

The Unintended Revolution in Academic Libraries: 1939 to 1989 and Beyond

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In 1989, the Association of College and Research Libraries (ACRL) celebrates its fiftieth anniversary. The years since its founding have been a period of great change and progress in academic librarianship. Academic libraries have evolved from relatively small, self-sufficient institutions to large, multifaceted organizations electronically interconnected and linked in ways not yet envisioned fifty years ago. The librarians who work in these institutions, although sharing many of the same attitudes and values of their predecessors, are called upon to have knowledge of processes and to provide services unforeseen in 1939. Academic librarianship in the United States has changed more rapidly and radically during the past fifty years than it had during its prior 300-year history.

This paper will examine some of these changes and attempt to chart the course of academic librarianship from 1939 to the present. To do justice to this history, far more space would be needed than is provided here. What follows is a much compressed and highly selective look at the topic, but it is hoped that the account will be comprehensive enough to permit the identification of the most important trends and influences and to isolate some

useful generalizations.

Tracing the development of academic librarianship results in two seemingly contradictory impressions. On one hand there are fundamental changes: Libraries have begun to make the transition from manual to electronic systems, and many central components, including collections, organization, personnel, and services, have been modified. The libraries of today are very different institutions from those of fifty years ago. On the other hand there are great similarities, so that an old adage seems to be applicable: the more things change the more they stay the same. Many contemporary issues and concerns were articulated and shared by academic librarians working in the field fifty years ago. More discouragingly, many of the problems that seemed intractable in the late 1930s have indeed proven to be unyielding and are yet to be resolved. The first issues of *C&RL* contained articles on topics such as the appropriateness of the Ph.D. and the advisability of faculty status for academic librarians, the necessity for research by academic librarians, the problem of low salaries for librarians in relation to faculty, the percentage of the institutional budget that should be devoted to libraries, and the advantages and disadvantages of library centralization.

These topics are still on the agenda.

The following account focuses largely on the changes in librarianship but also examines some of the similarities that indicate, perhaps better than anything else, both the strengths of academic libraries and the weaknesses where improvement and progress still need to be made. In closing, this paper turns briefly from the past to the future: What lies ahead for the academic librarian in the next half century, and what should librarians be doing now to prepare for that future?

THE ACADEMIC LIBRARY IN 1939

Many present-day librarians can only dimly imagine an academic library of the late 1930s. In what type of library were the founders of ACRL likely to have worked? According to one librarian who worked in such a library,

The year 1938 was back in the era of typewriters and adding machines (both non-electric), of duplicate hand-written or typed book cards (one filed under call number and one under borrower's name), of typing short-form original cataloging if LC cards were not available, when bill in duplicate for book orders was sufficient. Bibliographical resources of this period were also limited. Of the great national library catalogs in book form only that of the *Bibliothèque Nationale*, completed to the letter "R", offered much assistance in searching. The new edition of the *British Museum General Catalogue of Printed Books* had progressed only into the "B's," and there was no general record of Library of Congress's vast holdings except the depositary catalogs or proof sheets found only in large libraries.

Although there were exceptions, the typical academic library in the years before World War II had a small collection and a small staff. The usual educational preparation for librarians was a fifth-year bachelor's degree (B.L.S.) from a library science program, and librarians carried out many tasks that were essentially clerical in nature. The pay was low. There was rarely faculty status for any academic librarian below the administrative level. Some reference service was probably provided, but little effort was put into teaching students about the use of the collections, especially on a formal basis. Book selection was commonly done by interested faculty, not librarians. The acquisition budget was

small, and most major collections were shaped by gifts and by development techniques that emphasized curricular needs and serious, scholarly material. The collection was composed almost entirely of books and journals; only a few libraries held any type of audiovisual materials or microfilm. Librarians had little input into decisions made by administrators, and the head librarian might be a recruit from the teaching faculty. Only a few cooperative ventures were in existence, and most librarians, operating in relative isolation, had no formal relationships with other libraries or with librarians outside of their own institutions.

Academic libraries of the late 1930s were not only very different from contemporary libraries but also from the libraries that had preceded them. If it is accepted that the fundamental purpose of the academic library is to support the educational mission of its parent institution, then, as institutions of higher education change, so will the libraries associated with them. There had been significant changes in U.S. higher education since the founding of Harvard University in 1636. The most important of these had resulted from the impact of the German research university and the land grant acts in the latter part of the nineteenth century. For the most part, the modifications to higher education had been incremental, and both academic institutions and libraries had had sufficient time to alter and adapt in response to them. In 1939, however, the academic library, along with its parent institution, was standing at the brink of the greatest period of change ever encountered and the changes would occur so swiftly and unrelentingly that all of higher education would have to struggle to keep abreast of them.

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THE REVOLUTION IN HIGHER EDUCATION

Thomas Bonner, in a recent article in *Change* magazine, describes the "unin-

tended" revolution in American higher education since 1940—a revolution resulting in a contemporary system of higher education that he argues is as different from that of 1940 as our present-day colleges and universities are from those in the developing nations of Asia and Africa.² And, as Bonner points out, "The changes that crumbled the ivory tower of 1940 were not only unforeseen and unplanned but were largely unintended and unwanted."³ In his view, higher education did not control the developments that resulted in these changes but instead was carried along by swift social and demographic currents. Bonner lists the demands of World War II, impact of the returning veterans, economic growth, international crises, the baby boom, political strife, Vietnam, campus revolts, economic decline, and changing public support as the most important developments that have changed higher education during the past five decades. To this list must be added the growth of electronic technology, which has produced broad-based changes within institutions of higher education, especially in the last ten years.

If only one word could be chosen to describe the changes in both higher education and libraries, it would have to be *growth*. In academic libraries the growth—in size of collections and staff, in number of services provided and patrons served—mirrors the growth that took place in American higher education during the same time period.

Only about half of today's colleges and universities existed in 1940, and they served a student population of fewer than 1.5 million. These students were predominantly male and white, drawn almost exclusively from upper- and middle-class families. The federal government played an insignificant role in funding; the support of higher education just prior to World War II came almost entirely from a combination of student tuition and state government expenditures. The total national expenditure for higher education amounted to only 700 million dollars in 1940 compared to the 95 billion dollars spent in 1985.⁴

Spurred by the GI bill, the expansion in American higher education began after

World War II, but grew most rapidly in the sixties and seventies. During this period new universities were established, state colleges became universities, normal schools and teachers' colleges expanded into state colleges or universities, and hundreds of community and technical colleges were opened. By 1950 there were 2,300,000 students enrolled in American colleges and universities; by 1960, 3,600,000; by 1970, 8,650,000; and by 1980, 12,100,000.⁵ Despite the much-discussed "baby bust," enrollments have not dropped as feared; standing today at approximately 12,400,000; the enrollment figure is kept up primarily by the expanded number of nontraditional students.⁶

The new students who flocked to higher education were the impetus for new courses, programs, schools, and degrees. The liberal arts, the major of choice for almost all students fifty years ago, is now selected by only a third of them. In the 1980s nearly 60 percent of all college students are pursuing degrees in a wide range of professional and occupational studies. Students of today are a much more heterogeneous group than those enrolled in 1939. There are now more female than male students in institutions of higher learning. Blacks and most other minorities, although still underrepresented in relationship to their numbers in the population as a whole, have made tremendous strides since 1939, when many institutions of higher education were still closed to them. Despite cuts in federal aid for students during the last decade, there has been a broadening of opportunities to earn a degree—no longer is a college education the prerogative of children from upper- and middle-class families only. Although higher education in the U.S. still does not provide universal access, it serves a higher percentage of the college-age population than does any other country.

Higher education is no longer the exclusive preserve of the eighteen- to twenty-two-year-old. Perhaps the most striking indication of this change is the fact that, among more than twelve million college students, only about two million are full-time, living on campus, and aged eighteen to twenty-two.⁷ Older students, many attending college on a part-time basis, now

constitute an important segment of the enrollment on most campuses.

The growth and expansion of U.S. higher education over the past half century has made a dramatic impact upon academic libraries. Although today's libraries are larger according to almost any variable that might be measured, growth alone is not an adequate explanation of the changes that have occurred since 1939. Two other factors have been driving forces behind the changes, especially those of the past twenty years: the greater acceptance by librarians of interinstitutional cooperation and the adoption of new technologies.

Over the past fifty years, academic libraries have come to realize that interinstitutional cooperation is essential to meeting the needs of their users. The move to a more cooperative stance has been necessitated by economic circumstances and has been facilitated by the development of on-line data that can more easily be shared among institutions. Today's libraries are relying on networking and resource sharing as an integral part of their activities.

During the past twenty years, the changes brought about by technology have been so extensive that it is difficult to assess their total impact. Librarians adopted technology with great enthusiasm and, despite the fact that they have sometimes been viewed as a conservative group, were pioneers in the use of computer technology. The library was usually the first academic unit on campus to computerize. The match between automation and libraries was a natural one because librarians usually spend much more time processing data about their collections than they do working with the collection itself. Growth in the size of the collection and demand for services were added incentives for librarians to explore the ways in which automation could assist in performing routine library operations. Today, even the smallest academic libraries have been affected by the technological changes that have swept through librarianship.

The causes of the transformation in academic librarianship are many and varied. The following section focuses primarily on the three factors discussed above—

growth, cooperation, and technology—and examines their impact on the critical components of collections, budgets, organization, buildings, staff, and services.

LIBRARY COLLECTIONS

In 1939 the median size of the book collections in U.S. universities was 329,706; in small colleges, 62,285; and in teachers' colleges, 25,341.⁸ Today the average collection in all types of libraries has increased dramatically. For just one example, the median for ARL university libraries is now more than two million volumes.⁹ During the post-World War II era, many distinguished collections were amassed. Collection building and growth were among the major concerns of academic librarians; libraries were ranked by collection size, and bigger was always better.

Growing both in numbers and diversity, academic library collections now routinely consist not only of books and journals but of microforms, audiovisual materials in many formats, and increasing numbers of machine-readable databases, online texts, and software programs. The broad spectrum of courses being offered in today's institutions of higher education has led to the collecting of library materials in areas that would have been unheard of previously.

No account of the past fifty years would be complete without a mention of the information "explosion" and its impact upon academic libraries. Beginning after World War II, the amount of published material skyrocketed as fields of study grew and subdivided, resulting in the production of more and more new and specialized journals. The numbers of monographs being published both here and abroad also ballooned, increasing 14 percent a year during the sixties and 2.8 percent a year during the seventies.¹⁰

As acquisitions librarians know all too well, the cost of publications escalated along with the amount of material being published. The largest cost increases began to occur in the 1970s, at a time when libraries' materials budgets were beginning to stagnate; the increases resulted in a severe erosion of purchasing power. Librarians reluctantly acknowledged that

their previous levels of collection building could no longer be maintained and that the days of the comprehensive, self-contained collection were over. Perhaps one of the greatest changes of the past fifty years is the realization that, because of the rising level of scholarly output, no library, however large, can be self-sufficient but instead must be part of a system in which users are linked to needed resources in other collections.

The resource sharing that is such a clear hallmark of the academic library in the 1980s was spurred by the hard realities of increased publication and decreased budgets but is not a new development. Although there were some examples prior to 1939, the most notable cooperative efforts have been attempted throughout the past fifty years. Many geographically close libraries began cooperative acquisition plans during the 1930s. The New England Deposit Library opened in 1942, the Universal Serial and Book Exchange and the Farmington Plan began in 1948, and the Midwest Interlibrary Center (later to become the Center for Research Libraries) was established in 1949.¹¹ Interlibrary loan existed before 1939; but with new tools that permit both efficient verification and ordering of items, ILL has become an integral part of library cooperation in the past few decades.

Libraries have gradually moved away from collection building and growth to a new emphasis on providing access to information from many sources. Academic librarians of the future must remember, however, that access depends on ownership by at least one party. On the whole, today's libraries can provide access to material because they own the material collectively. Since self-sufficiency is no longer possible, greater attention will need to be paid to coordinated, cooperative collection development such as that being attempted by the Research Libraries Group's *Conspectus*.¹²

During the past fifty years, academic librarians have also begun to face up to the physical deterioration of large parts of the collections. Prior to this time, preservation was a neglected activity, and today's collections reflect that neglect.¹³ The problem of brittle books has been

compounded by the preservation problems associated with some of the newer media such as film, videotape, and magnetic tape, which are just as fragile and apt to deteriorate as pulp paper. Despite advances in preservation techniques, academic librarians are far from having a cure for this malady, and the preservation problem is one that must wait for solution in the years ahead.

Although some new preservation techniques and storage devices such as optical disks hold promise, funding, as usual, provides the major obstacle. At a time when libraries need to find funding sources in order to invest in technology, they are faced with the concurrent need to invest in preservation to save their collections. Because of the size of the problem and the overwhelming cost required to solve it, cooperative action will be needed. A coalition of librarians, scholars, academic administrators, publishers, and all who use the records of civilization is needed to forge an alliance and seek a common solution to this problem if tomorrow's scholars are to have access to the collections built with great care and cost in the past.

LIBRARY BUDGETS

The actual increases in academic libraries' budgets are less dramatic if they are adjusted to reflect the inflation of the dollar that has occurred. In 1938 institutions of higher education spent \$17,588,000 on libraries;¹⁴ in 1985, the last year for which figures are available, they spent \$2,361,000,000.¹⁵ The 1960s were a period of especially great affluence for academic libraries, but this prosperity was followed by the stringent budgets of the seventies and eighties. And, even with an increased library budget, there was no way to keep up with the growth in publications.

One of the reasons that technology was embraced so eagerly was the hope that the use of automation would reduce the day-to-day costs of operation. Many library directors justified the heavy capital expenditures necessary for computer-based systems by promising lower operating costs in the future. These trade-offs—capital investments for lower operating

costs—almost never succeeded. As Richard De Gennaro wrote,

When we first started to use computers in libraries 15 years ago, we thought we would save money, but we soon learned there would be no net savings from automation. Then we thought that automation would at least "reduce the rate of rise of library costs," but even this is proving to be illusory as we demand and receive an ever increasing variety of new and expensive services from our network and local systems.¹⁶

By automating, the library multiplied its capabilities and raised the expectation level of library staff and user alike. Thus, as library services became more efficient and useful, demand for them increased. While the unit cost of any given service might decline, the total cost of satisfying the increased demand would go up.

One of the constants in academic librarianship over the past fifty years has been the portion of the parent institution's budget that has been devoted to libraries. Before the 1960s, academic libraries received, on the average, about 3.1 percent of the total institutional budget. During the late sixties and early seventies, the figure rose to about 4 percent but, after 1976, drifted down again.¹⁷ The percentage varies from institution to institution, with large universities devoting a smaller percent of their budgets to libraries than small colleges. The true significance of the pattern is what it reveals about institutional budgeting for libraries. It seems clear that library funding is not based on the library's need because, if it were, the percentage would fluctuate from year to year. Academic library costs have not been determined by need but by available revenue. Libraries have not been successful in providing a rationale for the funds they need and seeing those needs met by their parent institutions. This invariant pattern does not augur well for the future when libraries, more than ever, will require increased budgets to meet the demands of their expanding role in the use of technology.

If the percentage of the institutional budget has been constant, one of the most inconstant elements in library funding over the past fifty years has been federal funding. Although federal aid to libraries was almost nonexistent in 1939, it began to

increase after World War II, reached a high point during the late 1960s, and then began a slow decline. One of the greatest factors supporting the growth of librarianship during 1945-70 was federal funding. The Higher Education Act of 1965 provided three library programs: Title IIA, funds for acquisition of books, periodicals, and other materials; Title IIB, library training and research demonstration programs; and Title IIC, a centralized cataloging and acquisition program under the direction of the Library of Congress. The Library Services and Construction Act and the Academic Facilities Act were also important pieces of legislation for academic libraries.¹⁸

Budgeting for technology has been one of the major difficulties since the 1960s. Traditionally, 60 percent of the library budget had been used for salaries, 30 percent for materials, and 10 percent for other expenses. The percentage used for "other" needed to be increased during the past few decades because this is the section of the budget used to finance automation. As a result, libraries had to cut back on the percentages for personnel and materials. Within the materials budget, they are now facing the problem of balancing the cost of new electronic sources against the cost of traditional library acquisitions. It would be reassuring to think that universities will increase the budgets of libraries sometime soon, but this does not appear to be likely in the near future. Too many competing claims exist.

As the new information technologies become more widespread, they will make students and faculty more productive, and there will be a need to shift funding from faculty to infrastructure. Both libraries and computing centers would benefit from this move,¹⁹ but it will likely be resisted by many units on campus. In addition, librarians themselves will need to find ways to limit the need to provide services through both print and electronic means. The decisions to be made in these areas will not be easy ones.

ORGANIZATIONAL PATTERNS

The growth in the size of libraries has led to the adoption of different organizational patterns. In 1939, almost all college

and university libraries, regardless of size, were organized along departmental lines with all department heads reporting directly to the chief librarian. As libraries grew in size, the number of departments grew also so that the span of management became too broad to be workable, and this highly centralized organizational pattern needed to be modified. Various experiments at reorganization were attempted, but, by the early 1950s, the bifurcated organizational pattern with its division of functions into public and technical services had been widely accepted by most large academic libraries.²⁰ Since then, some libraries have produced modifications to this structure; for instance, in 1973 the library at Columbia University organized its activities into a services group, a resources group, and a technical support group. Nonetheless, the bifurcated structure is still the most common in large libraries while most smaller libraries continue to be organized departmentally. Although much has been written about the merger of technical service and public service departments in academic libraries, this type of reorganization is still more conjecture than reality.

As libraries grew in size and complexity, the number of middle managers proliferated. In addition to the traditional line managers, most large libraries now include a team of individuals who provide specialized managerial expertise in areas such as personnel, budgeting, planning, and automation.

The past fifty years has been a period when libraries have continued to grapple with the thorny issue of centralized versus decentralized services. Fifty years ago, Robert A. Miller argued the pros and cons of centralized and decentralized collections in areas such as accessibility, efficiency, interrelationship of subject field, and cost.²¹ Today's library directors are still trying to arrive at a balance between the efficiency of centralized services and the greater convenience of decentralized services. At most institutions, the present trend has been to continue to centralize services as much as possible.

In a similar vein, academic librarianship has seen the waxing and now the waning of interest in undergraduate libraries.

Harvard's Lamont Library was built in 1949, but the real proliferation of this type of library came in the 1960s and the early 1970s when the number of undergraduates on campus was expanding most rapidly. The interest in establishing new undergraduate libraries has dwindled in the past fifteen years because of cuts in library budgets, stable enrollments, and the assumption of many that separate libraries for undergraduates are unnecessary now that bibliographic instruction programs are available to make the main library more comprehensible to undergraduate users.

The future place of both undergraduate and branch libraries is not clear. Still to be factored in is the impact of the new technologies and the advent of new methods of document storage and retrieval. Many of the arguments in favor of centralization will disappear when materials can be shared electronically among libraries. Some writers predict that the library of the future will consist of small, decentralized units which will provide users with the convenient, individualized services they have always preferred.²² The new technology will likely be a driving force in determining the organizational structure of the library of the future, but the shape of that library is still to be determined.

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LIBRARY BUILDINGS

Indicative of the growth of higher education is the spurt in library building that went on during the middle of the period under consideration. With the infusion of federal money in the sixties and seventies, a large number of academic libraries were built. Between 1967 and 1975, 647 academic library projects were completed in the U.S. at a cost of \$1,900,000,000. Many

of the projects were partially funded with federal money authorized under the Higher Education Facilities Act.²³ Many of the old main libraries that were replaced were refurbished and used for other purposes such as undergraduate libraries or classroom buildings.

Not only have library buildings grown in sheer numbers and in size, but the change in architectural design over the past fifty years has seen a shift from the "monumental" library building, still the most common type in the 1930s, to a more functional style of library architecture. Edna Ruth Hanley's *College and University Library Buildings*, published in 1939, provides a good introduction to the style of architecture popular in academic libraries at that time.²⁴ The book presents photographs and floor plans of 42 college and university libraries that had been erected between 1922 and 1938, the most expensive of these libraries costing \$1,200,000. The columns, cupolas, and towers associated with "old fashioned" library buildings are all well represented.

The architecture of the buildings built since 1939 has been very different from that of the earlier era. The older, fixed form buildings were replaced by buildings with functional flexibility which provided facilities for group discussion rooms, conference rooms, individual study carrels, and comfortable reading areas. The new buildings had good lighting and ventilation, air conditioning, open stack design, comfortable furniture, and adequate acoustical properties.²⁵

During the past few years, the "flexibility" of some of these new buildings has been strained as librarians have attempted to accommodate the computer hardware, especially the terminals, being added in libraries. The need for space is critical as libraries are going through a transition period between online and manual systems. Libraries with online catalogs still need space for traditional card catalogs and reference departments are attempting to find room for CD-ROM terminals among the reference stacks. The clatter of the printer in public use areas is a new sound in most libraries, and librarians are struggling to find a way to accommodate harmoniously

the old and new technologies of librarianship.

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STAFF

The size of the library staff has increased commensurately with the growth of the rest of the library. When C&RL published its first annual statistics in 1941-42, the median number of full-time personnel in the largest academic libraries was thirty-seven.²⁶ Today, each of those same libraries would have a full-time staff that numbers in the hundreds.²⁷ But to describe the changes in the personnel aspects of academic libraries as growth alone would obscure the truly significant advances made in this area.

In the past five decades, the tasks professional librarians perform have become more clearly differentiated from those performed by nonprofessionals, and, in many instances, tasks that had been done by professionals have been transferred to members of the support staff. As Allen Veaner has written, this displacement provides an illustration of technological imperative in that once technology is used to accomplish complex, routine mental work, that work is driven downward in the work hierarchy away from professional to support staff. The professional's work then expands to include new and more challenging tasks, and, as a result, librarians have acquired a more clearly defined professional responsibility.²⁸

In terms of professional-level staff, the academic libraries of today are "leaner and meaner" organizations. As recently as 1950, the staff of most college and university libraries was composed of fifty to ninety percent professional librarians. In most contemporary libraries, the ratio is now one professional librarian to two support staff members, and in some large li-

braries, the proportion of professional librarians is still lower.

Professional librarians of today, taken as a group, are better educated than those of fifty years ago. Almost all of them have at least a master's degree, and a large number have, in addition, a second master's degree or a Ph.D. They are graduates of professional schools whose curricula are less practice-oriented and more research- and problem-oriented than they were fifty years ago.

Librarians not only enter the profession with a better education, but they strive to continue that advantage not only by recognizing the value of continuing education and staff development but also seeking out opportunities to avail themselves of further education. Without this willingness to continue to learn, librarians would have found their knowledge and skills had become outdated in the rapidly changing academic library field.

The past fifty years also have seen librarians assume tasks that were not considered totally within their sphere of competence in the late 1930s. Individuals trained as librarians, not bookloving faculty members, are found as directors, almost without exception. Librarians, not teaching faculty, now do the bulk of the book selection (although often with the advice of interested faculty), and collection development is considered to be the right of the library staff. Librarians now routinely engage in teaching, both within the library and without, by means of bibliographic instruction programs.

These changes have led to a greater professional maturity among academic librarians. Most of today's academic librarians have a clear view of their place and purpose within academe and recognize that they play a role of central importance in the instructional and scholarly life of the university. This greater professional maturity has been reflected in the growth of the number of professional journals, in the increase in research and publications, in interest in professional organizations, and in the establishment of policies and standards.

Academic librarians have also made tremendous strides in their quest for partici-

pation in library governance. In 1939 almost all libraries were organized in a traditional hierarchical structure, and the most common management style was authoritarian with the director making all decisions relating to the library. Although there are still a few authoritarian directors remaining, non-administrative librarians are now involved to some degree in decision making in almost every academic library. The committee system has been found to be an effective method of providing librarians' input. Although a few small libraries have adopted the faculty model of collegial governance, the sheer size of most academic libraries makes that model an inappropriate one. A few libraries have also experimented with matrix or project management organization patterns in an attempt to provide greater staff input and involvement, but on the whole, the academic library of today is still organized in a traditional, pyramidal fashion. The difference is that librarians have been successful in finding ways of providing opportunity for staff participation in decision making within the confines of the bureaucratic structure.

The now generally accepted premise that academic librarians should have input into decision making provides an interesting contrast to the still unresolved issue of what is the appropriate status for academic librarians. This is an issue that was being discussed fifty years ago (and before) and is still far from being resolved today. Miriam Maloy wrote in a 1939 *ALA Bulletin* article:

[W]riters have pointed out the important function of the librarian as a teacher and his obligation to pursue higher studies and broaden his outlook by travel, just as regular faculty members are expected to do. These are good arguments for the inclusion of librarians in the academic ranks rather than the administrative ranks. . . . However, some groups of librarians have felt that more immediate advantage could be gained in their particular institutions by stressing and developing their unique status as librarians, raising their own standards, developing their own potentialities, and bringing to the attention of college authorities the educational and cultural requirements of the library profession.²⁹

Maloy's words describe the situation in 1989 as well as they did fifty years previously. The quest for faculty status for academic librarians began well over 100 years ago,³⁰ but it began to become a central concern for librarians starting in the fifties and sixties. The concern about the most appropriate status for librarians has extended up to the present and is reflected in the fact that perhaps more has been written about this particular aspect of academic librarianship than about any other during the last 25 years.

The move toward faculty status was advanced by the decision of the American Association of University Professors (AAUP) to admit librarians as members in 1956. At the 1969 ALA Conference, ACRL approved a motion establishing as one of its chief goals, full faculty status for all academic librarians. ACRL, the Association of American Colleges, and AAUP drafted a joint statement on faculty status of college and university librarians urging the granting of faculty status to librarians as well as the same rights, privileges, and responsibilities of faculty members.³¹ Although recent surveys have shown that nearly 80 percent of librarians report having faculty status,³² it is clear that few librarians have full faculty status "with the same rights, privileges, and responsibilities."

In the past decade, a large number of academic librarians have begun to reconsider the issue, and some now feel that perhaps the quest for faculty status was misguided. It is their judgment that academic librarians have assumed the dual responsibilities of teaching faculty members and librarians to their own detriment. Despite the fact that faculty status still has its strong proponents, a growing number of individuals now advocate having librarians organize as a separate academic group to seek recognition and status as librarians. Under this status, it would be necessary for librarians to set strict standards for performance, education, and professional competence if they wished to earn the respect of their faculty colleagues, but at least librarians would be judged by criteria appropriate not to another profession but to their own.

The debate about the appropriate status which has consumed so much energy and effort during the past fifty years has yet to be resolved. Perhaps, the ultimate resolution will be the realization that there is no one "ideal" status for academic librarians and that the appropriate status can best be worked out on an institution-specific basis. In those institutions which have granted full faculty status to librarians including the released time and the institutional support needed for doing research, faculty status may indeed be a realistic option. In those other, more numerous institutions where faculty status has been granted in name only, librarians might do well to seek to be judged on criteria directly related to what they do in their own profession.

Here again, the impact of technology will be a significant factor. If libraries of the future are the decentralized units foreseen by some, where a "holistic" librarian with an advanced subject degree and knowledge of the research process works in close relationship with faculty and students in a specific discipline or field of study, the faculty status model might fit very well.

Some of the changes in the personnel patterns in academic libraries have been the result of the changes in personnel patterns within academe as a whole. The push of collective bargaining units into institutions of higher education beginning in the 1970s has resulted in the unionization of a large number of librarians, especially those in large public systems. Interest in better working conditions has led to increased attention being paid to the quality of the working life within libraries. Most libraries now have instituted formal grievance policies which can be used to redress employee complaints.

Academic libraries have also mirrored the improving conditions for women and minorities within the society as a whole. Interestingly, women had an easier time securing positions in library administration in the late 1930s than they did in the sixties and seventies. In 1930, only 9 percent of all librarians were male; by 1940, the percentage of males in libraries had increased to only 10 percent.³³ Males were

encouraged to enter the field of academic librarianship after World War II. The percentage of males increased until now it is estimated that approximately 20 percent of all librarians are males, with a higher percentage of males working in academic libraries than in any other type of library. The most recent statistics show that approximately 35 percent of all academic librarians are male.³⁴ As males entered academic librarianship, females were displaced from administrative positions, especially in the large, research university libraries, where their representation in administration had always been low. In 1930, in the 74 institutions of higher education with enrollments of more than 2,000, there were fifty-five men and nineteen women serving as chief librarians. As women retired, men were hired to take their places. By 1967, 70 of these libraries were headed by men and only 4 by women—not one of the fifty largest academic libraries was directed by a woman. In the late 1960s, even the women's colleges that had traditionally employed female head librarians were employing males.³⁵ In the 1970s, federal Equal Employment Opportunity legislation was made applicable to institutions of higher education, and conditions for women improved. Today, 28 of the 103 ARL university libraries have female directors, and there is a higher percentage of females at the middle management level than ever before. Academic libraries, like other institutions in our society, still need to make progress in the area of equal opportunity for women, but they have left behind, forever it is hoped, a time when an advertisement like the following could appear: "Stymied in your present job? Want to broaden your experience? Like to work in brand-new building under ideal conditions? Insist on liberal fringe benefits? Want faculty status? If so, and you are male, you may be interested."³⁶

In terms of equal opportunity for racial minorities, academic libraries have also made progress. In 1939, an article in the *ALA Bulletin* reported the problems associated with library education for blacks.³⁷ At that time Hampton Institute, the only library school for blacks, was on the verge

of closing. The article urged the establishment of another library school to prepare black librarians. The problem today lies not in availability of education but in how to get more minority students to enroll. Despite the efforts of many academic libraries to increase the number of minorities on their staffs, the profession has not been successful in attracting minorities to the field. Librarianship has to compete with other more lucrative professions, and is, too often, coming in second. The latest statistics show that almost 90 percent of all academic librarians are white; 4.5 percent, Asian/Pacific Islander; 4.1 percent, black; 1.5 percent, Hispanic; and .02 percent, native American.³⁸ It seems obvious that libraries will not be able to compete on the basis of pay but must look for other ways to attract minority entrants. Some academic libraries and some library schools have instituted innovative scholarship and internship programs to attract minorities to the field. More efforts in this area need to be made if librarianship is committed to increasing the number of minorities in the profession in the future.

SERVICES

Not surprisingly, library services have changed along with the rest of librarianship. Technology has had an enormous impact on technical services. Automation was first used to make the work of librarians easier, especially the "record-keeping" work of librarianship including acquisitions and cataloging. Librarians developed their own local systems or bought turnkey systems to help with acquisitions and serial control. The growth of the bibliographic utilities, especially OCLC, during the seventies and eighties revolutionized cataloging and led to a restructuring of the catalog department in almost every academic library.

Because technology was first used in technical services and thus was invisible to the library user, many users were unaware of its heavy use in libraries during the sixties and seventies, even though much of the growth in collections and services during that period was made possible by its implementation. Today, especially in large libraries, things are very

different. Patrons themselves have become eager users of technology such as CD-ROM discs and online public access catalogs.

Public services in libraries have increased both in number and in comprehensiveness over the past fifty years. Circulation was the first service provided in academic libraries, and, by the late 1800s, some academic libraries were providing reference service. As Samuel Rothstein has shown, however, this service was provided on a minimal basis until the 1940s.³⁹ Throughout the last fifty years, academic librarians have increased the amount of specialized and in-depth assistance in the use of collections, not only in answering users' questions, but in preparing bibliographies and in providing telephone information services. Many libraries have employed subject specialists to provide reference service in specific areas.

In addition, two new services have been developed: bibliographic instruction, which has become an integral part of academic librarianship over the past twenty years, and online searching of bibliographic or natural-language databases.

The librarians of 1989, like those of 1939, have a strong commitment to service to users. This commitment to service may be needed even more in the near future as library users have greater opportunities to interact directly with library technology and need to be trained in its use. As C. Lee Jones has pointed out, "This era of technical innovation in libraries has become for patrons an age of discontinuity of library services as library practices they have grown accustomed to are rapidly replaced by new ones."⁴⁰ It will be the librarians of the present and the future who will need to refamiliarize patrons with the library.

As long as technology stayed in the backroom, librarians were not faced with this problem. Even when online searching became common, in most cases trained librarians performed the searching. It was not until the availability of online catalogs and CD-ROM discs that librarians found they had to spend an increasing amount of their time in the teaching of the new technologies. Reference librarians in departments which have just recently acquired

CD-ROM discs frequently mention the way their time is being redistributed away from traditional reference service to the instruction of patrons in the use of the CD-ROM. These demands for new instruction and new services will only increase as librarians make more computerized information technology available to patrons. It is likely that in the near future librarians will be called on to help in new ways, for instance, assisting patrons with downloading information and constructing their own tailored databases. The possibilities in this area are limitless and will be constrained only by the amount of time librarians have available to be divided among competing demands.

QUO VADIS?

If growth, acceptance of cooperation, and the adoption of technology were the driving forces behind the changes in academic libraries over the past fifty years, what will be their impact in the future? It seems likely that the relative importance of these factors will not remain the same.

Growth, which was perhaps the strongest force for change over the past fifty years, will likely be the weakest in the future. This is because the great expansion in higher education that served as an impetus for the growth of libraries has plateaued and is likely entering a period of decline. Although it is impossible to predict exactly the number of students who will be going to college in the future, the best available estimates are that between now and 1996, enrollments may decline from 12.4 to 11 million students.⁴¹ This decline will not affect all institutions equally; some types of institutions and some parts of the country will be more hard hit than others. Nonetheless, on the whole, most institutions of higher education are expecting a smaller number of students to enroll between now and 1996, and that decrease will affect libraries in many ways from budget freezes and cuts to the need for fewer seats in the reference room.

The increase in publication rate that led to the spurt in the size of library collections has leveled off, but straitened budgets and increasing costs, especially for foreign serials, mean that librarians will still not be

able to acquire a larger proportion of this output. With a shrinking enrollment and no increases seen in federal spending, there may be fewer new libraries built in the future. Librarians will need to continue to experiment with remote storage facilities and steady-state collections.

The cooperative efforts of libraries will likely increase and strengthen in the future. The move away from acquisitions to access will continue and be made even more necessary as costs for technology compete with funds for collection development. Many library users who would prefer to see their libraries continue to purchase the bulk of the scholarly material they need will likely resist this new emphasis on access. Nevertheless, it is inevitable that the collection development policies of even the largest academic libraries will respond to the economic realities. Librarians will accelerate "the trend away from each library being a self-contained unit, toward a system in which the library will be a service center, capable of linking users to national bibliographic files and distant collections," which was advocated by the National Enquiry into Scholarly Communication in 1979.⁴² Advances in technology will make both the inter-institutional and the intrainstitutional sharing of resources less burdensome.

Technology will play the greatest role in transforming the library of the future. It is clear that the process of technological innovation in libraries (and in higher education) is an ongoing one. The library of today is in a process of transformation that has already produced great changes but which promises to produce a great many more in the future. It is important to remember that as much as technology has already changed libraries, the changes it has made are likely to be just the beginning. This is because technology is usually adopted in three stages and libraries are not even halfway through the process yet. This three-stage model of technological adoption was first described by O'Connell in 1969. In the first stage, technology is used to do the same things but to do those things more quickly. In the second stage, technology is used for new applications and to do new things. In stage three, tech-

nology is used in ways that create fundamental changes within organizations and societies.⁴³

It is clear that at this point, most of the use of technology in libraries is still at stage one. Librarians have used computers to speed up cataloging, circulation, and acquisitions. Libraries began to enter stage two with technological advances such as online catalogs which have greater search capacities than traditional card catalogs and with database searching which permits searchers to search materials electronically in ways that were never possible using print sources.⁴⁴

Stage three, the one that will lead to fundamental changes within a society and its institutions, has not yet made its appearance, but when it does, the academic library, like the rest of higher education, will undergo dramatic changes. At this time, the changes this stage will bring can only be dimly and imperfectly glimpsed. It is this new use of technology that will most strongly affect the shape of the library of the future.

THE LIBRARY OF THE FUTURE

Much has already been prophesied about the library of the future, but these seers share no common vision. Some see the library of the future as relatively similar to today's but with new technological "bells and whistles" to make it work more efficiently and effectively. On the other hand, there are those who have predicted the virtual demise of the library as users' information needs are satisfied entirely by electronic information available in homes or offices.

Foretelling the future is both difficult and risky. A perusal of library literature of the thirties and forties dealing with the future of academic libraries reveals that librarians of that time were not particularly prescient.⁴⁵ Although many authors foresaw the growth of libraries, none of them had an inkling of the impact of computer technology upon today's libraries. This is not surprising. Although the first computer was built just before World War II, general purpose computers were not common before 1960. But there is no reason to

think that today's librarians are going to be any more accurate in their visions.

Prophets are usually led astray by linear projection—they take today's trends and interpolate them into the future. The problem lies in the fact that the future is often not linear or deterministic. As John Naisbitt has written, "The gee-whiz futurists are always wrong because they believe technological innovation travels in a straight line. It doesn't. It weaves and bobs and lurches and sputters."⁴⁶

What weaves, bobs, lurches, and sputters lie ahead for academic libraries in the next fifty years? It seems that the answer to this question depends on the larger question of what lies ahead for higher education in that same time period. Remember Bonner's description of the changes of the past fifty years as "not only unforeseen and unplanned, but . . . largely unintended and unwanted."⁴⁷ Will the changes of the next fifty years be planned and foreseen any better? It seems unlikely.

Higher education has learned the lesson about demographic planning. The students who will be entering the college classroom in the first decade of the twenty-first century have already been born. Both birth and enrollment rates are being closely watched by institutions of higher education. But demographic planning, despite its uncertainties, is the easiest part of planning for the future.

The biggest unanswered question related to the future of higher education is what impact the electronic information technologies will have on this nation's colleges and universities. It is impossible to know now what the ultimate result will be. Computer technology has the potential to produce as much change in our society as the invention of the printing press. As a society, we are still in the early stages of the adoption of technology and may not even realize it has begun to change our life-styles and reshape our institutions until it is too late either to control the effects or shape the future.

It is possible that higher learning might be completely deinstitutionalized as information technology and computer networks are improved and become common

on all campuses. Higher education may no longer be identified with institutions as defined by bricks, faculty, and libraries, but with a content of knowledge that could be learned wherever and whenever it best suited the student. Our institutions of higher education, as presently constituted, would be anachronistic in such a learning environment. As one writer put it,

Some wealthy institutions may seek to perpetuate their present form. But the unique structure of the American research university, in which professors do research aided by assistants who support themselves in part by teaching undergraduates what they should have learned in secondary schools may come undone.⁴⁸

Perhaps this is one possible future for higher education. In that case, there would be no need to worry about the future of academic libraries—they would disappear along with their parent institutions. There are, however, many counterarguments that could be put forth against such a future. It could be asserted that the personal interaction between teacher and student will never be replaced by a machine. Naisbitt has written about the need for "high touch" in a high-tech world.⁴⁹ The humanistic elements of education would still be important to most individuals. One might also contend that institutions of higher education play an important role in socializing students which could not be duplicated in an environment where a learner studies in isolation connected to others only by means of telecommunication channels.

But, regardless of how alien the above vision seems, higher education is likely to be transformed at some point in the future as the result of technology. It is impossible now to do more than conjecture about what shape this transformation will take and when it will occur. It seems highly unlikely that this transformation will take place within the next fifty years, since it has been shown that forecasters tend to overestimate what is likely to occur in the short run and underestimate or fail to anticipate at all what will happen in the long run.⁵⁰ So dramatic change will not come quickly to higher education but it will

come eventually. To avoid the fate of the carriage makers of the nineteenth century who had no idea they would be replaced by the automakers of the twentieth, all individuals involved in higher education, including librarians, need to think about the future direction of the field. While this will not stop the flow of change, at least the changes may not be as "unplanned and unintended" as they might be. Of course, the task is complicated by the fact that the participants have a stake in the existing structure but that is all the more reason for them to want to exert as much influence as possible in shaping the future of higher education.

If the long-term future of both higher education and academic libraries is unclear, the short-term future is much easier to describe. The academic library of the early part of the twenty-first century will still be a strong and vibrant institution. As today, there will be a great diversity in these libraries. Some of the smallest ones may still have made only modest investments in technology although the proliferation of microcomputers will have made technology more affordable for all. Many libraries, especially those in large and wealthy institutions, will have transformed themselves into "electronic" libraries. They will be active participants in an environment where the library serves as the connecting agency or gateway between users and information in all formats. Their services will be available in a much more decentralized fashion, and users will not have to come to a physical entity, the *library*, to use its resources. There will be a much closer relationship (or possibly, a merger) between the library and the computer center, as each discovers that the scholarly information needs of individual institutions can be met only by cooperative effort.

Librarians in this setting will have to learn to handle long-distance users—library patrons whom they have never seen. There will be opportunities for librarians with their specialized knowledge of both information skills and technologies to play more active roles in instruction. The development of electronic libraries will impose still greater demands

on academic libraries because the less visible the medium the greater the need for the intermediary.⁵¹

But despite the heavier use of technology in all types of academic libraries, book collections will continue to be heavily used. Books and computer output will co-exist. Libraries will continue to add new technologies but these new technologies will not completely replace the existing ones.

What should librarians be doing now to make the transition to this short-term future easier? First of all, they should be taking an active part in their institution's planning for electronic technologies. Academic librarians need to be at the forefront in discussions about electronic technologies on campuses. They should be working collaboratively with other units on campus such as the computer center and the telecommunications center to explore new ways to exploit the powers of the new technology. They should be discussing how to secure the funding, both for capital costs and ongoing expenditures, that will be necessary to finance the new technologies and services that libraries may provide and how to balance these new costs against the costs for traditional library materials and services that will still be needed. They should be investigating the type of education (and reeducation) necessary for staff to function effectively. Librarians also should be working on difficult issues such as how to handle copyright and ownership of materials in machine readable files and how to provide maintenance for electronic databases that are in a constant state of change. Finally, and most important, academic librarians should be attempting now to define the roles they want libraries and librarians to play, because if they do not, others will define those roles for them. Librarians should seize the initiative to take advantage of opportunities the new technologies are presenting them to make the restructured library a major force in the university's new information environment.

Despite the uncertainties of the future, the opportunities for libraries are bright. Libraries have existed as institutions for

nearly 3,000 years because they have had a vital role to play in society. That role will continue. Fifty years from now academic libraries will still be in existence. They will have changed, no doubt as much or more than the libraries of today have changed from those of 1939. Yet, in 2039, when ACRL celebrates its 100th anniversary, there will be an opportunity for someone else to write an article for *C&RL* about the changes in academic libraries in the last fifty years. It is likely that author too will discuss the unforeseen changes that occurred in libraries since 1989 and how un-

prepared in some respects libraries were for the changes that befell them. Perhaps, he or she will marvel that the librarians of the twenty-first century are still wrestling with some of the same problems as their predecessors. Will the most appropriate status for academic libraries still be a matter of concern? But there is every reason to believe that the underlying theme of that article as of this one will be that libraries have come through another period of challenge and change and are stronger entities than ever before in institutions of higher education.

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