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Cooperation and
Library Network Development

Networks function as change agents for libraries because they provide three critical services—research and development, capital acquisition, and technology transfer mechanisms. Areas in which network participation has an impact on the academic library include the management of change, economic and attitudinal change, and cost accountability. Because of their early successes, networks have given rise to increased expectations for solutions to many critical library problems and for the equally rapid development of a national library network.

W HEN THE NEW JOURNAL *College & Research Libraries* was issued in December 1939, a new era and new horizons for academic libraries, based on cooperation, improved bibliographic control, technology, and legislation, seemed imminent.

Forty years have passed. We still seek improved technology. We still propose legislation. We still fund cooperative projects at a level that would have disgraced the board of a backward eighteenth-century poor-relief society. As for bibliographic control, we still hope that someone will invent a bibliographic Cuisinart that will automatically chop, mash, puree, and blend national standard bibliographic records into an inexpensive and tasty dish seasoned to the local palate.

Having achieved at least a national, standard, machine-readable bibliographic record, after enormous expenditure of effort, local catalogers reverse the effort by working their exquisite local petit point, having refined bibliographic embroidery to a high art form. In many of our libraries we still treat users with benign neglect, as we concentrate on amassing collections accessible by methods with which Mr. Cutter would be thoroughly familiar.

Nevertheless, there are glimpses of a new horizon. If we subscribe to Ivan Illich's tenets,

our salvation may rest in our failure to get exclusive rights as purveyors of information.

When physicists, engineers, mathematicians, programmers, and other strange folk invaded our field after World War II, we couldn't have them arrested for practicing without a license. After setting up camp, they made forays into the bibliographic jungle. Then, after having surveyed our manual control mechanisms, our massive collections, and our primitive file access, they called us dinosaurs doomed to extinction. The dinosaurs continued, with ponderous movements, to graze the ancient feeding grounds, so the interlopers decamped and invented what is now called the information industry.

Finally, the dinosaurs, nibbling through the midden, found such food for thought as data processing, information as a national resource, work flow analysis, cost effectiveness, and user service on demand. It was not easy to adjust to this strange diet; and, unfortunately, the interlopers decamped so hastily that they failed to leave the formula for changing dinosaurs into ecologically efficient beasts.

When Fred Kilgour hit on a way to pry enough money loose from academic library budgets to form a large-scale cooperative, decently funded and technically oriented, it was a historic moment in American librarianship. I am convinced that we now have at least part of the formula for change.

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Expanding on this theme, the following sections review networks as change agents and coping with change, and the final section scans the new academic library horizon, taking brief notice of a few cloudy issues.

NETWORKS AS CHANGE AGENTS

The rapid development of cooperative computer-based library networks, in which academic libraries played a seminal role, is a phenomenon yet to be adequately investigated. Whether networks will become permanent components of the library environment or whether they are an expedient and ad hoc structure is uncertain. Despite these unknowns, a present attempt to rationalize network development is both a matter of immediate concern and of permanent professional interest.

To this end, I hypothesize that networks provide three critical services: research and development, capital acquisition, and technology transfer mechanisms. The permanence of networks will largely depend on their ability to provide these services until more efficient technology change agents are provided.

Research and Development

Any institution's survival depends upon its response to social, economic, and technical change in its environment. Since World War II, libraries, as well as other institutions, have attempted to accommodate to almost continuous change. The effort to adjust to technical change in the library field has been difficult due to the nature of technical change and the inadequate library mechanisms for technical planning, assessment, and transfer.

Technological developments spawn new developments like yeast spores, multiplying rapidly, mindlessly, and endlessly. Banks turned to computers, and we now have automated tellers; transistors were invented, and now even schoolchildren have their own personal calculators. Soon videotape recorders will be as prevalent as television sets. Unfortunately, the library profession's mechanisms for assessing these technologies have not, until recently, advanced much beyond those used by Melvil Dewey and his peers, who sat around and swapped tales of staff resistance to, and the relative efficiencies of, the Hammond,

Sun, Calligraph, and other variants of the typewriting machine.

Beyond our grudging annual widow's mite to the American Library Association and similar groups, we support no permanent organizations to assume responsibility for library research and development; we have no library think tanks gathering data and formulating long-range strategies; we have no laboratories testing new equipment and alerting us to its potential impact, cost, and benefits.

None of this would matter if each library's budget provided for technological assessment and planning. Not only is this far from true, but the limited research and development funding available to the library field is sporadic, limited to areas of concern to funding agencies, geared to short-term projects, and inadequate. Moreover, the political realities in the distribution of funds generally result in small-scale efforts, since not only the politicians but the librarians as well complain if large grants are given to only a few.

An additional problem arises because library budgeting mechanisms rarely allow forward funding, permit massive equipment and system replacement, provide for amortization of long-range development efforts, or allow the establishment of "risk" capital or depreciation funds. Inevitably, long-range advance planning for continuous absorption of technological change is virtually nonexistent in libraries.

This lack of technical research and development was not so important when the technology was simpler. If one bought an inefficient copier or microfilm reader that was condemned after consumer testing, the impact was localized, and the defect was remedied with a reasonable outlay of cash. Attempts to use computer technology revealed, for the first time and on a large scale, lack of appropriate agencies and mechanisms for massive technological retooling of library operations. The manpower and funding required if literally hundreds of libraries were to convert to computer-based operations made evident not only serious flaws in the library economy, but also the essential lack of structure in the library community.

Furthermore, the forces that made computer technology of particular relevance to libraries continued. It was unthinkable that a field besieged by an information explosion,

more sophisticated user demands, and cyclic financial retrenchment would be unable to use a machine that processed, retrieved, and transmitted data rapidly; offered potential for increased staff productivity; and expanded the range of user services.

Thus, while it is generally assumed that the raison d'être for networks stems largely from our tradition of interlibrary cooperation, an equally compelling argument can be made that networks are largely a response to our lack of techniques to deal with innovation and change when these involve complex technologies.

Although many networks have done little in the way of significant research and development, although many do not yet have research projects as budgeted line items, and although networks themselves are still largely dependent upon uncertain funding sources to support research and development, a potential exists for a permanent research and development program.

This year, for example, OCLC, Inc., announced the formation of a research department within its research and development division. Projects include a study of machine/machine interface, the efficient response time for different terminal operations, the potential of the home television set as a remote catalog access device, and the problems of subject access to very large files of catalog records.

By assessing a tiny research and development "tax" on each operation, networks could aggregate funds to support permanent research and development projects. This internal funding of research to supplement our limited external funding could increase our ability to use new technology efficiently and to develop new techniques for information handling.

Capital Acquisition

The library literature generally concentrates on the operational aspects of library technology; rarely are we given insight into how a given library acquired the capital for the new technology. Computer technology has, perhaps, been the most capital intensive of any introduced on the library scene. In addition, computer systems tend to be upgraded on a regular basis, requiring more or less continuous funding for modification and maintenance. It is important that libraries understand the

role networks play in transmission of technology because of their ability to assist in the acquisition of capital required for change.

A recent OCLC financial statement indicates that over $13,000,000 in land, buildings, computers, and other equipment is owned by OCLC, and almost $10,000,000 is owed in current and long-term debt for computer equipment and other resources. Assets as of September 30, 1978, totaled $27,785,070, corporate equity was slightly over $9,000,000, and liabilities were about $18,500,500.

Over and above these central costs, there are some two thousand terminals purchased by library networks or individual libraries representing, ignoring depreciation, an aggregate investment of about $7,400,000. A conservative estimate of the current budget for the OCLC, Inc., and its associated networks would be in the neighborhood of $30,000,000—roughly about $23,000 per library.

Melvin Day, formerly deputy director of the National Library of Medicine (NLM), recently noted similar features of the NLM on-line network. More than two thousand terminals in one thousand health science libraries use the system for more than a million literature searches annually. This allows the large capital investment that NLM has made to be amortized over a high volume of use. Commercial information retrieval services, such as SDC and Lockheed, follow a similar strategy.

It seems reasonably clear that only large firms, the federal government, a few large states, and large library networks will be able to undertake the capital investment needed to support complex, large-scale on-line networks and to provide the continuing research and development needed to mount new services. In the library community the network provides the structure required to concentrate needed capital. Networks can also employ various entrepreneurial strategies, such as indebtedness, that are unavailable to many libraries. It is important that network organizations have a legal basis which allows maximum flexibility in funding strategies and that member libraries honor contractual commitments which the network has incurred on their behalf.

Technology Transfer

Networks are an efficient mechanism for

comprehensive, rapid, and widespread technology transfer at a reasonable cost. Networks facilitate this transfer by centralized contracting with commercial firms, by centralized acquisition of equipment, by contracting for development of specialized services, and by contracting with other networks.

Networks can also effect rapid change by centralizing a specialist staff whose skills are made available to many libraries. As new technologies require increasingly skilled and specialized staff, this feature of networks will become critical to continued development, especially as salaries of specialists increase. Job descriptions that appear in network newsletters, such as the one published by BALLOTS (now RLIN, the Research Libraries Information Network), give insight into the range of skills required to develop and maintain large-scale on-line systems.

The economics of this centralization of staff is made evident by an analysis of the OCLC system. A library using OCLC supports about one-fifth of an OCLC staff member's time a year and obtains skills, such as electrical engineering, cost accounting, programming, computer operation, telecommunication planning, and systems analysis. Few libraries can acquire even some of these specialists on their local staffs.

Networks also facilitate rapid change by role specialization. Networks such as RLIN, Washington Library Network, and OCLC concentrate their efforts on the development, installation, and management of central computer-based systems and services. Affiliated networks such as CLASS, AMIGOS, SOLINET, INCOLSA, and MINITEX concentrate their skills on marketing, user education and training, and assisting with local installation of network services.

Although this development in role specialization was largely unplanned, it has proved to be an effective and efficient means of rapid technology transfer, has allowed an equitable access to network services on a nationwide basis, and yet has permitted some differentiation in services and governance as the needs vary in different parts of the country.

THE ACADEMIC LIBRARY
IN THE NETWORK ENVIRONMENT

No one has yet detailed the total impact that network participation may have on the academic library. Areas of special importance are the management of change, economic change, attitudinal change, and cost accountability.

Management of Change

For many academic libraries, participating in network services and connecting to on-line cataloging may well be the first major change in library operations. Many library administrators are not experienced in the management of change. It seems inevitable, however, that, once a library embarks on an automation program through network participation, change becomes a permanent way of life.

There are macro changes (for example, the impending introduction by OCLC, Inc., of automated interlibrary loan) and micro changes (for example, the change in a field of the MARC serials format). In addition, there are local changes that result from network participation, for example, the decision to shift to a computer-output-microform catalog using machine-readable records generated via the network.

Each of these changes involves external communications, internal communications, and perhaps endless committee meetings. Professional librarians must find efficient ways to cope with change to facilitate the decision-making process. Librarians must begin to consider themselves as information resource managers rather than guardians of time-honored local routines. As managers, they need to be concerned with costs, increased productivity, increased success for the library user, and quality.

Library staff rarely begin a discussion of the potential use of on-line cataloging by stating, "Our goal is to reduce our costs by 'x' dollars per title and to increase our annual output by 'y' units without reducing quality." Instead, they are more likely to ask something like, "Will the system be able to print the location symbol for reference books under the call number as we now do?" We need to emphasize that technical processing is an internal service supporting the library's public service just as the network is an external service supporting the library.

Management needs to exert more efforts toward alerting the entire staff to its goals, objectives, and plans if the management of

change is to be effective. Effective use of technology usually results from group action rather than individual action because technology inevitably affects a wide range of library operations. Group decision making is often slow. Management should encourage staff decision making based on objective data, gathered from sampling, performance analysis, costs, and so on, rather than on opinions. My experience has been that this speeds up decision making and settles arguments more objectively.

Time for planning and training must be made available if systems are to work well in the local library. Inevitably time will be lost in attending network meetings and in reading network communications, but, overall, increased efficiency and understanding should result. Librarians also need to give attention to more effective ways of transmitting information internally so that network and cataloging documentation is rapidly disseminated to those whose work is affected.

Economic Change

Academic libraries will need to automate operations as rapidly, comprehensively, and economically as possible to meet increased demands within budget limits, and, because of these limits, the success in meeting this goal for the majority of libraries will depend largely on network capabilities.

Inflation and increased labor costs are a reality. If we cannot improve production, we may face future hostile confrontations from users and funders. Other professions are under attack for outrageous fees. We feel intuitively that seventy-five dollars is too much to pay for having one's teeth cleaned. Others may feel that it is also too much to pay to get a book on the shelf. Even if we are below that cost today, a combination of inflation and increases in wages, benefits, and supplies could get us there in a few years. We can argue that these are inflated dollars, but we, too, can reach the tolerance level, especially for internal services that are politically vulnerable.

Not only will the manual operations increase in cost, but it also will be increasingly difficult to offset these costs by benefits. Even if automated systems cost more, benefits are such that it is at least evident that the library is getting more for its money.

Although commercial vendors and locally developed automated systems are alternatives to network services, they may not be feasible for many academic libraries. Small libraries may be barred from these alternatives due to lack of capital; very large libraries may be barred due to the complexity of their operations, the size of their files, and the large investment required to bring about a satisfactory system. Although millions of dollars and hundreds of staff-years have been spent, it is remarkable that few large academic research libraries have achieved anything close to a total local automated system, and most large research libraries have now affiliated with networks.

Two years ago interest in closing the card catalog was high. Currently one hears less of this, partly because the initial assessment of the cost of local development and installation of on-line catalogs has been sobering. One suspects that the inauguration of the Research Libraries Information Network results from the interest, particularly in large research libraries, in on-line catalogs, the difficulty in finding an adequate solution on an individual basis, and the hope that the RLIN can solve the problem in a network environment.

Attitudinal Change

We continually say that information is power, but when we say this we usually are thinking about our library users rather than our staff. However, library operational information is also power. Manual files allow minimal file access and, thus, minimal knowledge throughout the library of certain file-centered operations. This fact gives rise to the familiar "my file" and "my collection" syndrome. If we view the library as a micro network, it is obvious that some "members" of the "micro network" have very restricted access to information.

On-line files, whether locally maintained or centralized in a network, will become "our files," and collections will become "our collection," because they will be accessible to more library staff. Micro and macro networks may eventually allow access throughout the library, including its branches and departments, to serial check-in files, circulation files, cataloging and in-process files, acquisitions and subscription files, authority files, union list files, and management information files. Information about library operations will then

be available on an equitable basis.

Among the changes resulting from on-line access, observers have noted the following: (1) File access takes less time and personal efficiency is increased; (2) traffic patterns are altered; (3) the feeling of a community of purpose is strengthened; (4) pride in the total effort is fostered; and (5) equitable access to information and resources is available to staff and, in many cases, to users.

However, the "my file" and "my collection" syndrome shifts from the micro network to the macro or central network. Librarians are not at all certain which of their files should be accessible by other libraries. For example, should an order file or a serial check-in file be available for search by another library? At present, we have some vague feeling that access to operational files would be pernicious, but as yet I have seen no well-reasoned arguments to show why this is so. (An exception, of course, would be made for access that could permit surveillance of an individual's reading habits.)

The need to view each library's catalog as a subset of the network catalog is important conceptually if quality is to be obtained and if benefits of cooperation are to be realized. Many people talk about the supposedly bad quality that resides in cooperative network data bases. I take the opposing view that network participation has done more to raise the quality and standardization of cataloging than any other event since the beginning of the Library of Congress card service. Within the past five years hundreds of thousands of hours of work have gone into training on AACR, MARC formats, CONSER standards, quality control, and error reporting and correcting. Librarians are showing an increasing concern for quality work on initial network input to benefit others.

There are, of course, libraries that still regard networks as a machine for their local convenience; but where this obtains, the fault should rest with library management and not with the catalog departments.

Increasingly, the fear of putting one's data on-line for all to see is giving way to those attitudinal changes noted above: a strengthened commonality of purpose (we are not just "cataloging" but, rather, creating a national bibliographic entry which will serve many purposes) and a pride in the total effort.

To achieve these benefits, networks need to establish even greater communication channels with the Library of Congress to ensure a more cost-effective flow of information about changes of cataloging rules, subject heading changes of interpretation, etc., so that we build an efficient information network that will support our efforts to develop an efficient bibliographic network. I should note in passing that the library field's dissemination of documentation and rules relating to bibliographic control must surely be one of the most primitive now extant on the national scene.

The wider distribution of information and improved access to information on-line will be an increasing phenomenon as networks mature and as more functions are available through networks. The impact of these changes on academic libraries has already been seen, but even more far-reaching changes should be in store for us over the next decade.

Cost Accountability

The lack of library cost data is endemic. Despite exhortations from the pulpit and press, we still fail in fiscal matters. Many believe we may even be afraid of what such data would reveal. Networks may be able to exert a beneficial influence by emphasizing the profession's need for accountability and by the network's own emphasis on accountability to its members. In perhaps no other segment of the library community is cost and budget information so widely distributed and so openly discussed. Some networks are encouraging their members to gather data to support cost accounting, collection development analysis, and statistical reporting efforts.

Because of cooperative funding and governance, many computer-based networks are required to maintain cost accounting and audit information. Cost decisions made by networks have a direct impact on library budgets so that library management is keenly interested in network costing. There is also interest in cost comparisons between networks. It is obvious from some of the literature that many libraries are not yet used to paying overhead to support both operations and research and development activities. Because of this mutual relationship—with the network exhorting the library to be more cost-effective and with the libraries monitoring networks—services should be beneficial to our public, keep us all

honest, and promote maximum return from the funds invested in library and information services.

NEW HORIZONS

Networks have perturbed the structure of the library field. The typical library indicia of status—size of staff, collection, and budget—that have in the past been the measure of influence, power, and importance are not appropriate for networks. This has tended to disturb balances of power in the field. On the other hand, networks, by the rapidity of their early successes, have given rise to expectations of an equally rapid development of a national library network and cost-effective solutions to many critical problems.

This section deals first with raised expectations and then with national developments.

New Services and Systems

Networks and other on-line systems have whetted appetites for transferring more library functions to on-line operations. We want, among other on-line authority files, catalogs and management data.

Much of this interest was generated by the alarm created by the second edition of the *Anglo-American Cataloguing Rules* (AACR 2) and the initial stampede toward the closing of catalogs. Some are now beginning to realize the paucity of research and development concerning the requirements and specifications for an on-line catalog. It is inevitable, of course, that a first conception of an on-line catalog is that it will be like our present manual file, except that records will be viewed via a CRT display.

However, the opportunity to begin our central access file using a new technology should cause us to rethink the functions of the catalogs. The on-line retrieval systems are probably a closer model than is our manual catalog structure. Efficient use of catalog records will probably require more subject indexing and content analysis to allow the user to select the records of interest more economically.

One approach might be similar to that used by NLM in creating records that would be used both for printed display and for on-line retrieval. More access points were added, and codes were used to identify subject terms to be used only for on-line retrieval. This technique would allow LC to generate catalog records for both manual and on-line systems.

The need for research and development will delay the transition to on-line catalogs; but since these catalogs have real merit for improved library operation and user access, we should begin to provide increased funding now if we are to achieve our goal within the next decade.

The transition to on-line catalogs will also require a massive retooling that will make what we are now doing seem very simple. The capital and equipment acquisition will need to be planned and budgeted well in advance.

For example, if we needed only an average of five terminals for each library now using an on-line network to provide public access to an on-line catalog, we would require at least fifteen thousand terminals; but if we are thinking about on-line catalogs for all libraries, accommodating users in remote locations, branches, department libraries, units of the library, etc., we might be in the range of a million terminals at a total cost of a billion dollars if the cost were about a thousand dollars per terminal. Obviously, it will be a long time before on-line catalogs will be generally available to the public.

Interest in AACR 2 and on-line catalogs has also stimulated interest in on-line authority control. In some quarters there is the belief that, unless a network can provide this service, on-line cataloging will be deficient. However, it is not yet clear how a large on-line network can provide authority control at a reasonable cost, unless we alter our concept of authority control.

I suspect that most libraries conceptualize network authority control as a system that would maintain, for each, an on-line version of its present manual authority file, thus maintaining a link between the records it has used and the authorities relevant to each record. Conceptually, this approach mirrors present manual practices in which cross-references and *see also* cards are interfiled with catalog cards for items in the collection, although the functions of the two records are totally different. As a result, the relevant subset of the authority file needed for each library is not only unique but literally changing constantly (which explains why most libraries do a less than adequate job of coping with this operation). How this approach can be accommo-

dated in a large network with millions of records used by hundreds of libraries is not obvious.

A more feasible approach may require us to think about the authority control system as functionally different from the system that describes the contents of the collection. Thus each network might maintain a single authority file for all users of the network against which all proposed input would be screened and not maintain links to each record used by each library. The authority file would become more comparable to the thesaurus in on-line retrieval systems, which is used to develop the search strategy before the catalog file is accessed.

This approach prepares the way for on-line catalogs. It also eliminates the screening of information that the present systems perpetuate. Users may wish to have information on all subjects relevant to their inquiry, not just the subset that matches the particular collection at hand. In other words, it is possible that a system that would respond with a message such as, "We have no materials on the following subject; if you wish to pursue this subject, please see the reference staff," would be a positive rather than a negative service to users, since it could well be that information is available in journal articles, through interlibrary loan, etc.

If libraries can agree on a centralized authority system for each network, then networks will be able to find solutions much more rapidly, and the access strategies for library catalogs and to information retrieval services will become more comparable.

The limits to network capabilities are not yet defined. There is an intuitive feeling that networks will not be able to support both on-line catalogs and circulation because of the volume of traffic and the local nature of the use of such systems. However, because of limited funding available for research and development, networks may design local catalogs that are linked to the network data base. Such an approach would allow full data to be kept in the network file and available on demand while briefer records are stored locally.

At present, OCLC, Inc., can be viewed as our closest approximation to an automated *National Union Catalog* (NUC). It supports the two major functions that NUC provides, namely, access to catalog data and holding information. Through automation it has made both the generation of cataloging records and the transmission of interlibrary loan requests an integral operation. At the present stage of networking, the local catalog itself is still maintained largely as it was before networking, although some filing labor has been eliminated.

We need to mount research and development efforts so that the catalog itself will become an integral operation as well. It appears that most national research and development efforts will be expended toward linking present networks, or developing competing networks, rather than providing networks with funding to extend the range of automation that they can offer.

Academic libraries can be assured of continual refinement of present network services and extension of network services into additional areas, but it may be some time before their own files will become linked to the network data bases. OCLC's present investigation of automated circulation systems should give us further information about the economic feasibility of decentralization of network services. In the long-range network plan, it may also someday be economically feasible to achieve further decentralization, allowing users, in their homes, to access a library's on-line catalog and, in turn, the central network files.

It is a truism that we generally tend to overestimate what can become technically feasible in the short term and underestimate the long-term potential of technology. For this reason, I believe that we will have no dramatic changes in network services, e.g., local on-line catalogs, within the next two or three years. But within the next decade we can expect significant changes in library operations, and almost all library support functions will be automated.

National Developments

The number of reports describing the national library network, national network plans, etc., might mislead a naive observer into thinking that our present network structure results from such directives and plans. Nothing could be further from the truth.

Present networks have developed from local initiatives. BALLOTS (RLIN) began from a private academic library automation program,

Washington Library Network from a state plan, and OCLC, Inc., as a consortium of academic libraries in Ohio. Affiliated networks such as NELINET, BCR, COWL, and PALINET also stemmed from local, state, or multistate initiatives. If anything, it could be argued that national planning is now being based on achievements at the local, state, and regional level.

The interest in national networking might also mislead some to believe that networks receive large amounts of federal funding. This also is untrue. Most networks are supported by transfer funds from local operating budgets of member libraries supplemented, in some areas, by state tax funds.

While federal funds, particularly U.S. Office of Education funds distributed through the Library Services and Construction Act and the Office of Libraries and Learning Resources grants, have been valuable in stimulating network development and expansion, federal funds have continued to be a small portion of the total network budget.

Similarly, private foundation funds have been instrumental in expanding networks, particularly the Kellogg Foundation grants to enable small academic libraries to join networks. Up to now, however, these funds have also been a small portion of the total funding. As far as I am aware, the only federal funding especially earmarked for networking is the small LSCA Title II grant allocated each state and territory.

Another view of national library network directions could stem from the belief that present networks are struggling with problems of governance and organization and need help from above. This can also be challenged.

Present network structures have accommodated to political realities in various parts of the country. Without federal direction networks have already cooperated, coordinated activities, and undertaken several jointly funded projects. Much of the present network achievement rests in the organizational flexibility that allows entrepreneurial strategies and the development of pilot projects with a minimum of paperwork. Network role specialization has allowed present resources to be used effectively to benefit many libraries. The local support of state agencies and large academic libraries has also allowed additional stimulus to foster network growth.

Virtually without federal or even much state planning, many networks have evolved from the professional drive of committed librarians. A recent informal study by Thompson Little, associate executive director of OCLC, Inc., indicates that, if the data reported in *Library Statistics of Colleges and Universities* to the U.S. Office of Education (USOE) are reasonably accurate, then we have already reached the point where, in the OCLC network alone, about 60 percent of current academic library cataloging is being done online. If we include other networks, then this total may be up to 75 percent. This means, of course, not that 75 percent of all of the 2,831 institutions reported to USOE are now online, but rather that the academic libraries using on-line networks account for the bulk of the total academic library cataloging annually.

The impact of this development on academic library collection management and sharing is enormous, and we are just beginning to understand the potential benefits that might accrue. Whereas researchers have tended to rely on resources in large academic libraries, we are beginning to unveil a vast decentralized research library of unparalleled richness through network data bases. Many special collections in small colleges, seminaries, and state and public libraries will come to light and will supplement the holdings of the large research libraries in support of access to resources. This knowledge will create demand for better strategies for resource sharing and document delivery, areas that many networks are just beginning to address.

To this richness of data, the addition of on-line holdings of serials to network data bases will add more specific location data for serials, plugging a gap that has existed since the final edition of the *Union List of Serials* almost two decades ago.

It is unfortunate that many of the national plans that have been published fail to take these developments into account. For example, the national periodicals center plan recently released by the Council on Library Resources (CLR) suggests transmission of requests via TWX, when out in the field many libraries are preparing for electronic mail box transmission of interlibrary loan. Such networks are already in place and available at virtually no additional cost.

Several proposals are now afloat concerning

aspects of the national library network. This year, for the first time, suggestions are being made that we need a national library agency or national library board. The CLR report on the national periodicals center espouses such a view, and one argument advanced is that we cannot have the center without the agency. Why this is so is not fully demonstrated, particularly when organizations such as the Center for Research Libraries and the Universal Serials and Book Exchange (formerly U.S. Book Exchange) have provided somewhat similar services for years as nonprofit cooperatives managed by participating libraries (the governance of the exchange includes some sixteen hundred members electing an executive board).

Potential services of the national library agency or board (also called the "capping" agency) vary in the different plans being advanced. Among them are: setting standards, determining network fees, reimbursement for interlibrary loan, developing national telecommunications channels, linking existing networks, administering the national periodicals center, establishing national library information policy, determining protocols for intercomputer communications, and preservation of materials.

Since such a capping agency would affect all libraries, it should be a professional responsibility for each of us to be thoroughly familiar with such proposals. We need to decide whether we want to expend the limited federal dollars that libraries obtain for such an agency or whether such an agency would increase our ability to obtain federal dollars. We need to understand whether such an agency would actually increase our ability to reach national goals or whether we can reach these through cooperation and networking. We particularly need to know how the directors and staff of such an agency would be selected and to whom they would report. What input would we have either as individual libraries or networks? How would such an agency relate to the Library of Congress, the National Library of Medicine, and existing library funding programs, such as the U.S. Office of Education library support programs?

A recent report states the premise that a most critical problem facing libraries in this country is the need to develop a coherent national network system. Whether this is true or not, only a survey of libraries could reveal. Many of the libraries with which I deal worry more about getting funding to use the network services already available. Even for many large libraries, present networks are filling 95 percent of their need for cataloging data. A major feature of a coherent national system might be an improved facility to access the total national resource. It may well be that, for the majority of libraries, this is not a critical need. They might rather see funds diverted to the development of a local operating system tied to existing systems, thus improving their capability to operate better libraries.

We do need, however, to encourage all Library of Congress efforts to improve our coverage of current cataloging of nonbook materials, to support LC's efforts to develop standard formats for analytics and technical report literature, and to encourage LC's continued interest in and support of network developments in the field.

Another argument recently advanced is that the national network must be designed to meet the needs of our largest research libraries. This may be true, but it has yet to be demonstrated. Perhaps the internal operating needs of large research libraries are different from the needs of networks. What we may need is not to skew network services to a few libraries but to mount an extensive research program aimed at developing cost-effective systems. In this way large research libraries could operate independent of the network but still be linked to it. Skewing the entire network to the needs of a few could make it uneconomic for many libraries particularly if we review the past history of systems developed in several such libraries.

We should also decide whether it is politically wise to mount a federal program geared principally to solving the operational problems of libraries. Surely these problems have limited political appeal, and it is doubtful whether a strong case can be made that they are federal concerns. Shifting to programs in user services would be wiser, but public service librarians do not seem to exert their interests as effectively as technical service librarians. Support for user access to federal and government data banks, national information delivery systems, improved distribution of government documents, and subsidies to allow small libraries to enjoy network participation may be more

politically appealing than bibliographic control.

In any case, all of the planning groups invite your comments and suggestions. The Library of Congress, the National Commission on Libraries and Information Science, the Council on Library Resources, and other groups disseminate their reports widely and encourage comments. I recommend ACRL take steps to ensure that reports from each of these agencies be brought to its members' attention and that reviews be published and comments invited. This association could take a leadership role in ensuring that users of academic libraries are well served.

When this association was founded, the technical support of cooperation was primitive; for example, improved microfilm cameras were described as advancing cooperative efforts. Many of the greatest cooperative ventures then under way were labor intensive, and the labor was frequently a labor of love.

Today advanced technology and networks play a role in helping the association achieve the goals it espoused almost forty years ago. The continuing interaction of academic libraries with other libraries in multitype library networks can benefit all. Such interaction should also gain additional political support to improve the funding for research and development of improved services to academic library users. Each of you can help shape the direction of local, state, multistate, and national library network planning.