



# Collection Development—Evaluation

by Dennis P. Carrigan

**This article argues for explicit evaluation of collection development and discusses means to accomplish that. Evaluating a library's collection is not an acceptable proxy for evaluating collection development.**

In fiscal 1992-1993, U. S. academic libraries spent \$1.29 billion for materials acquisitions.<sup>1</sup> Collection developers and others who, when making such decisions acted as collection developers, made the decisions about how to spend that money.<sup>2</sup> That sum, however, does not tell the whole story about spending that collection developers' decisions give rise to, as the acquisition, cataloging, and processing of those materials results in additional costs. The purchase and other costs may account for two-thirds of libraries' operating budgets.<sup>3</sup> If U.S. academic libraries spent an average of 35 percent of operating expenditures for the purchase costs of materials, then in that year the libraries' operating budgets, in the aggregate, exceeded \$3.68 billion. In that case, collection developers were responsible directly and indirectly for spending nearly \$2.46 billion.

The work that bears on such vast expenditures deserves to be evaluated. However, a literature search reveals that, although the evaluation of collections has received considerable attention,<sup>4</sup> little has been written about the evaluation of collection development and collection developers.<sup>5</sup> Given the importance of collection development in determining the nature and, to a considerable extent, the level of service which a library is able to provide<sup>6</sup> and in causing vast sums to be spent, the dearth of published material having to do with evaluating collection development is unfortunate, and it no doubt reflects the difficulty of such evaluation.

In spite of that difficulty, means to evaluate collection development must be devised. The ultimate objective of the evaluation is to determine how effectively collection developers allocate the resources for which they are directly and indirectly responsible. Vast sums are invested in library collections so that users and others may realize benefits. The bene-

fits are the return on the investment; and the benefits, if they are of sufficient magnitude, justify the investment. Collection development may be defined as the function whose responsibility it is to allocate scarce resources to create and enhance the investment in the collection, so that patrons and others may realize benefits. Given the role of benefits in justifying vast expenditures, and the role of collection developers in determining the level of benefits, the work of collection developers, among library functions, has primary responsibility for the degree to which a library succeeds in fulfilling its mission.<sup>7</sup> The need to evaluate collection development is commensurate with this primary responsibility.

## EVALUATING COLLECTIONS NOT AN ACCEPTABLE PROXY

Some might assert that the evaluation of collections is an acceptable proxy for the evaluation of collection development. Since collection developers<sup>8</sup> are responsible for the collections, so the assertion might go, then an evaluation of a library's collections is tantamount to an evaluation of the work of the library's collection developers. The assertion is not persuasive, for two reasons. For one reason, collection evaluation, as typically practiced, does not detect overselection,<sup>9</sup> yet overselection is increasingly costly and must be detected. For the second and more important reason, the success of collection developers in carrying out their collection development responsibilities determines whether the return on the investment in the collection justifies the magnitude of the investment. Given the importance of the work of collection developers, a group that includes those teaching faculty who have materials selection as one of their responsibilities, that work should be evaluated directly.

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## THE IMPORTANT ISSUE OF OVERSELECTION

Some years ago Edelman pointed out the important distinction between what he referred to as "underselection," not acquiring materials that should have been acquired, and "overselection," acquiring "materials that probably should not have been acquired."<sup>10</sup> The Vanderbilt University libraries, according to Getz, distinguishes between a Type I acquisition decision error, Edelman's underselection, and a Type II error, Edelman's overselection.<sup>11</sup> Carpenter and Getz elaborate: "The Type I Error is the false negative: failing to buy books [or other materials] that would have been useful. The Type II Error is the false positive: buying books [or other materials] that were not used."<sup>12</sup>

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### The Rising Costs of Overselection

Some might argue concern with overselection is misplaced, but that argument must be rejected due to the high and rising costs of overselection. Those who take the position that attention to overselection is misplaced might contend overselection is harmless or even argue it is a sensible strategy. Predicting what library clients will need today and in the future is problematic, and, therefore, the best strategy is to acquire as much as possible and not to be overly concerned whether acquired materials are used. In that regard, Futas and Vidor commented:

It has always been supposed that size, although not a qualitative criterion in itself, is one measure of a 'good' collection. The theory (and it can be argued to be valid) is that if you buy enough of what is available, some of it is bound to be valuable, albeit surrounded by a lot of dross.<sup>13</sup>

Sullivan put it this way: "As long as there is a lot of material in a library, without obvious discontinuities in coverage, researchers stand some chance of having their needs met."<sup>14</sup>

If, however, the argument ever could be maintained convincingly that concern with overselection is misplaced, that is no longer the case.<sup>15</sup> The costs of overselection are rising, and not simply or even most importantly because the costs to construct library buildings are very high and are increasing. The true cost of an item acquired for a library's collections is the opportunity cost of the item, which is to say, the value to the library's clients of what was *not* acquired because the acquired item was chosen instead.<sup>16</sup> As the gap widens between what a library would like to acquire and what it is able to acquire, it is inevitable that ever more valuable materials must go unacquired. It is for this reason the opportunity costs of acquired items rise as the gap grows between what is desired and what can be acquired. Rising opportunity costs are an expression of the growing costs of overselection.

As Futas and Vidor commented, "one problem with collecting everything to get the 'good' is that we are not sure of the impact of every 'bad' volume on a 'good' collection."<sup>17</sup> When, however, a library is unable to collect everything it would like to in order to meet the needs of its users, which is increasingly the case with libraries serving research universities,<sup>18</sup> "the impact of every 'bad' volume"—an acquired volume that should not have been added to the collections—is known: It robs the library and those it serves of a volume that should have been acquired. Because of the role of opportunity costs, the consequences of overselection vary among libraries and among categories of libraries. The important consideration is the extent of the gap between what is desired and what is acquired. As a group, libraries serving research universities likely face the highest opportunity costs and, therefore, pay the highest price for overselection.

Overselection is a more serious error than underselection. The consequences of underselection can be undone or offset either by acquiring materials it is later determined should have been acquired or by borrowing them through interlibrary loan (ILL).<sup>19</sup> However, there really is no undoing the opportunity and other costs of overselection. Sending overselected items to remote storage may reduce the cost to store the materials, but there is a storage cost. If it is decided to dispose of overselected items, perhaps through the annual used book sale, the indirect costs to acquire the materials cannot be recouped

and, in fact, there are additional indirect costs to remove the materials from the catalog and collections. And the amount obtained for overselected materials at the used book sale likely will be a fraction of the materials' purchase prices.

## MEANS TO EVALUATE COLLECTION DEVELOPMENT

### The Need for and Availability of Data

It is important to *analyze* collections and the uses made of them, and it is essential to *evaluate* collection development. The former is the basis for the latter, but it is not a substitute for it. How might collection development be evaluated? Are the data requirements for collection development evaluation so great as to make the task impractical? The answer to the second question is no. Although good evaluation of collection development requires data, much valuable information for such purpose is available, or can be made available, as a byproduct of automated circulation systems.<sup>20</sup>

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Now to the first question, How might collection development be evaluated? Several ways are discussed in what follows. They are *use*-based, for the reason that it is essential to identify both underselection and overselection. *User*-based means are also an important way to evaluate collection development. However, it is unlikely user-based means would identify overselection. In any case, user-based means to evaluate collection development are outside the scope of this article.

Before discussing some ways to evaluate collection development, the broad objective for such evaluation should be restated: The ultimate objective is to determine how effectively collection developers allocate the resources at their disposal; these resources may be as much as two-thirds of a library's operating budget.<sup>21</sup>

### Proportional Use

Determining the relative or proportional use of the materials making up a library's collections reveals both overselection and underselection. The immediate objective is to determine the extent of use of materials in each subject relative to holdings in each subject. The ultimate

objective should be to evaluate the work of collection developers, which this analysis makes possible. More than 20 years ago Bonn pointed out:

Proportionate circulation statistics by subject class compiled over a definite period are excellent checks on overall selection policies and acquisition rates when compared with proportionate holdings statistics by subject class.<sup>22</sup>

He referred to "the ratio of use to holdings in specific subject classes" as the "use factor" for that subject class." Such "proportionate analyses" were included in surveys that Bonn conducted at three libraries, and the analyses exposed "overdeveloped as well as underused areas" in the collections, that is, examples of overselection. In one of the three libraries surveyed, the analysis revealed that underuse of the library's holdings in an important subject "coincided with overborrowing from other libraries" in the same subject. According to Bonn, the cause was quickly identified. For some time that part of the collection had been "left to itself" by collection developers, with the result the holdings in the subject had become dated.<sup>23</sup>

More than a decade ago Metz published the results of his large-scale study of the proportional use of circulating materials in the Virginia Tech libraries.<sup>24</sup> The study was made possible by an online catalog and circulation control system developed at Virginia Tech. In each of 81 subject categories, defined by specified call number ranges, circulation data for two one-day periods, and holdings, were analyzed by using a statistical analysis package. The circulation percentage in each category was divided by the holdings percentage in the category, and the "proportional use statistic" was calculated for each of the 81 categories. If circulation and holdings percentages were identical, the category's proportional use statistic would be 1.00. The proportional use statistics for several subject categories were essentially 1.00. If circulation of materials in a category was heavy relative to holdings, then the proportional use statistic would be above 1.00; and if circulation were low relative to holdings, then the statistic would be below 1.00. Some proportional use statistics deviated significantly from 1.00, in certain cases above while in others below.<sup>25</sup>

While proportional use statistics close to 1.00 suggest collection developers are performing well, the more the proportional use statistics deviate from that ideal,

the greater the need to review the performance of collection developers. To bring that performance up to standard may require no more than a change in allocating the materials budget, but this will be known only after a review.

### 80/20 Statistic

More recently Britten reported the results of his study of the use of circulating materials in the University of Tennessee, Knoxville (UTK) libraries, and his analysis reveals a means to evaluate collection development.<sup>26</sup> His study also was made possible by an automated circulation system, but his approach differed from that of Metz. Britten proceeded from the so-called "80/20 rule" associated with Richard Trueswell, which expresses the fact that in the typical library, a substantial majority of uses is concentrated among a minority—often a small one—of holdings.

Trueswell reported that a:

characteristic of inventory in business or industry is that approximately 80 percent of the number of transactions taken from a warehouse represents about 20 percent of the items stocked. . . . The rule is sometimes expressed as the 75/25 rule with the same interpretation.

According to him, a "library exhibits similar relationships." When he analyzed the circulation transactions for nearly 500 medical journals, he determined that 28 percent of the titles accounted for 80 percent of the loans of the journals. For that analysis, the "rule" would be 80/28.

Trueswell also examined the circulation of monographs at the Air Force Cambridge Research Laboratory Library, and he concluded that "80 percent of the circulation requirements are satisfied by approximately 20 percent of the library's holdings." For that analysis, then, the "rule" would be 80/20. Finally, Trueswell examined the circulation of materials at the Forbes Library, the public library serving Northampton, Massachusetts, and concluded "that 80 percent of the circulation is satisfied by 20 percent of the holdings."<sup>27</sup>

Britten set out to calculate what he refers to as the "80/20 statistic"<sup>28</sup> for the collection as a whole, and then to calculate the statistic for individual Library of Congress (LC) classes. As with Metz's proportional use statistics, so Britten's 80/20 statistics reveal relative levels of use among categories of the collections.<sup>29</sup>

At the UTK libraries during the period studied, overall the situation was very close to 80/20: 20% of holdings accounted

for a little more than 80% of circulation. But Britten commented:

While it may be fortuitously dramatic that the 80/20 phenomenon exists at UTK Libraries, the proving or disproving of a mystical relationship between the numbers 80 and 20 is only of interest for curiosity's sake. What is of greater importance is that the ratio for the entire collection has been established and can be used as a basis of comparison with specific segments of the collection. These comparisons, in turn, can be used for further study in the pursuit of systematic management of the collection.<sup>30</sup>

When the "80/20 statistics" were calculated for individual LC classes, they revealed

a wide range of deviation from the 80/20 average of the collection as a whole, and it is difficult to restrain an excitement from thinking that the collection has parted with a deep secret. . . . And, now that Pandora's box is opened, if 1.5% of the items in class J have produced 80% of the circulations, what small percentage must be responsible for 100% of the circulations?<sup>31</sup>

Britten concluded:

The deviations of the LC classes...from the 80/20 ratio of the collection as a whole provide valuable clues regarding where the wrong books are being acquired, as well as evidence about where not enough of the right books are being acquired. . . .

Comparing the 80/20 findings for various portions of a library's collection may not furnish a foolproof quantitative method for allocating the book budget, but it undeniably reveals where a collection management librarian should investigate further.<sup>32</sup>

### Interlibrary Loan Data

Data showing the extent to which a library's clients must turn elsewhere for the materials they need provide a means to evaluate collection development. Although some turning elsewhere for materials not available locally may take place outside ILL, nevertheless it is reasonable to assume most such turning elsewhere for materials is done via interlibrary loan (ILL).<sup>33</sup> Thus, a library's ILL office is a convenient source of important information for use not only to guide collection development<sup>34</sup> but also to evaluate it.

On the surface, the ILL data indicate underselection, but use of the data should not end there. As one example of how their use could be extended, each item acquired through ILL could be assigned to a subject

category, and the number of items in each category obtained through ILL could be compared with the proportional circulation of *owned* items in the subject category.<sup>35</sup> Where the comparison revealed a high percentage of owned items in the category was circulating, it would appear something other than having chosen the wrong materials for purchase was causing the ILL activity. Where the comparison revealed a low percentage of owned items was circulating, however, the twin errors of overselection and underselection might be the cause of, or a major contributor to, the need to turn elsewhere for materials. Only further analysis could establish the cause.

In the wake of the University of Pittsburgh study and the controversy it generated, Hardesty partially replicated that study at DePauw University, a small liberal arts college. His study evaluated collection development at the college library, and the study incorporated information about the use of materials not owned by the DePauw library. He did not have the benefit of an automated circulation system and the data it can make readily available. He chose as his sample the 2,031 books that had been acquired in a half-year period. When books that were not permitted to circulate were excluded from the study, the number was reduced to 1,904. The recorded circulation for each book was determined for two time periods. According to Hardesty, the two periods, combined, "represent approximately the first five years of availability for use."

As a result of his findings, Hardesty concluded "DePauw University books generally are used even less than University of Pittsburgh books."<sup>36</sup> He anticipated the comment that making known the results of his investigation might lead to the conclusion the library was acquiring more books than it needed and the decision to cut the library's materials budget, on the belief that a cut could be made without adversely affecting library service. He pointed out that two surveys of DePauw seniors revealed that they had to use other libraries to complete assignments "because of inadequate DePauw University library collections."

The seniors' evaluation of the DePauw library was confirmed by a study, for the period 1974-1980, of the materials cited in seniors' theses by DePauw psychology students graduating with honors. More than half of the books cited by the students were not owned by the DePauw library. As Hardesty commented, "The problem

may not be that too many books are being acquired, but that the wrong books are being acquired."<sup>37</sup> Ironically, at the time at DePauw, collection development was primarily by teaching faculty.<sup>38</sup>

Hardesty's evaluation showed that both underselection and overselection existed. The students whose work revealed the errors of underselection were, nevertheless, able to deal with the errors by using materials owned by other libraries. But how were the errors of overselection dealt with? And if the wrong books were acquired and the right books were not, then each purchase of a wrong book carried with it a significant opportunity cost—the value to library users of the right book that was not purchased.

### Evaluating Collection Development: Benefits of Electronic Tools

Carpenter and Getz reported the results of an investigation of how the library's collecting program supports the missions of the department of economics at Vanderbilt University. Their work reveals what today's electronic technology makes possible in evaluating collection development, and it shows the ability to evaluate collection development can come as a byproduct with certain electronic information services. According to Carpenter and Getz,

The tools used here for evaluating collections are recent developments. The electronic tools libraries have adopted to enhance services also provide information useful in assessing how well the library is performing. As the Heard Library learns to use the new tools, it should be able to improve its support for the department.<sup>39</sup>

The point deserves to be emphasized: The "electronic tools" to which Carpenter and Getz refer provide direct benefits to library clients who take advantage of the tools. The tools also provide indirect benefits to clients *if* advantage is taken of the tools' ability to enable collection developers to manage better the library's resources and in that way match resources with clients' needs. In their case study, Carpenter and Getz illustrate how this is done.

In the aggregate the Vanderbilt libraries hold about 88,000 monographic titles in economics and business. About 2,000 titles are added annually. For the study, the titles were divided among 17 groupings, 16 LC call number ranges and those older titles that are still classified with Dewey numbers. All of the Dewey-classified monographs were treated as a single

grouping. The percentage of titles in each grouping that circulated since 1986 was determined, as was the percentage of all titles in the study.

For their analysis, Carpenter and Getz calculated average monograph and serial cost. They determined the average price of an economics book published in North America or the United Kingdom (\$44) and the average direct cost to process a monograph at Vanderbilt (\$27). They used the figure of \$2 per volume for shelf space and arrived at \$73 as the total cost to add a monograph. Taking the same approach, they arrived at \$117 as the average print subscription cost, and they used \$2,933 as the average price of CD-ROMs in the social sciences.<sup>40</sup>

Carpenter and Getz undertook to evaluate the libraries' collecting program in economics journals. To that end,

A careful review of current economic serial subscriptions held by the library would require the identification of both titles to drop and titles to add. In considering titles to drop, it might be useful to examine journals with high prices and journals least frequently cited.<sup>41</sup>

In their evaluation, the authors make use of such information as the ranking of journals in the discipline, citations, each title's subscription price and the Institute for Scientific Information's (ISI) impact factor for the title.

Carpenter and Getz developed a scatter plot that shows the relationship between price and ISI impact factor. They conclude:

If the ISI Impact Factor measured the intellectual value of the publication, then one might expect those titles with higher impact factors to bear higher prices, other things being equal. The scatter shows no such relationship.

The analysis provides the basis for any future serials cancellations or new subscriptions. The authors make clear faculty in economics would be asked to participate in a review of titles prior to cancellation, and they state any such review "will carefully examine journal subscriptions to take account of quality, relevance to Vanderbilt's faculty and instructional programs, and price."<sup>42</sup>

To evaluate monographic collecting in economics and business, the authors distinguish between Type I and Type II collecting errors, which they refer to, respectively, as "the false negative: failing to buy books that would have been useful" and "the false positive: buying books that

were not used." Using *Books for College Libraries*, the *OCLC/Amigos Collection Analysis CD*, and the 6-year circulation history of the 3,056 titles in LC call-number range H with a 1987 imprint date, they conclude:

[O]ne senses that the library might have deployed its book budget in economics more effectively had it acquired more titles in statistics, theory, business, and finance, and fewer in transport, and land.<sup>43</sup>

After discussing electronic resources, other services, and the future, Carpenter and Getz identify changes that have been made or are under consideration, due to their review of library resources in economics and business.<sup>44</sup> The goal is to better align library collecting efforts with the needs of the department. They show how use of the electronic tools makes possible better alignment by taking advantage of the tools' analytical capabilities.

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### CONCLUSION

The work of collection development is difficult at libraries that serve colleges or universities at which graduate study and research are not central missions. At institutions where research and graduate study at the doctoral level are central missions, the work is even more difficult. It is at such institutions that collection developers grapple with the need to balance collecting materials for today's use with collecting materials for possible future use. It is at such institutions that collection developers struggle with the vexing challenge of allocating materials budgets that are, and for some time have been, shrinking relative to perceived needs, with the result that the goal of comprehensiveness recedes ineluctably. And it is at such institutions that collection developers wrestle with the increasingly frequent choice between the purchase of an item and other forms of access to it, such as ILL, document delivery, or transaction-based electronic access.

For collection developers, and indirectly for the users of the libraries where the collection developers are employed,

the most significant consequence of the persistent relative decline in materials budgets is the attendant rise in the cost of overselection, the purchase of an item that turns out not to be used. To determine the extent of overselection, as well as underselection, and to put in place ways to reduce either or both if overselection and/or underselection exist at a significant level, the work of collection developers must be given explicit evaluation.

The literature reveals that little has been written about the evaluation of collection development and collection developers. This may reflect the perceived difficulty of such evaluation. Whatever the reason, however, this must change. The work of collection developers is too important for it to continue to go along without regular, thorough evaluation. In this article, certain means to that end have been discussed. Other means exist, and still others can be devised. What is required is the commitment.

### NOTES AND REFERENCES

1. Catherine Barr, ed. *The Bowker Annual*, 39th ed. (New York: Bowker, 1994), pp. 447-455.
2. In this article, "collection developers" are those who have collection development as their primary or sole responsibility, as well as those materials selectors who have collection development as a responsibility, though it is not their primary responsibility. The latter group includes many teaching faculty. The work of collection development is not limited to the selection of materials to be added to the collections, though arguably selection is at the heart of collection development. As will become clear, this article concerns itself with the selection function.
3. Michael K. Buckland, "The Roles of Collections and the Scope of Collection Development," *Journal of Documentation* 45 (September 1989): 213.
4. For an indication of the amount of attention, see Thomas E. Nisonger, *Collection Evaluation in Academic Libraries: A Literature Guide and Annotated Bibliography* (Englewood, CO: Libraries Unlimited, 1992).
5. Anne Edwards discusses the need for the evaluation of collection development librarians, but among the "skills, qualities, and duties" she mentions for evaluation she does not include the librarians' skill in selecting appropriate titles to be added to the collection. See Anne E. Edwards, "Performance Evaluation of Collection Development and Acquisitions Librarians," in *Evaluating Acquisitions and Collection Management*, edited by Pamela S. Cenzer & Cynthia I. Gozzi (New York: Haworth Press, 1991), pp. 115-122.
6. Although ILL, document delivery, and transaction-based electronic access may enable

all academic libraries to deliver ultimately the same materials to their clients, decisions about what to have in the local collection and what to make available only through other forms of access bear greatly on—if not determine—the nature and level of service. Such decisions are the province of collection development.

7. For elaboration of the argument outlined in this paragraph, see Dennis P. Carrigan, "Toward a Theory of Collection Development," *Library Acquisitions: Practice & Theory* 19 (1995): 97-106.

8. In this article, the terms "collection development" and "collection developers" are used interchangeably. Although "collection development" is the far more common term, "collection developers" is used here, too, to call attention to the fact there are people responsible for the composition of a library's collections. It is the efforts of those people that should be evaluated.

9. According to Mosher, "Perhaps the most common form of collection evaluation is based on the shelflist or shelf count of titles. . . ." Overselection would not be detected. Paul H. Mosher, "Quality and Library Collections: New Directions in Research and Practice in Collection Evaluation," in *Advances in Librarianship*, Vol. 13, edited by Wesley Simonton (Orlando, FL: Academic Press, 1988), p. 219. On the other hand, F. W. Lancaster points out that a portion of a collection may be "underused," which may be due to "buying the wrong books," i.e., overselection. F. W. Lancaster, *If You Want to Evaluate Your Library . . .* (Champaign, IL: University of Illinois Graduate School of Library and Information Science, 1988), pp. 39-45. The quote appears on p. 41.

10. Hendrik Edelman, "Selection Methodology in Academic Libraries," *Library Resources & Technical Services* 23 (Winter 1979): 38.

11. Malcolm Getz, "The Electronic Library: Analysis and Decentralization in Collection Decisions," *Journal of Library Administration* 14, 3 (1991): 78.

12. David Carpenter & Malcolm Getz, "Evaluation of Library Resources in the Field of Economics: A Case Study," *Collection Management* 20 (1995): 69.

13. Elizabeth Futas & David L. Vidor, "What Constitutes a 'Good' Collection?," *Library Journal* 112 (April 15, 1987): 45.

14. David S. Sullivan, "Budgeting for Users: Rethinking the Materials Budget," in *Evaluating Acquisitions and Collection Management*, p. 18.

15. *Ibid.*, p. 16.

16. For opportunity costs and libraries, see Dennis P. Carrigan, "Improving Return on Investment: A Proposal for Allocating the Book Budget," *Journal of Academic Librarianship* 18 (November 1992): 294; Dennis P. Carrigan, "Librarians and the 'Dismal Science,'" *Library Journal* 113 (June 15, 1988): 22; Bruce P. Schauer, *The Economics of Managing Library Service* (Chicago: American Library Association,

- 1986), pp. 108-109. Economists impose the condition that the opportunity cost of a choice be stated in terms of the best alternative use of the resources.
17. Futas and Vidor, "What Constitutes...," p. 45.
18. Malcolm Getz, "The Economics of Research Libraries: Present State and Future Prospects," *IFLA Journal* 15 (November 1989): 302, 303.
19. For an interesting discussion of this, see Michael Roberts & Kenneth J. Cameron, "A Barometer of 'Unmet Demand': Interlibrary Loans Analysis and Monographic Acquisitions," *Library Acquisitions: Practice and Theory* 8 (1984): 35-36.
20. See, for example, Getz, "The Electronic Library . . .," p. 78, and the cited works by Metz and Britten (see notes 24 and 26).
21. Although the single resource, money, receives most attention, nevertheless in going about their work collection developers also allocate other valuable resources, library space and their (collection developers') time as well as the time of those in acquisitions and cataloging.
22. George S. Bonn, "Evaluation of the Collection," *Library Trends* 29 (January 1974): 272-273.
23. *Ibid.*, pp. 273.
24. Paul Metz, *The Landscape of Literatures: Use of Subject Collections in a University Library* (Chicago: American Library Association, 1983).
25. *Ibid.*, pp. 7-16.
26. William A. Britten, "A Use Statistic for Collection Management: The 80/20 Rule Revisited," *Library Acquisitions: Practice & Theory* 14 (1990): 183-189.
27. Richard L. Trueswell, "Some Behavioral Patterns of Library Users: The 80/20 Rule," *Wilson Library Bulletin* 43 (January 1969): 458-461.
28. The "80/20 rule" does not hold that in every library 80 percent of circulation will be concentrated among 20 percent of holdings. Although 80/20 may describe the actual situation in some libraries, nevertheless 80/20 has come to be a succinct representation of the general phenomenon. Britten set out to determine the actual situation at his institution.
29. William A. Britten, "A Use Statistic...," p. 183.
30. *Ibid.*, pp. 184-185.
31. *Ibid.*, p. 185.
32. *Ibid.*, pp. 188-189.
33. As used here "interlibrary loan" includes document delivery.
34. For the use of ILL data in collection development, see, for example, F. K. Rottmann, "To Buy or to Borrow: Studies of the Impact of Interlibrary Loan on Collection Development in the Academic Library," *Journal of Interlibrary Loan & Information Supply* 1 (1991): 17-27; Brian W. Williams & Joan G. Hubbard, "Interlibrary Loan and Collection Management Applications of an ILL Database Management System," *Journal of Interlibrary Loan & Information Supply* 1 (1991): 63-90.
35. William Aguilar, "The Application of Relative Use and Interlibrary Loan in Collection Development," *Collection Management* 8 (Spring 1986): 15-24. For an analysis that relies on relative acquisitions and ILL data rather than on relative use and ILL data, see Gary D. Byrd, D. A. Thomas, & Katherine E. Hughes, "Collection Development Using Interlibrary Loan Borrowing and Acquisitions Statistics," *Bulletin of the Medical Library Association* 70 (January 1982): 1-9.
36. Larry Hardesty, "Use of Library Materials at a Small Liberal Arts College," *Library Research* 3 (Fall 1981): 271.
37. *Ibid.*, p. 272.
38. In that regard, Roberts and Cameron comment: [I]t is ... known, if not often admitted, that much that has been purchased on academic recommendation in the past has slowly yellowed on the shelf, unloved and unread." Roberts & Cameron, "Barometer of 'Unmet Demand,'" p. 41.
39. David Carpenter & Malcolm Getz, "Evaluation of Library Resources in the Field of Economics: A Case Study," *Collection Management* 20 (1995): 50. It is unfortunate the authors, in their title, use the expression "evaluation of library resources" rather than the expression "evaluation of library collection development." It is noteworthy that, in their first paragraph, the authors appropriately refer to "how the library's collecting program supports the department."
40. *Ibid.*, pp. 52-57.
41. *Ibid.*, p. 59.
42. *Ibid.*, pp. 58-67.
43. *Ibid.*, pp. 68-76.
44. *Ibid.*, pp. 81-83.