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# The Whole Cost of Libraries

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## ABSTRACT

MOST PEOPLE THINK OF the cost of a library in terms of its assigned budget, which sets out the annual allocation of specific sums of money for specific purposes. This budget is only symbolic since, in many cases, certain kinds of expenditures are not included, and some, such as opportunity costs, cannot, because of their nature, be included in a financial statement. In addition, a relatively new concept, "value maintenance," should be considered. Almost all writing by academic librarians has been concerned with operating budgets rather than the total costs of libraries. Here an attempt will be made to review the kinds of costs involved and how they affect the real cost of running a library. For the most part, first attention will be given to academic libraries, but, where appropriate, reference will be made to other libraries.

## INTRODUCTION

In addition to the operating budget, which may also include endowment and similar special funds, there may also be capital budgets. The interaction among these budgets is seldom stated, though many academic institutions have begun the practice of including some kind of operating endowment in fund drives meant to finance new construction.

Most institutional budgets are aggregated from budget requests submitted by various agencies who may or may not have engaged in any prior consultations. The fragmentary nature of institutional

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budgeting makes it clear that the true cost of running a library is not simply that shown in the operating budget.

Different kinds of libraries receive different kinds of budgetary treatment. In general, public library budgets are the most comprehensive, since they operate autonomously and have to be responsible, for example, for utility and cleaning costs, which seldom show up in an academic library budget. Special libraries sometimes do not have a direct budget, and their costs are paid from various sources as appropriate or charged back to various accounts. Some academic budgets make provision for staff benefits, while in other cases these are charged against a central fund. These variations exist whatever budget style is used—from the simplest line item to the most complicated program budget. This makes consideration of total library costs a very complex matter, but, in view of the need for exercising the highest level of budgetary restraint, it is essential to know what these costs are.

### BUILDING AND MAINTENANCE COSTS

Among the most important costs that do not usually show up directly in an academic or special library budget are those related to the building and its equipment. These include utility costs—heat, light, and power—which may be included in another part of the institutional budget, somewhat in the manner of overhead. Given the size of most libraries and the fact that they are open long hours with sizable populations, it is clear that building maintenance costs will also be sizable. It is, therefore, strange that these costs are seldom taken into consideration when planning new or renovated libraries.<sup>1</sup>

Added power consumption or changes in heating, ventilation, and air conditioning (HVAC) requirements are seldom considered when planning for the installation of automated systems, despite the fact that concentrations of machines and people tend to generate both heat and noise beyond that expected in the simpler days when most libraries were planned. This is particularly important when the need is to fit systems into an existing building.

Most library budgets include lines for door guards, and some include at least a part-time position responsible for building security, but few budgets (other than public libraries) include the cost of personal security or of cleaning, though both can be substantial in a large library. In part, this is because these activities are the responsibilities of other parts of the organization, which are themselves differently organized. It may be possible to extract costs associated with the library, but this kind of effort tends to be more expensive than the results are worth. It also results from the fact that different reporting mechanisms result in the activities being

under the charge of different senior officers, so that there may be little or no interaction in the course of budget decision making.

Personal security is usually the responsibility of another agency, though there has been a move in some institutions to involve a wider range of administrators. Whereas the actual costs of repairs to the building may be charged back to the library budget, it is not often seen as parallel that the costs of personnel safety incidents should also be charged back. In fact, because of the nature of the building's use and the value of the materials housed, most libraries do make *de facto* assignments concerned with personal safety without showing the cost separately. Again, because they operate separately, large public libraries and museums have arrived at much better estimates of such costs and include them in their budgets.<sup>2</sup> Because such considerations can affect the ways in which libraries (or individual departments such as Special Collections) can operate, their incorporation into the library budget, or at least consultation about these costs, would make clearer the actual cost of operation and enable better decisions to be made about how to do business.

Most library budgets will carry some line within the budget covering the cost of repairs even if the amount is small since there will inevitably be power and equipment failures and broken furniture. In this, library budgets differ from other parts of an academic institution, primarily because, whereas classrooms are shared by many departments, these are single users and the costs of replacement and repair can be allocated directly. The amount so allocated tends to have historic roots and acts as a kind of amortization fund on the theory that it is likely that a certain number of chairs and tables will wear out each year and can be replaced individually rather than wholesale which tends to be the method used for classroom buildings.

The increasing amount of electronic equipment in libraries has begun to strain the operating budget since very few institutions create sinking funds to cover the inevitable cost of replacement with more up-to-date equipment. Testimony to this is the increasing number of idle computer terminals in many libraries awaiting replacement or repair, also the long delay in upgrading computer systems beyond the time their peak usefulness has passed. Although it has long been the practice to provide a budget line for equipment service contracts (such as typewriter cleaning or maintenance for microform readers), the increase in the number and kinds of equipment has far exceeded the capacity of this usually modest part of the budget. Even the relatively simple need to keep terminals and workstations clean has been overlooked as a cost although it is as important as programming or CPU maintenance. In fact, libraries are finding that the cost of going electronic is far more complex than was ever thought.

Insurance for library buildings and collections can be very expensive, and insurance companies are now insisting on better building conditions, including the provision of proper disaster control systems. This may prompt institutions to think more thoroughly about one of their most expensive and valuable investments. Renovation of a library can be extremely costly, but the replacement of lost collections can be prohibitive, and may, in some cases, be impossible. There are no simple ways to keep the valuation of a library's collections up to date. It is possible to use annual expenditures to increase total worth, but there are few algorithms to upgrade the cost of the replacement of older materials, and the calculation of the cost of replacing bibliographic data, whether in paper or electronic format, defies any existing system, since the original costs are either lost in time or composed of so many separate operations that the calculation of a total cost may prove impossible. Although they are referring principally to the concept of depreciation, both Christianson (1992) and Carpenter and Millican (1991) stress the importance of including processing costs. Only when a disaster wipes out a library do most institutions realize the cost of replacement which must cover not only the direct cost of materials but also the cost of processing them—a cost that is not covered by any insurance policy. In the light of these facts, it is clear that more should be spent on preventive measures, including preservation, but such a change runs counter to most academic or other library budget styles. In the same way as repairs to a building are likely to be delayed until the cost demands either a separate fund drive or a legislative appropriation, the repair of the collection may well be delayed until there is virtually no collection to repair. Many libraries maintain minimal budgets for replacement, but, for the bulk of the collection where the deterioration is slow and silent, most libraries must seek special grants or look to national programs which use microforming or digitization. Overlooking such needs leads to the undercapitalization of the library.

Building and maintenance costs can thus be seen to cover a wide range of costs, some of which are recognized, some of which are not. Again some are included, even if inadequately, in the library budget; some are the responsibility of other agencies and may or may not be provided for in their budgets; others are not covered at all. These costs include:

- repairs, whether major or minor;
- maintenance contracts for equipment;
- utilities;
- cleaning;

- insurance;
- amortization funding for new equipment;
- collection maintenance and preservation;
- personal safety costs; and
- disaster preparedness costs,

### GROWTH COSTS

It is in the nature of libraries to grow. Predicting the rate of growth is not an easy task (Drake, 1976). There have been several attempts to control growth in favor of stable library size. These efforts are generally more successful in smaller libraries where the principal need is to support teaching rather than research (Gore, 1976). In larger libraries, the need for specific items in the collection may diminish over time. The famous Pittsburgh study (Kent et al., 1979) simply confirmed this but did not explain how to predict what items will be used. In many subject areas, books and periodicals simply do not go out of date; in others, use may diminish to the degree that they do not need to be retained. However, even in technological fields, new uses have been found for older materials—for example, in exploring its history or in recovering an earlier base on which to measure change as in ecological studies.<sup>3</sup> While it is clear that comprehensive libraries are not needed at all locations, there are no clear paradigms by which to determine what to keep and what to discard. Use studies have a role to play and can certainly help direct future growth. However, use also reflects the fashion of the day. Only too often a researcher, seeking to probe new fields, finds that the materials needed have been discarded. Popular culture students often find themselves in this situation (Brooks, 1993) or those who want to revisit older times and interests (Heinzkill, 1990; Metz & Foltin, 1990).

Administrators and librarians who have pinned their hopes (for cutting budgets and keeping the library building smaller) on electronics and cooperative schemes have usually had those hopes dashed by the complexities of each alternative. In any event, both depend for success on the original items having been kept somewhere. It is unlikely that many libraries can be assured that anything they discard will automatically be available to them through interlibrary loan or document delivery. There is no current evidence that libraries are coordinating serial cancellations (Martin, 1992; Price & Carey, 1993), which suggests that interlibrary cooperation is still a hit or miss affair. There are also transfer costs associated with heavy reliance on document delivery. Leach and Tribble (1993) suggest that libraries will begin to invest more of their budgets in delivery services rather than purchase, but they also raise many issues related to financing and managing this very different kind of library operation (pp. 360-64).

In such circumstances, libraries can be expected to grow, whether by the addition of printed materials or by the incorporation of electronic alternatives (which still require space), and administrations will continue to find that they need new buildings or at least better ones. One solution is the construction of storage libraries which are cheaper to construct than regular libraries and can also make more effective use of environmental controls than buildings which are heavily used daily. There are, of course, processing and retrieval costs associated with running a separate building, but these are less than similar costs associated with an increasingly larger library building. Another alternative is the use of compact shelving, whether within the existing library or as an adjunct structure. User-accessible compact storage works best with smaller frequently used collections but can also be used in remote storage facilities where access is under staff control. Compact shelving offers the opportunity to house more materials in less space but also carries new operating costs, somewhat akin to the older system of paging that was used with closed access library stacks. There are also some questions about the speed with which materials can be retrieved, and such forms of storage raise questions related to equal access by handicapped persons. Here the cost benefits of storage have to be weighed against any resulting user service costs.

Because libraries usually occupy prime space, any expansion is likely to be costly even if it is underground. This has made the idea of an electronic library very attractive since it appears to offer the chance to house more in less space. In fact, the changeover to electronic access may well need every bit as much space as the traditional expansion of the printed collections, since the user space will have to grow proportionately to use. One architect has claimed, for instance, that workstations for computer-related work will need between fifty and sixty square feet of space, as against the twenty to twenty-five square feet that is now provided for a reading space (Jeffrey Freeman, personal communication, 1990). A major research library reference area must now include many more reader spaces of a larger size than was ever intended in the original design. Because electronic information does not yet include all publishing, the traditional collections are unlikely to diminish to make room for them. What this means is that the basic design concepts behind library buildings are changing rapidly, and older buildings cannot easily adapt to the new needs.

Traffic patterns will change and tend to concentrate the user populace more. Many libraries have also found that the electronic media have led to a new need for instruction space, separate from regular user space, since library instruction is no longer simply a

matter of being shown where reference works and other tools, such as the catalog, are located. The combined effects result in a library very different from that to which most administrators have been accustomed, and it is difficult to persuade them that the budgets that support them must also change.

If libraries are to provide adequate services to users, they have to maintain adequate staff ratios, and these tend to remain constant. Some of these issues were examined as long ago as 1969 (Knight & Nourse, 1969) and later by Baumol and Marcus (1973), and the various budget ratios and patterns have not changed substantially since that time. Economies of scale are not readily available to a library where the transactions remain individual and unique. This remains true even in the use of electronic information. Such complexities make the modern library a much more difficult building problem, one which is barely now beginning to be addressed by librarians, administrators, and architects. The costs associated with changing building needs are seldom conveniently placed within existing budget paradigms, if only because it is difficult to place them clearly within categories.

- Are CD-ROM workstations capital equipment or the equivalent of periodical subscriptions?
- Have they replaced some elements of the older traditional budget or simply added new ones?
- How does one calculate the added utility costs of new electronic equipment, and where should they show up in the budget?
- Are there other support costs that must be included in the budget?
- What are the costs of different space alternatives?
- What alternative uses could be made of any money saved on building construction?
- How far can mechanical and electronic retrieval systems replace staff costs, or will they simply be added budget items?

These are only a few of the budgetary questions associated with the "new" library. Formerly, most such costs showed up in the "other" category of support expenditures, traditionally, about 10 percent of the total, but this is changing rapidly (Hayes, 1982; Kantor, 1986; Budd, 1990). Many libraries are now spending more than this proportion on electronic systems alone without taking into consideration more mundane daily expenditures. Without a substantial infusion of new money, an increase of that order can only be attained at the expense of other budget items—notably library materials—and there is a limit as to how far such a process can go before the library becomes dysfunctional.

## ELECTRONICS

Too many have seen the advent of long-distance electronic information transfer not only as a way of extending the services a

library can provide but as a way of cutting costs. As several speakers at the Computers in Libraries Conference (Oakland, California, 1991) pointed out, such an attitude overlooks the very real cost of telecommunication, the costs of staff training, and the substantial costs for equipment and installation. Many of these issues are discussed in *Campus Strategies for Libraries and Electronic Information* (Arms, 1990) but with little attention to budgetary effects. Since most wide area and local area networks are handled on an institution-wide basis, these are seldom charged back to individual operational units. This may change as the Internet and similar networks are privatized, leading to direct user charges. The internal result may well be similar to the change that was made in telephone billing when central overhead costs were charged back to individual units based on their share of the total system. This is likely to come as a shock to most users since networks have been thought of as essentially free. Institutions, on the other hand, which have tried to update their communications—for instance, by laying fiber optic cables—have come to realize that there are large capital costs and ongoing maintenance costs. Usage costs, in the form now familiar for telephones, have not yet emerged clearly but are certain to be developed either in an attempt to control usage or to recover costs.

### COST RECOVERY

Libraries have already had to grapple with this kind of issue in the provision of online services. Discussion of cost recovery has largely been conducted under the rubric of "Fee or Free," though, as White (1993) has pointed out, this is a misleading approach since, in fact, everything has a cost and has to be paid for. It is only a question of who will pay, and where the money will come from. Similar reservations were raised by Nielsen (1989) who was concerned at the relationships being drawn between cost and values. Taylor (1984) presented a very convincing case for fees for database searches using the analogy of photocopy services. The latter costs were, for a while, provided free until libraries realized: (1) that the cost would swamp the budget, and (2) that photocopy provided a good additional income source. Whether the service is provided internally or by contract, it is now customary for there to be a user charge. Taylor predicts that database searching and other analogous electronic services will also require charges if only to regulate use and prevent a drain on the budget. White, as cited earlier, cautions that there are problems in trying to distinguish between traditional and new services—the moral basis on which librarians justify charges—but he does not deny that the services cost money.

The problem is compounded as libraries move toward including such services in their online catalog systems. Many system vendors now make a great point of ways in which their systems link to other databases and services, such as the UnCover document delivery service. The advent of direct user searches and the possibility of using credit cards for payment is tending to eliminate such activities from those of the library proper. It is therefore becoming difficult to draw the lines among library, departmental, and personal budget expenditures. Even if all such services became payment driven, someone would still have to provide the space and the equipment, tend to the hardware and software involved, and provide instruction when needed. Should these services be charged for, and, if so, who would pay? Should there be an overhead for each transaction or should the parent institution provide these through a central budget? These issues are still unresolved. Libraries seem to have engaged in ad hoc planning and to have drawn money from wherever possible. Nor has the issue of handling income from fees and charges been resolved, though libraries seem to be encouraged to charge for more and more services. Warner (1990) offers some suggestions for resolving such issues, though these relate more to special libraries.

#### COST CENTERS AND OVERHEAD

As program or functional budgets have become more accepted, libraries have begun to look at the concept of cost centers. The new electronic services can well be so regarded, with the caveat that these are linked to other more traditional services, such as reference and circulation, because of their side effects on those operations. Defining library cost centers is difficult, except in the case of standalone operations like interlibrary loan, while it is possible to argue that technical services as a whole is a kind of overhead. This introduces a new aspect of overhead costing, which has not been customary other than in special libraries. There are sizable overheads in any library. These include general administration, supplies, systems support (from the library and the institution), and (in such cases as online services or bibliographic instruction) part-time assignments of staff together with benefits and support. To these can be added any direct system or vendor charges—e.g., for maintenance or upgrading. The result is a budget considerably different from a line item budget or even a simple program budget. If indeed all overhead or associated costs—such as heat, light, and power—and general administration were added, it would also be considerably larger than the traditional program budget. Despite the growth of such costs in any institution or library, there has been a move (mostly from federal programs) to lower the definition of overhead so that costs associated with grant projects may

no longer be adequately recovered. This has had an indirect effect on libraries, which had been seen as part of that overhead in that they have to continue to provide the necessary services from diminished budgets since the parent institution is no longer receiving the same reimbursement. It is true that many libraries were never allocated research overhead directly and may never have received the amount they used to justify, but this does not vitiate the argument that, in the new electronic era, libraries must be much more concerned with indirect and overhead costs.

### USER-RELATED COSTS

Although it has never been the custom to count user costs as part of the library budget, these are a real cost to the parent institution which must pay for the time used by its employees. If a considerable part of that time is used in walking to and from the library with no apparent return (the book wanted is out), then that time is wasted. Here electronic systems can play a part in developing higher returns on user time. Online circulation information, particularly when accessible through office computers, can help users plan library visits more fruitfully. This information also makes it possible for users to ask for materials to be held at the circulation desk, thus reducing everyone's expenditure of time. Dahlgren (1990) outlines many of the elements that should be considered when choosing a circulations system including user costs and benefits. It is also possible to load reserve book lists and thus to update these online quite apart from being able to give information about actual usage, which can help in determining retention on the list thus making the whole operation much more cost effective from both the library and the faculty point of view. Online catalog searching can also be linked to interlibrary loan or to document delivery. In this way, online information can play a significant role in streamlining both library and user activity.

The budgetary effects of this improvement are diffused and unlikely to show up directly in a budget line, but indirectly these can help to refine collection management and reduce lost user time. This topic is mentioned here to encourage libraries and administrators to look beyond the actual budget figures when making decisions. The examination is akin to a user environmental impact study and has some of the same difficulties—notably converting such savings into dollar figures. But the attempt can and should be made since automation is usually presented as saving money without any concrete evidence (Martin, 1986). If user time were seen as a library cost element, then savings in that time would be seen as actual rather than illusory savings. Leaving the user out of the budgetary calculation is rather like a business ignoring customer preferences.

All library activities should be re-examined from a user point of view. For the most part, these activities are designed with the library staff in mind, which may be fine internally but overlooks whether these best serve the user. This may or may not cost the library more—double staffing for both reference and information desks, for example—but it will result in better use, which is in the best interests of both the library and its parent institution. It may also result in a realignment of some expenditures—e.g., the transfer of some staff members from internal circulation to document delivery or an increase in levels of staff when it is realized that the circulation desk handles a regular quota of reference questions. It may, on the other hand, be possible to close a service station altogether as a reflection of use patterns. Even so simple a matter as closer attention to signage (usually a minimal budget item) can result in better usage patterns and a better use of the budget available.

#### VALUE MAINTENANCE

Financial accounting systems for colleges and universities and for public sector organizations in general are constructed under the rules of generally accepted accounting principles, as shown in the various guidelines composed by the National Association of College and University Business Officers and similar organizations. Most library studies, excellent though they are, on economic theory (Schauer, 1986), on accounting methods (Smith, 1991), or on budgeting practice (Trumpeter & Rounds, 1985), are written without taking explicit account of the institutional context. The assumption seems to be that this is a given, whereas, in fact, it can have a substantial impact on what the library can or cannot do.

The principal aim of these accounting systems is to record accurately what the assets and liabilities of the organization were at the beginning of a period, what they were at the end, and what activities occurred between those points in time to cause the changes. In their attempt to be entirely factual, these accounting systems focus on actual rather than projected or estimated values. Thus they record the value of assets such as buildings only at the original price paid. Any subsequent expenditures for enlargement or restoration are simply added to the original recorded value regardless of any changes which may have occurred in the value of those dollars. Similarly, they make no attempt to recognize that assets may grow in value over time, nor that replacement costs may be significantly different. In summary, generally accepted accounting standards make no provision for recognizing the current value of an asset to the institution.

Similarly, operating budgets are solely concerned with current expenditures, and capital budgets are developed to take care of

necessary current expenditures—e.g., repairs or expansions. All these financial concepts are important tools for fiscal control, but these need to be supplemented by “management accounting” concepts. Of these, the most important concept is value maintenance.

In principle, the idea is fairly simple. Librarians or other administrators want to maintain the current value of library assets to the ongoing life of the institution or constituency. There are two dimensions to this concept: (1) maintaining the current value of the assets (buildings, collections, etc.); and (2) since institutional needs evolve over time, modifying those assets over time so as to maintain their usefulness. These two dimensions may be thought of as upkeep and renewal.

There are three classes of asset with which librarians are concerned: facilities, collections (or, more broadly, access to information), and equipment.

Buildings deteriorate over time, as a function both of use and of decay. Each building can be thought of as a series of “systems,” such as the foundations and walls; roof and windows; electrical, plumbing, HVAC; floor and wall coverings; and so on. Each system has a cost and a life cycle. For example, the roof on a library may cost \$100,000. Depending on the materials used and the climate, it may be necessary to replace it every twenty-five to forty years. Based on the cost and the life cycle, it is possible to estimate what amount should be put aside each year so as to be able to replace it when needed. The sum of the amounts needed for each system is the total amount that should be budgeted each year for asset upkeep. It is estimated that such a provision should be in the range of 1 to 1.5 percent each year.

The second dimension of value maintenance recognizes the effect of change. Alteration in the mix of users or changes in the methods of pedagogy or in technology can result in demand for more or less user space, for different kinds of space, or for additions to space. In addition, libraries have a special problem in dealing with growing collections. The “renewal” component of value maintenance can be very substantial and may require budgeting 1 or 2 percent per year of the replacement cost of the facility. Together these dimensions imply setting aside as much as 4 percent annually of the replacement cost—a very substantial addition to the usual operating budget.

The same concepts can be applied to library collections. Although all institutions recognize that their collections are extremely valuable, only recently have some institutions begun to assign an asset value to their collections. In part, this attitude has resulted from the fact that library materials purchases are made from current operating budgets and not seen as a capital expenditure. Whether or not the

collections are recorded as a capital asset, it is essential to maintain their current value.

Upkeep is the primary concern. As with a building, the total collection can be thought of as a series of collections, each with different costs and life cycles. This is most clear in the sciences where the currency of the information is critical. Such collections have a very short life cycle, needing to be "replaced" yearly, and the retention of older materials adds a significant housing cost. Other collections, such as literature and language, do not deteriorate as quickly. These collections do need to be refreshed by adding current publications, but the whole collection remains useful and may even grow in value over time. From an analysis of the needs of each collection, the "upkeep" portion of the value maintenance budget may be calculated. This calculation can be used as a factor in budget construction and allocation.

Upkeep, however, is not enough. New programs, changes in curricula, or the development of new reader interests require "renewal" expenditures. These expenditures are major and easy to overlook when planning new programs and research projects.

The rapid growth of electronic access to information adds complexity to the problem. Such access comes at a cost, which has been regarded as an added operating expense. From a "management accounting" perspective it may be more useful to view it as part of the cost of maintaining the current value of the library as an information asset.

Finally, the concept of value maintenance can be applied to library equipment—increasingly electronic equipment. The life cycles of the equipment are so short and the new technologies expanding so fast that the distinction between upkeep and renewal is less significant though still useful. Since the life cycles are only from three to five years, it is vital that library budgets make annual expenditure or reserve provisions to enable regular and frequent replacement of equipment.

The basic point is that institutional budgeting and accounting systems make it more difficult, rather than easier, to understand and provide for the whole cost of libraries. Librarians and administrators need to understand the management accounting approach of value maintenance, and to budget on that basis. By allowing for the upkeep and renewal of facilities, collections, and equipment, we can come closer to fulfilling our responsibilities. Nothing in this approach, of course, makes any new funding available, but it does make it easier to demonstrate the need for additional resources and helps in the better allocation of the available resources.

## CONCLUSION

Without pretending to have engaged in an exhaustive analysis here, the goal has been to show that there are many unconsidered costs in running a library. Unless these are considered, changes and improvements may not have the desired effects. Many organizational decisions are made without a clear understanding of the financial effects, some of which may be delayed and others of which may be external to the library. The result can be a less than successful library program.

## NOTES

1. The Windsor Locks Public Library, after opening a new building, found that the new costs for telephones and other utilities exceeded the allowed budget by more than \$3,000. The result was a scaling back in such provisions while the town was forced to find some extra money from reserves.
2. The Library Administration and Management Association Safety and Security of Libraries Committee sponsored a program at the San Francisco conference on this topic, and representatives from the Brooklyn Public Library and the San Francisco Museums Association pointed out many of the safety needs not addressed by other libraries.
3. A student in Martin's Collection Management course at Simmons pointed out that older voyage records, formerly disregarded as "unscientific," were now being sought as helping to provide a baseline for measuring environmental change, and similar shifts are doubtless occurring in other disciplines.

## REFERENCES

- Arms, C. (Ed.). (1990). *Campus strategies for libraries and electronic information*. (In *EDUCOM strategies series on information technology*). Bedford, MA: Digital Press.
- Baumol, W. J., & Marcus, M. (1973). *Economics of academic libraries*. Washington, DC: American Council on Education.
- Brooks, H. C. (1993). The availability of Western series fiction in American libraries. *Collection Management, 17*(4), 49-56.
- Budd, J. M. (1990). Academic libraries: Institutional support and internal expenditures. *Library Administration & Management, 4*(3), 154-158.
- Carpenter, M., & Millican, R. (1991). The recognition of depreciation of library materials. *Library Administration & Management, 5*(4), 222-229.
- Christianson, E. (1992). Depreciation of library collections: A matter of interpretation. *Library Administration & Management, 6*(1), 41-43.
- Dahlgren, A. C. (1990). Costing library system services. *Bottom Line, 4*(3), 18-24.
- Drake, M. A. (1976). Forecasting academic library growth. *College & Research Libraries, 37*(1), 53-59.
- Gertz, J.; Brown, C. B.; Beebe, J.; D'Arienzo, D.; Merritt, F.; & Robinson, L. (1993). Preservation analysis and the brittle book problem in college libraries: The identification of research-level collections and their implications. *College & Research Libraries, 54*(3), 227-239.
- Gore, D. (1976). Farewell to Alexandria: The theory of the no-growth, high performance library. In D. Gore (Ed.), *Farewell to Alexandria: Solutions to space, growth, and performance problems of libraries* (pp. 164-180). Westport, CT: Greenwood Press.
- Hayes, S. (1982). Budgeting for and controlling the cost of *other* in library expenditures: The distant relative in the budgetary process. *Journal of Library Administration, 3*(3/4), 121-131.

- Heinzkill, R. (1990). The literary canon and collection building. *Collection Management*, 13(1/2), 51-64.
- Kantor, P. B. (1986). Three studies of the economics of academic libraries. In G. B. McCabe & B. Kreissman (Eds.), *Advances in library administration and organization: A research annual* (vol. 5, pp. 221-286). Greenwich, CT: JAI Press.
- Kent, A.; Cohen, J.; Montgomery, K. L.; Williams, J. G.; Bulick, S.; Flynn, R. R.; Sabor, W. N.; & Mansfield, U. (1979). *Use of library materials: The University of Pittsburgh study*. New York: Marcel Dekker, Inc.
- Knight, D. M., & Nourse, E. S. (Eds.). (1969). *Libraries at large: Tradition, innovation, and the national interest: The resource book based on the materials of the National Advisory Commission on Libraries*. New York: Bowker.
- Leach, R. G., & Tribble, J. E. (1993). Electronic document delivery: New options for libraries. *Journal of Academic Librarianship*, 18(6), 359-364.
- Martin, M. S. (1986). Financing library automation: Selling the benefits and the budget. *Bottom Line* (Charter issue), 11-16.
- Martin, M. S. (1992). Cost containment and serial cancellations. *Serials Review*, 18(3), 64-65.
- Metz, P., & Foltin, B., Jr. (1990). A social history of madness—or, Who's buying this round? Anticipating and avoiding gaps in collection development. *College & Research Libraries*, 51(1), 33-39.
- Nielsen, B. (1989). Allocating costs, thinking about values: The fee-or-free debate revisited. *Journal of Academic Librarianship*, 15(4), 211-217.
- Price, A. L., & Carey, K. R. (1993). Serials use study raises questions about cooperative ventures. *Serials Review*, 19(3), 79-84.
- Schauer, B. P. (1986). *The economics of managing library service*. Chicago, IL: American Library Association.
- Smith, G. S. (1991). *Managerial accounting for librarians and other not-for-profit managers*. Chicago, IL: American Library Association.
- Taylor, D. C. (1984). Serials management: Issues and recommendations. In *Issues in library management: A reader for the professional librarian* (pp. 82-96). White Plains, NY: Knowledge Industry Publications, Inc.
- Trumpeter, M. C., & Rounds, R. S. (1985). *Basic budgeting practices for librarians*. Chicago, IL: American Library Association.
- Warner, A. S. (1990). Charging back, charging out, charging fees. *Bottom Line*, 4(3), 32-35.
- White, H. S. (1993). Fee vs. free: A catchy but not very meaningful option. *Library Journal*, 118(15), 55-56.