

WILLIAM DIX

The Financing of the Research Library

The following is a discussion paper presented to the National Commission on the Financing of Postsecondary Education by the Association of Research Libraries, submitted August 1973.

IN THE COMPLETION OF ITS MISSION the National Commission on the Financing of Postsecondary Education will be reviewing a broad spectrum of fiscal requirements. The supporting role of libraries may easily cause this sector of the total picture to be given minimal notice or even to be overlooked; yet the significance of the library's contribution to the educational and research processes and their substantial budgetary impact are so great as to warrant careful scrutiny by the commission.

In 1967 the American Council of Learned Societies published the following statement: "Research libraries may be defined as institutions whose collections are organized primarily to meet the needs of scholars and so to facilitate effective action on the frontier of every field of knowledge, traditional and novel. . . . At their best they are notable for the variety and depth of their holdings and for the quality of research that they support."¹

These relatively well-stocked libraries make an indispensable contribution to higher education and research in every section of the country and indeed in all parts of the world. The research library is typically a university library similar to the eighty-plus which are members of the Association of Research Libraries (ARL). Much of what we say applies also to certain major nonuniversity li-

braries which hold some of the world's greatest research collections, such as the New York Public Library and the Library of Congress.

The seventy-eight university libraries who were members of ARL in 1971-72 had in their collections from 700,000 (Rice) to 8,700,000 volumes (Harvard). In 1971-72 they added to their collections from 34,000 (Howard) to 387,000 volumes (Harvard). Most of them maintain as well large collections of manuscripts, microforms, and other library materials not reflected in the count of printed books. These figures alone may serve to indicate that these libraries are quite different from most of the thousands of libraries which support the educational activities of two-year colleges and even the best four-year liberal arts colleges.

It is often said that universities exist for the preservation of knowledge, the transmission of knowledge, and the creation of new knowledge. The university library is deeply involved in all three functions. Aside from oral tradition and the physical monuments of art and architecture, libraries are essentially the sole repository of recorded civilization, and only the large research library performs the preservation function in anything like a comprehensive way. Collectively these libraries are the memory of mankind, organized so that it may be drawn upon as needed today and in all of our tomorrows, whether man requires information recorded at the dawn of history or only yesterday.

Dr. Dix is librarian at the Princeton University Library, Princeton, New Jersey.

These libraries are essential also to the transmission of knowledge and the teaching function of the university. A simple skill, such as woodworking, may be passed on without recourse to the written word. More sophisticated disciplines (e.g., technology, science, philosophy, economics, literature), at least as essential as simple skills to the advancement of civilization, are obviously built upon and transmitted to a considerable extent through the intellectual discourse of books and serious journals. Even at the undergraduate level, education of any quality seems to require sending the student beyond the lecture-plus-single-textbook process to exploration among many printed or pictorial sources. Economy alone prescribes that these sources be shared through a library.

Graduate education demands much greater resources. Various studies indicate that graduate students use from three to five times as many books as undergraduates, as well as a far greater variety of books and other kinds of recorded information. The kind of library we are discussing is likely to be found in the universities whose graduate and professional programs have been identified in the American Council on Education (ACE) and other surveys as possessing excellence. Indeed, in the 1966 ACE report, *An Assessment of Quality in Graduate Education*, it was noted: "The library is the heart of the university; no other single non-human factor is as closely related to the quality of graduate education. . . . Institutions that are strong in all areas invariably have major national research libraries."

While the market for Ph.D.'s in many fields may be temporarily glutted, the continuing health of much postsecondary education will obviously require continued doctoral training of quality, if only to provide competent staffing for thousands of colleges and universities. It is interesting to note that the seventy-eight universities which were members

of the Association of Research Libraries in 1971-72 produced 23,885 or 69 percent of the estimated 34,600 doctoral degrees (excluding law and medicine) awarded that year in the U.S. and Canada. This is another way of saying that a great deal of graduate education is concentrated in a relatively few large universities, as it should be in terms of the economics of the situation.

The third function of the university, the creation of new knowledge, is shared with other institutions, such as the government or industrial laboratory, for example, but it is clear that it is a major function and the element which most obviously distinguishes the university from the college, the vocational institution, and other types of postsecondary educational institutions. It is equally clear that most research demands major library resources. In nearly all fields new knowledge is developed only after a careful sifting of what is already known, and work in the field or the laboratory is interspersed with work in the library. In some fields the books in the library are themselves the sole material of research.

The point which we wish to emphasize is that the three functions of the university are inseparable and the library is essential to all three. That it exists to support the university is only part of the ecological balance, for it can be said also that the university exists in part to support the library. These relationships have an important bearing upon any discussion of the financing of research libraries and of postsecondary education.

The university library and, even more, the independent research library have important relations outside the university. Almost all of them, under a variety of arrangements, provide important resources to industrial research laboratories, government agencies, independent scholars, and the whole range of organizations and activities that comprise the web of American society. These libraries are collectively the capstone of the pyra-

mid of information resources.

Together they constitute a single national resource of great importance. Increasingly and of necessity they are sharing and pooling their resources, for no library can have everything. It has been estimated that by 1974-75 the magnitude of loans of materials that will be made by academic libraries to other libraries would approximate 2,600,000, at an estimated cost on the order of \$12.1 million. Typically the university library lends to other smaller libraries four or five times as much as it borrows.

A variety of devices, national and regional, has been developed by librarians for bringing the combined collections of the research libraries under bibliographic control, for telling where a particular book may be obtained. The *National Union Catalog, Pre-1956 Imprints*, now being published in an estimated 600 large volumes, supplements the ongoing current record by indicating holdings, mostly monographic, reported over the past seventy years of more than 800 libraries throughout North America. The *NUC* is one of the keys to that vast national resource represented by the combined collections of libraries. (Incidentally, with some 300 volumes already published, through the letter M, the project is facing serious financial problems.) The rapidly developing computer-based technology will almost certainly provide the basis for bibliographic control in the future through a national library communication network.

Librarians have for years been thinking of the total research library collections of the country as a single national resource. In 1940 Julian P. Boyd, then librarian of Princeton University, stated the issue succinctly: "The fallacy of an impossible completeness in any one library should be abandoned in theory and practice; librarians should now think in terms of completeness for the library resources of the whole country." Soon

after, Dr. Boyd was one of the leaders in proposing and developing the Farmington Plan, under which some fifty libraries have accepted responsibility for specific fields and geographic areas in an attempt to bring to the country at least one copy of each book of potential research interest from about 150 countries and territories.

This program is now being phased out and the National Program for Acquisitions and Cataloging of the Library of Congress, authorized by Title II-C of the Higher Education Act of 1965, is beginning to achieve the objective of the Farmington Plan. NPAC, or the "shared cataloging" program, had its inception in the recognition of the substantial economies which could be realized if each book could be cataloged once only and the cataloging copy made available promptly to all other libraries acquiring the same book. Its import has been tremendous, even though NPAC has never been fully funded by the Congress.

One more example among many may be cited to suggest the way in which libraries are sharing their resources and serving students and scholars by drawing upon collective strength. The Center for Research Libraries in Chicago, which had its origin in 1951, is an independent "library's library," supported by its more than 100 institutional members. Its function is to collect and make available important but seldom-used materials so that each individual library will not have to preserve such things as newspaper files, which are essential but not called for frequently. Currently, with the aid of a grant from the Carnegie Corporation, the center is conducting a pilot program of subscribing to several thousand seldom-used journals in the hope that individual member libraries may find it possible to rely on the center for these titles and thus increase their available resources and stabilize the heavy load of carrying individual subscriptions.

One model for such an activity is the highly successful National Lending Library for Science and Technology in England, supported by the British government as a national resource.

Many other examples could be cited. However, it should already be clear that the university libraries and a few rather similar national and independent research libraries constitute a major national resource, a *de facto* network creating a vast pool of recorded knowledge and information essential to higher education and to the advancement of learning without which modern society could not exist. This network has evolved unsystematically and without adequate planning and its links are at present quite imperfect, but we are beginning to see the emergence of a coherent, integrated whole. Its viability will depend upon a judicious balance between centers of local excellence, immediately accessible to users, and a variety of centralized cooperative activities, integrated through a computer-based system of bibliographic control.

In all of these developments and activities the objective has been to provide what users need at a cost which is bearable, for a large university library is an expensive proposition. In 1971-72 the seventy-eight libraries upon which we have been concentrating spent a total of more than \$76 million for the purchase of books, periodicals, and other materials. Since the associated staff costs of acquiring, organizing, preserving, and interpreting large library collections tend to be about twice the amount spent for purchases, total library expenditures of these seventy-eight libraries in 1971-72 were \$260.5 million, not including great capital expenditures for housing library collections and operations.

It may be easier to comprehend what has happened if one looks at the actual dollar expenditures of a single university library. For the Princeton University Li-

brary, actual annual expenditures over the past twenty-five years increased as follows:

	1947-48	1972-73
Books, periodicals, and binding	\$100,000	\$1,400,000
Salaries and wages	190,000	2,400,000
Total library expenditures	317,000	4,100,000

It should be noted that Princeton's is an old and stable library, in an institution which has not seen the enormous growth of the great state universities. The library's rate of growth has been one of the slowest among ARL libraries, and it is not one of the largest in the group. In 1972 it was eighteenth in the number of volumes held among U.S. and Canadian university libraries.

Costs of this magnitude are impressive and alarming, but their significance lies more in the rate of growth which they represent. Statistics are available for fifty-eight university libraries which have been members of the ARL throughout the period 1950-1969. For these libraries the average annual rate of growth was 10.5 percent over the twenty-year period. It should be underscored that this rate of growth represents an annual compounding, and that the power of compounding is such that at this rate a variable doubles in size in less than seven years and *in two decades grows to about eight times its original size.*

The principal causes of this growth in costs include not only general inflation and higher salaries but also several special library factors:

1. The increase in university enrollments (probably less significant than the other factors).
2. The expansion in the scope of teaching and research programs.
3. The rapid increase in the worldwide production of recorded knowledge. For example, in 1947, 7,807 new hard-cover books were published in the United States; in 1972, 26,865. To maintain the same relative sam-

ple of this information, without regard to new fields of study, libraries must increase acquisitions proportionately.

4. An increase in the unit cost of publications considerably in excess of general commodity indices for the period. For example, note the following average list prices of U.S. publications:

	1947	1972
New hard-cover books (per volume)	\$3.62	\$12.99
Periodicals (annual subscription)	3.59	13.23

We suggest that in the light of this evidence the financial problems of the university libraries and the related non-university general research libraries merit the attention of the National Commission on the Financing of Postsecondary Education. While these libraries occupy numerically a small portion of the broad spectrum of educational activities to which the commission must address itself, this is a particularly significant segment. Libraries of this type are an absolutely essential element in a very substantial amount of undergraduate collegiate education. Perhaps more important, they are even more essential to the advanced and professional education and research upon which the nation depends. One cannot conceive of a modern society without the steady infusion of highly skilled manpower and creative thinking which only the university can provide, and one cannot conceive of a university of quality without library support of equal quality. Beyond formal academic walls, these libraries collectively are a single national resource of recorded knowledge organized for use, the collective memory of mankind, constantly being applied to improving the quality of life today and tomorrow.

We recognize that this very involvement of the research library with so many aspects of education, with a complex blend of teaching and research,

makes it difficult to develop a single satisfactory plan for financing libraries. University libraries have been supported by a variety of federal, state, and private funds. They have received a share of the general funds of their parent institutions, whether derived from state legislatures, endowment income, tuition, sponsored research overhead, or annual gifts from alumni. Some have separately endowed funds, and most receive direct gifts and grants from individuals, foundations, and corporations for specified activities. They have received categorical assistance directly from the federal government, such as the grants for acquisitions under Title II-A of the Higher Education Act of 1965, or as part of federal support of specific programs, such as the NDEA foreign language centers. Some charge nominal fees for certain kinds of services, such as service to industry. We trust that all of these kinds of support will continue. We urge, however, that special attention be paid to library problems as new patterns of university financing emerge.

There have been discussions of general institutional support, by which federal aid would come to the institution in a lump sum, to be distributed by the institution according to its own needs. If the library were merely a service agency, bounded by the specific needs of specific classroom activities, merely placing books on reserve for assigned reading, such a program might be fairly effective. But the university library has a multitude of other functions and relationships not bounded by the walls of a single institution. Furthermore, while institutional autonomy may be generally a worthy objective, in the case of the university library it runs directly counter not only to quality of service, for no library can have everything, but also to sensible economy, for it is becoming increasingly clear that one of the most promising means of slowing the growth

of library costs is the sharing of resources among institutions.

There have been discussions of student support, by which much of the funding of institutions might come from tuition grants from the government which the student might bring with him to the institution of his choice. This plan has the great merit of encouraging free choice. Yet university library costs are related much less directly to numbers of students than they are to factors such as the number of fields offered, the nature of each field, the quality of the collections, and above all the research element. For adequate university library support to be derived entirely in this way the student grants would have to be quite large indeed. Furthermore, it would be difficult to adapt this method of funding to the highly desirable support of the great independent research libraries which are an important element of the single national resource which has been described.

We believe, therefore, that some form of categorical aid is probably essential for university and research libraries. For too long the aid which they need has tended to slip away because through the multiplicity of their involvements this aid has always seemed to be someone else's business. They need direct and massive support as libraries, or rather as elements of a single national interrelated network of libraries, an essential national resource.

We believe further that, while grants to individual libraries are useful and welcome, they are not necessarily the most economical and rational way of solving the problem of the rapid exponential growth of university library costs. Perhaps the most effective kind of assistance is massive aid applied centrally to whatever operations facilitate sharing, and thus relieve individual institutional funds to do what must be done locally. A variety of opportunities at the federal

level suggest themselves:

- Legislation already exists which has done much and could do much more if fully funded under existing authorization and under increased authorization. The shared cataloging program of the Library of Congress (NPAC) has saved university libraries millions of dollars in cataloging costs and could save millions more if adequately funded and expanded.

- The distribution of machine-readable catalog copy on computer tapes (MARC) could be quickly extended to additional categories of books and made a free service to libraries by appropriate action of the Congress.

- The development of the national computer network could be accelerated by the substantial investment of federal funds in developing a series of related networks, perhaps along the lines of the Ohio College Library Center or other tested model, which would as a federal service provide individual cataloging from MARC tapes and from pooled original cataloging to the major libraries of the country.

- The staff costs of acquisitions and cataloging consume as much as one third of the annual budgets of university libraries. By applying federal funds centrally for programs such as those outlined above, substantial savings for individual libraries might be achieved.

- In a quite different area, the creation and operation at federal expense of one or perhaps several special libraries to which research libraries could turn with confidence for the loan of journal articles, on the model of the British National Lending Library for Science and Technology, would provide for access by individual libraries to tens of thousands of scholarly journals which might otherwise be unavailable to them.

We have attempted to identify the nature and functions of the large university and research library, to indicate

the special role these libraries play in postsecondary education and the life of the country as a unified national resource, to suggest the formidable costs and the rapid exponential growth involved, to discuss alternative forms of financial support, and to suggest examples of centralized federal assistance which might be given. We would be happy to elaborate any of these points with members of the commission or its

staff and to help develop specific legislative proposals.

We are grateful for the opportunity to present these views.

REFERENCE

1. *On Research Libraries; Statement and Recommendations of the Committee on Research Libraries of the American Council of Learned Societies, Submitted to National Advisory Commission on Libraries, November 1967.*