteration tables for "Languages of India and Pakistan" (*Cataloging Service* 64:1 (Feb. 1964)) the Library of Congress admits that "...transliteration tables for Indic and Pakistani alphabets are useless to anyone not familiar with the languages..."
Recommended Data Elements for the Descriptive Cataloging of Computer-based Educational Materials in the Health Sciences

Becky Lyon-Hartmann
Head, Network Services Section
Division for the Blind and Physically Handicapped
Library of Congress

and

Charles M. Goldstein
Chief, Computer Technology Branch
Lister Hill National Center for Biomedical Communications
National Library of Medicine

A large part of the mission of the National Library of Medicine is to collect, index, and disseminate the world's biomedical literature. Until recently, this related only to serial and monographic material, but as new forms of information appear, responsibility for bibliographic control of these also must be assumed by the National Library of Medicine. This paper briefly describes the type of information that will be necessary before descriptive cataloging of computer-based educational materials can be attempted.

Introduction

From July 1972 through May 1975, the Lister Hill National Center for Biomedical Communications (LHNCBC) of the National Library of Medicine (NLM) operated an experimental computer-assisted instruction (CAI) network. This network was a first in the world of computer-assisted instruction, and, although financial support of the network terminated on May 31, 1975, Lister Hill involvement in health sciences computer-based educational materials (CBEM) continues. One area in which a recognized need exists is that of bibliographic control for computer-based educational materials.

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Bibliographic Control

One of the primary missions of NLM is the dissemination of information in the health sciences. For dissemination to take place, for the community to find and have access to the appropriate literature, audiovisuals, etc., some controls must be exercised over the information describing the material. NLM has effected bibliographic control on monographic and serial publications by means of descriptive cataloging and indexing procedures that have been firmly established over many years. These procedures have been standardized and adopted by worldwide organizations. Recently NLM has concentrated efforts toward the bibliographic control of audiovisual materials in the health sciences. Descriptive cataloging and indexing procedures for audiovisual materials are just now being established.

CBEM is another aspect of health sciences information of growing importance. While the number of programs is not yet large, indexes are already being compiled (see section on “Current Indexes”), and the need for more exhaustive and effective indexes has already been recognized. A recent (17–18 May 1976) workshop sponsored by LHNCBC and the Association of American Medical Colleges to develop guidelines for the appraisal of CBEM recommended that an ongoing effort should be supported to gather information about available computer-based educational materials. Before the number of programs becomes unmanageably large, it would be most desirable if the authors and other members of the health sciences community understood the requirements for descriptive cataloging information that will support good bibliographic control. It is toward this end that the recommendations for a list of descriptive data elements and their definitions are presented herein for consideration by the community.

In general, a catalog of CBEM may contain more than just descriptive data, for example, appraisal, evaluation, and/or utilization data. Only descriptive data elements, however, are considered in this document.

Recommended Descriptive Data Elements for CBEM

Early in March 1976, a preliminary list of data elements for CBEM was compiled by the Lister Hill staff. Many of the data elements included in the list were a direct result of experience gained from the audiovisual projects at NLM. Following review by an eight-person advisory group including the NLM cataloging staff, the following list of recommended data elements was compiled:

Descriptive Program Title: full title containing descriptive information (example: “Anatomy of the Head and Neck,” not an abbreviated computer access title such as “ANATI”)

Program Modules: sections or modules within an individual program

Author: full names of course author or authors (last name and initials or forename in order to be able to uniquely identify the authors;
year(s) of birth (to remove ambiguities of authorship); and institution of author(s)

Contributor:* person or persons given credit for assisting the author(s) in the production of the program

Instructional Programmer:* person responsible for programming the lesson (if different from author)

Publisher:† name of releasing agent, publisher, or other body or person responsible for issuing the program (if different from sponsoring/corporate body)

Place of Publication: location of the publishing body or releasing agent

Year of Publication: year of release or publication

Sponsoring Corporate Body:† institution or other body responsible for the production of the program (not funding body)

Funding Body:† institution that funded development of the program

Time: average length of time (in minutes) required in using a program

Accompanying Materials: slides, manuals, and other additional materials required in using a program

Audience Type (targeted): physicians, nurses, dentists, etc.

Audience Level (targeted): undergraduate, graduate, continuing medical education (private or clinical), etc.

Disciplines or Specialty: pharmacy, anatomy, etc.

Subject Descriptors: major subject areas program covers

Description: short description of program, including subject area, strategy, and suggested audience

Prerequisites: any prerequisites required in effective use of the program

Instructional Strategy: whether program is linear, branching, etc.

Instructional Purpose: whether program is intended as a simulation, test item bank, review, self-evaluation, etc.

Learning Objectives: author’s objectives for the lesson; what the student should have learned upon completion of lesson module

Accreditation: if program has been accredited for continuing education credits, name of accrediting body, number of units of credit given, date accredited

Language: computer language in which the program is written, to include enhancements, versions, driver if applicable

Hardware: make and model of computer(s) on which program is running

Terminal: type of terminals that may be used, any special terminal requirements, etc.

Transferability: names of institutions where program has been trans-

*Personal names should follow instructions for author.
†Corporate names should include full name of the institution and its current mailing address.
ported outside of originating institution

**Availability:** whether issuing institution is willing to release the program to other institutions; to include format (on-line, off-line, etc.) and terms of availability

**Revision:** date of last program revision

**References:** full bibliographic citations of articles and other descriptive material written about the program, when available

**Contact Person:** name, address, and telephone number of person(s) to contact for further information

**Current Indexes**

At the present time there are four nominal sources of descriptive information on health sciences oriented CBEM:


   This volume, sponsored by a grant from the Extramural Programs Division of the National Library of Medicine, presently provides the broadest coverage of existing programs in the health sciences. However, the information it contains does not provide the depth of description that is necessary for good bibliographic control.


   This index contains a more in-depth description of each program listed, but it does not cover the health science disciplines as completely as the Kamp index. Coverage is of programs used by elementary and secondary schools, community colleges, and universities in all subject areas. Bibliographic information is more complete, but noticeable gaps still exist, and the latest edition is difficult to use.


   The Lister Hill Center of the National Library of Medicine sponsored this catalog of descriptive information about programs that were available over the experimental CAI network. However, cataloging data were gathered from sources that provided minimal information, thus, it is considered incomplete. In addition, only programs at Massachusetts General Hospital, the Ohio State University, and the University of Illinois Medical Center were included.

   While the index by Kamp is more up to date, this effort by Kronick and Robinson is noteworthy because it represents an attempt to catalog rather than just index CBEM.

4. Manuals and other documentation supplied by program generators.

   These vary widely among institutions and in some cases do not exist at all. In addition, they are not readily available solely for informational purposes but, rather, distributed to users. There is little uni-
formity as to the kind of data gathered. Therefore, one must consult several sources, and, even then, a comprehensive description cannot be synthesized.

**Conclusion**

It is hoped that these recommendations for descriptive cataloging information will be of help to all librarians presently considering the problems of establishing bibliographic control of CBEM. In addition, authors of CBEM should be aware of the information necessary to insure that their efforts can receive widest accessibility and acknowledgment.

At LHNCBC, plans are in progress to establish an experimental on-line catalog. This catalog will be based initially on Kamp's index; because, as noted earlier, the information included in the index is not as extensive as that described here, the health science community will be asked to cooperate in adding the missing data.

**Reference**

SOME CURRENT REPROGRAPHIC CONCERNS RELATED TO INTERLIBRARY LOAN

The Library of Congress Photoduplication Service announces volume IV of the American Library Association Reproduction of Library Materials Section's "Micro-File Series." Some Current Reprographic Concerns Related to Interlibrary Loan, compiled by Danuta A. Nitecki of the University of Tennessee, is available on one sheet of positive, silver halide, microfiche for $4.50 (foreign, $5.75). Unbound electrostatic positive prints are available for $19.00 (foreign, $22.00). Prices quoted include postage. Orders and inquiries concerning this title should be addressed to the Library of Congress Photoduplication Service, Department C, 10 First St., S.E., Washington, DC 20540. Checks should be payable to the Library of Congress Photoduplication Service.

Some Current Reprographic Concerns Related to Interlibrary Loan is a collection of ten timely papers that will be of interest to library administrators as well as librarians involved in interlibrary loan activities. The collection is further enriched with an annotated bibliography by Alfred Modrall describing a variety of publications dealing with interlibrary loan as this function related to reprographic services. The collection concludes with an appendix listing six major, nonlibrary sources of photocopied bibliographic information.

Joyce Beene's "Copyright and Interlibrary Loan Services," the first paper in the collection, attempts to acquaint librarians with those portions of the new copyright law dealing with fair use and the rights of reproduction and distribution granted to librarians. This paper is followed by Mary Hardin's "The Oklahoma Teletype Interlibrary System," Jane Rollin's "Experiences and Problems of a Statewide Network: NYSILL," Karen Furlow's "On Trial: Free Photocopy for SOLINET Libraries in Louisiana," Jane Kleiner's "From Acorn to Oak: The Development of the National Agricultural Library Regional Document Delivery System," Leanne Blevin's "Vanderbilt Medical Center Library Experiences With Interlibrary Loan," and Elaine Albright's "The Organization of Interlibrary Services at the University of Illinois at Urbana-Champaign." Wilka Carter's "Billing and Accounting for Photocopying Services in a Small Academic Library" will be of interest to institutions of similar size facing bookkeeping and payment problems. Kenneth Jensen's "Serials and the Center for Research Libraries" relates the University of Virginia Library experience of using the center's Journal Access Service. Finally, Frances Gendimenico's "The British Library Lending Division Overseas Photocopy Service" is a detailed account of the University of Pennsylvania Library's use of the British Lending Library Division's services at Boston Spa. Considerable information on the Boston Spa operation, including costs, turnaround time, and holdings, is present in the report.
Some publications of
THE MUSIC LIBRARY ASSOCIATION
MLA Technical Reports
No. 1 SLACC, the Partial Use of the Shelf List as Classed Catalog, by Donald Selbert, 1973. $6.50
No. 4 The Classification and Cataloging of Sound Recordings, by Barbara Knisely Gaeddert. $5.50
No. 5 Recordings of Non-Western Music: Subject and Added Entry Access, by Judith Kaufman. $5.00

Music Cataloging Bulletin
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Rules for the Brief Cataloging of Music in the Library of Congress. Exceptions to the Anglo-American Cataloging Rules, 1970. $3.00

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