

The Renaissance in Library Buildings

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ABSTRACT

In the enthusiastic embrace of the digital library, with its anytime, anywhere characteristics, some people have assumed that physical libraries will become obsolete. Yet an examination of the behavior of students and faculty and of recent renovation and construction of academic and research libraries shows that brick and mortar buildings are enjoying a renaissance. Libraries have traditionally supported the housing of collections, reader services, and the staff who manage collections and provide services. These three components continue in the 21st century, but librarians, architects, and users are collaborating to produce elegant and functional designs that reflect new spatial allocations and new purposes. Modern libraries incorporate flexibility and comfort to create an environment that is welcoming and that supports a range of research and learning activities. This paper draws on examples from recent construction and reconfiguration of academic libraries in the United States to illustrate the changing scope of the physical library and the important role it plays in serving as a community hub within a university.

Among the examples selected are several relating to the challenges of collection management, including the use of compact shelving and high-density storage facilities. The paper also traces the evolution of spaces from the catalog card era to the present state in which wireless access is a standard feature. Lastly, the author touches on new and expanded roles for librarians and the ways in which design advances the effectiveness of information professionals in fulfilling these new roles.

INTRODUCTION

As the millennium approached and the promise of digital libraries appeared to be becoming a reality, both the general public and administrators often questioned the future of physical libraries. An article entitled "The Deserted Library" which appeared in the *Chronicle of Higher Education* in November 2001 attracted considerable attention for its descriptions of desolate reading rooms and declining library traffic ([Carlson, 2001](#)). University overseers have been prone to imagine that libraries would stop growing and might even shrink, with "everything being digitized." This wistful view of the benefits of technological advancement has been encouraged by the administrators' desire to solve problems of campus congestion caused by relentless construction of new buildings to house expanding collections. This has resulted in many ingenious solutions. At Cornell University the Board of Trustees insisted in 1991 that a new library be built underground to preserve green space and that there be a prohibition on future library expansion on central campus. Libraries have been challenged to use their space more effectively, but they nonetheless are expanding and remaining vital contributors to intellectual discovery and learning. Scott Bennett, in a monograph published in 2003, notes that in the decade between 1992 and 2001 U.S. library construction projects costing almost \$4.5 billion resulted in an annual renovation or construction of library space averaging about 2.8 million square feet. About 40% or 1.1 million square feet was newly built library space ([Bennett, 2003, p.9](#)).

Despite the trend toward electronic resources, physical collections continue to grow, especially in the humanities and social sciences. In the sciences, where a higher percentage of the literature appears in digital form, paper backfiles exist increasingly primarily for archival purposes and for professional certification, rather than for active consultation. Libraries have coped with the explosion of knowledge by utilizing compact shelving for materials required for immediate access. More frequently, however, they have opted for the so-called Harvard-style depository, named after the Harvard Depository Library, a high-density warehouse in which books and other materials are stored by size. Retrieval by barcode in buildings reaching to 30 feet high is effected by the use

of special forklift trucks. Initial resistance by scholars to the relocation of books and journals to a non-browsable offsite storage facility has been mitigated by efficient delivery mechanisms that bring physical objects to patrons within 24 hours or less or deliver scanned articles to the desktop (Kohl, 2003). A new development, that of regional repositories with shared and integrated holdings from multiple institutions, is taking hold in the U.S. (Smith, 2004). More and more libraries are questioning the practice of storing redundant versions of journals and are moving toward shared and integrated collections to conserve space and increase economies of scale (Reilly and DesRosiers, 2003).

Previous generations of scholars have often conceived the primary purpose of libraries as being the storehouse for books. Indeed, funding for collections and their management remains the largest portion of a library's budget. The construction of book stacks often dominated fortress-like buildings. Access to the collections was channeled through the card catalog, which occupied a place of prominence on the main floor of the library. Adjacent to the catalog cases were the offices for acquisitions and cataloging, since these staff needed to be able to consult the files and bibliographic indices.

INFORMATION COMMONS

Today the online catalog has displaced the card catalog, and libraries have transformed the liberated areas into information commons. With library staff able to access bibliographic information from their workstations, their workspace can be independent from collections and public areas. Institutions are regaining the use of technical services operations for patrons by shifting some staff to office buildings. Harvard, for example, moved technical services to an off-site facility about a mile away from its crowded Widener Library in 2000, renovating workrooms into an elegant and comfortable periodicals and newspaper reading room. Several other organizations have made or are planning similar moves, among them Cornell, Ohio State, The University of Pittsburgh, Stanford, and the University of Virginia. The relocation of staff who do not interact with the public to offices or other buildings frees valuable first-floor or central space for new public and collaborative uses.

Much of new library design or renovation focuses on the services libraries provide. Among one of the most popular installations is an innovation adopted from commercial booksellers such as Borders or Barnes and Noble: the café. Responding to the way society today often blurs the lines between work and home, progressive libraries have introduced cafés with soft seating, specialty drinks like mocha lattes and fruit smoothies, and wireless access. These inviting spaces are magnets for students and faculty alike and serve as meeting places and an informal study environment. They demonstrate the need for human connection, even in a cyberworld. One school, the Rochester Institute of Technology, has designed a series of spaces to foster creativity and community. The Idea Factory, as they have named it, includes a salt water aquarium, a microphone that speakers can reserve to address groups on topics ranging from poetry to public safety, a reading lounge with jazz piped into it, and flexible furniture that can be moved amidst gallery cases displaying student art.

Increasingly, libraries are investing in high quality finishes, solid wood furniture and paneling, and elegant task lamps that provide both an island of warm light and the functionality of electrical outlets and data connections. Readers seem drawn to reading rooms that impart an air of gravitas. Older libraries have refurbished their grand reading rooms as inspirational spaces, while new construction continues to feature modern interpretations of the large halls where students work quietly side by side. These spaces stand in stark contrast to the commotion typical in residence halls or shared apartments, and they impose a constructive discipline of order and serenity.

Students work on a 24-hour clock, and many of them seek study space where they can concentrate and work without interruptions at any hour of their convenience. Consequently libraries are incorporating secure 24-hour study spaces into their buildings. These areas frequently are capable of being closed off from the rest of the library so they cost less to operate during non-peak hours, and they often require an identification card for entrance. The primary purpose of the facility is for study and computer use; there is not high demand for collection access or reference service.

A CONTINUUM OF SPACES FROM INDIVIDUAL TO GROUP

Typically, libraries require an array of rooms created to support different work styles and levels of work. Increasingly professors are assigning students collaborative projects. To support this activity, libraries are creating group studies with Internet connections, white boards, and soundproof walls. This category of room is growing in new buildings, and demand remains high. Advanced students conducting dissertation research bring a different set of needs to the library. They seek a quiet desk where they can store books and lock up valuable or personal items. Power and data are standard. Enclosed, locked studies are highly desirable. At the same time that doctoral students advocate for such spaces, however, librarians note a pattern of behavior that makes them hesitate to allocate more single study space. The graduate students work in spurts and spend only a limited portion of their time at their carrels. The dilemma of the library is how to allocate scarce resources. Some institutions, such as Washington University in St. Louis, Missouri, are resolving this issue by creating graduate study rooms with adjacent lockers. A continuum of spaces from individual to group helps target the appropriate space to the user need and moves beyond the rigid, one-size-fits-all character of some earlier library designs.

Faculty studies are also undergoing change. A declining number of faculties make regular visits to the physical library. At Cornell University a recent survey revealed that only 15% of faculty are in the library daily. With ubiquitous access to many resources electronically and competing demands for their time, they are as likely to use library services and collections remotely from their office, from home, or from another location. Studies are often empty, dark and used chiefly as bookshelves. As a result, libraries are rethinking space for faculty, fashioning a flexible set of rooms that can be assigned for different durations, depending on the nature of the professor's work. Here, too, lockers provide privacy and security for working materials, but the rooms in which the faculty work may be assigned on a daily basis or be communal spaces in which multiple desks are available for use, but not permanently assigned to an individual.

In addition to rethinking public spaces to make them more congenial and functional for the modern university student or researcher, librarians are dramatically altering their buildings to reflect new expectations for service or new responsibilities. The insertion of technology into the academic enterprise has changed the way in which people work, bringing activities into proximity that previously rarely intersected. Individuals don't divide their time among reading, email, writing, problem solving, and other activities into separate categories conducted in separate places. Rather, they integrate their efforts and move fluidly from one to another. If, when working at a computer in a library, they have a question, it may relate to software as much as it does to the content or use of an information resource. Some institutions, therefore, have aligned their information technology experts with their librarians, placing them side-by-side. At Dartmouth College the architectural solution to fusing an addition to the main library was to create a street of services. As college residents passed through the building, using it as a thoroughfare to move from one part of the wintry campus to another, they traversed an array of services, including help offered by technologists, reference, circulation, and other desks. The familiar experience of the main street or the shopping mall was translated to the academic setting.

At the University of Chicago three different units in the university, the division of biological sciences combined forces with the science library and the information technologies group to create a computer-enriched teaching and learning center. The Crerar Library has a space that supports individual and group computer activities, multimedia, a visualization classroom, and a cybercafé ([Schuler, 2002](#)).

A SUITE OF SERVICES

Other collaborative spaces are becoming prevalent in libraries, particularly in the area of digitization and scholarly communication. North Carolina State University has developed a suite of services that relate to digital scholarship and digital libraries. One floor of their building has been repurposed into the Learning and Resource Center for the Digital Age ([LRCDA](#)). Among the operations housed there are a digital media lab, a scholarly communication center, a usability research library, a collaboratory, and several seminar rooms that function as information technology teaching centers and multimedia classrooms.

Another trend in library facilities reflects increasing interdisciplinary work as well as the shift from physical collections to electronic. Many American universities are building combined science or science and engineering libraries that are themselves integrated into science classrooms, laboratories, and workspaces. The University of Virginia has just opened a science and engineering library, and MIT, Columbia, Duke and Princeton all have plans to construct one in coming years. Princeton's facility, a \$60 million design by Frank Gehry, will consolidate the geosciences, chemistry, ecology and evolutionary biology, and molecular biology branch libraries and will connect below grade to the math and physics library. It is envisioned to be highly computerized, with very few books, and embedded within the daily life of the scientists and students researching, teaching, and research ([Stevens, 2002](#)). It will be collocated with a Digital Map and Geospatial Information Center and the Office of Information technology's Academic Technology Center and the Princeton Institute for Computational Science and Engineering.

CONSOLIDATION OF COLLECTIONS AND SERVICES

Just as teams of scientists come together to explore the intersection of their disciplines and collocate in buildings, so do the disciplinary libraries. This consolidation has the added benefit of creating a more effective and efficient delivery of library services since it eliminates redundancy and allows staff to be deployed at fewer service points. The reduction of service points is another theme in library buildings. Users seek one-stop shopping to increase their productivity. In a university where libraries are distributed in several locations, a professor who needs to consult materials in a number of different libraries will spend the equivalent of \$70 in retrieving an item from each collection, and the disincentive to interrupt other activities may act as a barrier to seeking out information at all. Consolidation of collections and services saves users of multiple resources time. Librarians are also able to derive advantages from having only one person staff a desk in off-peak hours, rather than three, as in an example at MIT where reference, reserve, and circulation all occur at a single counter.

One of the most advanced plans for a modern library is the Stanford Medical Library and Knowledge Management Center, for which plans are currently on the drawing boards ([Pizzo, 2003](#)). Here the Medical School takes full advantage of the freedom and flexibility that technology offers to rethink its traditional library. A significant portion of its print collection will move to offsite storage. Its new services will be split into two facilities, the library and the knowledge management center. The planners envision a distributed learning commons with a casual collaborative core, a visualization computation zone, interactive teaching areas, and live consultations. Librarians will be actively engaged in the full range of the medical educational process, being active in providing information assistance at hospitals and clinics, in classrooms, and in laboratories. The library and its services are dispersed among all facets of the medical school.

LIBRARIES AS A FONT OF CREATIVITY AND INSPIRATION

As these examples illustrate, the face and form of the library today is undergoing significant change. Libraries are shifting from being repositories for information and functioning in self-contained capsules to becoming integrated within the complex interdisciplinary fabric of the university. The overwhelming explosion of knowledge and the challenge of collecting it all physically have served as an impetus for networked library services which function on a worldwide scale. This transition, aided by rapidly evolving information technologies, had enabled librarians to think differently about housing voluminous collections. Libraries today support the flow of information and the exchange of ideas through their services and spaces. Despite the ability of the patron to meet many of her information needs at any hour of the day and in almost any location, library buildings offer unique features that continue to attract a clientele. Libraries are enjoying a renaissance as a font of creativity and inspiration. Through their placement at the very center of the university, they serve as intellectual and social crossroads. Modern libraries are beacons that attract the academic community and act as centers for facilitated knowledge discovery. The buildings, like the organizations that occupy them, are designed to be flexible and collaborative. Far from being deserted and abandoned, they teem with life and excitement. The next generation of students is building its own set of traditions and discoveries that will ensure that the library as place

remains a vital part of the learning experience.

REFERENCES

Bennett, Scott: *Libraries Designed for Learning*. Washington, D.C. : Council on Library and Information Resources, 2003. CLIR Report 122, November 2003, 89 pp. <http://www.clir.org/pubs/abstract/pub122abst.html>

Carlson, Scott: "The Deserted Library: As Students Work Online, Reading Rooms Empty Out, Leading Some Campuses to Add Starbucks". *Chronicle of Higher Education*, (November 16, 2001). <http://chronicle.com/free/v48/i12/12a03501.htm>

Kohl, David F.: "Paper and Digital Repositories in the United States". *LIBER Quarterly*, 13(2003)3/4, p. 244-246.

Pizzo, Philip: "Stanford Medicine Information & Learning Environment". The Library as Place: Symposium on Building and Revitalizing Health Sciences Libraries in the Digital Age, November 5-6, 2003, Bethesda, Maryland. <http://www.nlm.nih.gov/building/Pizzo.ppt>

Reilly, Bernard F. Jr. and Barbara DesRosiers: *Developing Print Repositories: Models for Shared Preservation and Access*. Washington, D.C. : Council on Library and Information Resources, 2003. CLIR Report 117, June 2003, 63 pp. <http://www.clir.org/pubs/abstract/pub117abst.html>

Schuler, Peter: "Crerar Library Will Soon House High-tech Computer Laboratory". *The University of Chicago Chronicle*, 19(March 2, 2000)11. <http://chronicle.uchicago.edu/000302/crerar.shtml>

Smith, Abby: "When Bigger is Not Better". *EDUCAUSE Review*, 39(2004)1, 52-53. <http://www.educause.edu/pub/er/erm04/erm0416.asp>

Stevens, Ruth: "A study in contrasts: Initial plans revealed for Whitman College, science library". *Princeton Weekly Bulletin*, 92(October 21, 2002)7. <http://www.princeton.edu/pr/pwb/02/1021/1b.shtml>

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Learning and Resource Center for the Digital Age. <http://www.lib.ncsu.edu/administration/lrcda/index.html>