An architect’s perspective on contemporary academic library design

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The making of space and place (architecture) requires cultural and financial consent as to societal value. Standards and values about the academic library of the immediate future are not always shared by librarians and architects; however, architects and librarians do possess several shared perceptions. Among these shared perceptions are that print collections will remain a primary function of libraries for the foreseeable future, flexibility in shelving arrangements are essential, adjacencies must be fluid, floor-to-floor heights should be generous, compact shelving has become commonplace, print and electronic media must coexist, and technology has not reduced library space requirements. Experience reinforces the continuing and increasing significance of the library on college and university campuses.

Symbols and iconography in the late twentieth century pose tremendous challenges for architects. Many of our building types, libraries among them, are shackled by outdated imagery at the same time that they remain the centers of intellectual purpose. Library designers struggle in a search for the symbolic meaning of technology; it is a challenge in which the traditional values of western culture are met by the indeterminacy of and questions about the formal meaning of technology and electronics. As we strive for greater discernment, understanding, and advancement of the architectural meaning of library, our task has hardly begun; we must then be able to convince our clients of the wisdom of our thought process and to part with their cash to build the results.

The making of space and place (architecture) requires cultural and financial consent as to societal value. If we cannot agree on standards, how are we to judge quality in what we build? At times, even the most erudite and far-thinking clients cannot overcome their traditional ideas of appropriate library design; classical monumentality has been accepted for libraries for centuries. The competition for the main branch of the Chicago Public Library, in which some of the most prominent members of our profession participated, was a case in point. In the end, that jury rather poignantly selected the winner mainly on the grounds that “It looked like a library.” The standards and values of the nineteenth century still applied, because no more modern imagery has convincingly captured our cultural endorsement.

We are not alone here, by the way.

Writing in the New York Times on February 12, 1995, Herbert Muschamp observed that Mario Botta, the architect of the San Francisco Museum of Modern Art, had missed a chance to “say something about the changing nature of modernity,” or to display “the power of architecture to reckon with the discordance that lurks beneath our masks of composure” [1]. The same issues confront the jury of librarians and architects as they attempt to recognize the best designs in the biannual American Library Association/Architectural Institute of America awards program. Our professions, mutually dependent, still battle with fervor and passion as we search to redefine quality in our work.

That search will not lead red herring-ly to an imagery in which time-honored principles of proportion, massing, detail, light, and design in context are subordinated to literal interpretations of electronic high fashion, any more than principles of aerodynamics and fuel efficiency in automobiles have been abandoned because of the installation of cellular phones. Architecture, fortunately, remains with us.

Technology and electronics are merely tools for our use. Of far greater interest is how they have changed the ways we use our libraries. In that context, I offer several perceptions about the academic library of the immediate future about which librarians and architects generally agree. Among them are these.

Collections in print will continue to dominate our libraries. The housing of print collections and readers remains the primary function of libraries today and
will for the foreseeable future. There are examples to the contrary, but academic libraries still remain pedagogically tied to the materials they own in print form. Projects on the boards today add as much space as can be afforded, but often the expanded buildings will be at capacity the day the ribbon is cut. The expanded Morgan Library at Colorado State University in Fort Collins will open in 1997, with 40% of its monograph collection still in remote storage despite a large increase in compact shelving in the main structure (Figure 1). The new library of 120,000 square feet at Marshall University will require the existing building to stay in operation as well, despite the attendant staffing and reader inconveniences.

Flexible shelving arrangements are essential. All floors should be designed for 150-pounds-per-square-foot live loading, to permit full-height shelving any-
where the staff may wish to put it. Office space, normally designed at fifty pounds' live loading, is far too likely to be reconfigured in the early life of the new building. We have observed that the premium from 150 pounds' to 300 pounds' loading, which will permit compact shelving anywhere, is only 10% of the structural cost of the project. This translates to roughly 2% of the overall cost of construction.

**Adjacencies must be fluid.** Increasingly, we find readers, collections, and staff blended together on every floor. Richard DeGennaro's definition of a librarian, that of "everybody's assistant," seems more apt with every passing day [2]. We now include a number of oversized work stations, fifty-four inches in width on every floor, accommodating both a student and a professional offering momentary assistance. In the new Health Sciences and Information Services Building at the University of Maryland at Baltimore, positions for both librarians and computer systems staff will be on each of its six floors.

On the entry levels of both public and academic libraries, service points can be found located in architectural arrangements that bear uncanny resemblances to cafeteria servery plans. Reference desks (rotisserie chicken), interlibrary loan (hot drinks), media services (salad bars), and OPAC terminals (condiments) can all be found on the way to circulation desks (cashiers). Persons using self-checkout kiosks (automatic-teller machines) can bypass any requirement for human interaction. Traffic and noise levels are high and are likely to remain so. Traditional functions blur, and even staff job descriptions can change during the course of the design process. New staffing efficiencies are developed in response to increasing responsibilities rarely matched by increases in numbers or funding.

**Floor-to-floor heights should be generous.** McKim et al. determined in the nineteenth century that seven feet was the maximum shelf height for most persons' comfortable reach and from that developed an elegant system of floor relationships [3]. Using seven feet, six inches as the floor-to-floor heights for self-supporting closed stacks, the architects arranged corridors and minor galleries of fifteen feet at every other stack level. Major reading rooms of thirty feet were then placed adjacent to four stack levels or two gallery levels. Today's mechanical systems and building codes restrictions no longer permit the volumetric density of such a system (Figure 2).

Floor-to-floor heights of fourteen to fifteen feet are...
now recommended in order to accommodate slow, quiet air movement through large ductwork. Low-voltage telephone and data distribution systems are often arranged in open visible troffers and coves for each adjustment and change, even eliminating the necessity of removing lay-in ceiling tiles.

**Compact shelving is a part of every library.** Particularly in academic libraries, storage of bound periodicals or government documents in compact shelving has become commonplace. Some librarians have traditionally preferred these collections integrated into the monograph stacks, but more and more frequently that option is ruled out for reasons of cost. As the number of subscriptions in electronic form increases geometrically, the requirement (or choice) for sequential storage diminishes. All of the ten academic libraries currently under design or construc-
Information and media systems should be included. One definition of the contents of a library includes "the objects of a person’s study, the sources upon which he depends for instruction" [4]. Most building programs now include information systems, instructional space, media storage and production facilities, and often the campus computer services. The barriers between the disciplines are coming down rapidly. New programs make little distinction between the staff locations and work spaces save those that are special to the computer work room itself. A single organizational system for administration ensures a sense of common purpose.

Technology will not reduce space requirements. The battle cry of the eighties about shrinking libraries has been conclusively disproven. To accept the notion that low-voltage wiring from dormitory rooms to databases and cyberspace makes libraries obsolete is to miss the essence of the human experience in campus life. We must visit our libraries in person as well as electronically. The availability of information through electronics has generated new kinds of space needs. For example, the simple requirement for staff to assist students as they learn how to access knowledge in electronic form takes floor space. We now find expanded facilities and service points for interlibrary loan and for group-study and seminar rooms in which students share information and assemble individually prepared research assignments. These rooms, parenthetically, were anathema to librarians as little as ten years ago. It was felt that such spaces, holding four to twelve seats around single or flexibly configured tables, were not required by class assignments and, conveying no sense of ownership, were apt to be mistreated. Students today appreciate the accommodation, and recent experience is positive.

Workstation space standards approach those of office planning at thirty to thirty-five square feet per reader, rather than the twenty-five square feet used up to a decade ago [5]. Computer terminals and keyboards are now included, but notebooks and backpacks have not gone away, and the carrel space requirements of honors and thesis students are substantially larger. Dr. David Kaser, librarian emeritus of Indiana University, and an internationally recog-
nized consultant on library planning, now programs buildings at 75% to 80% efficiency; by comparison, Jay K. Lucker, librarian at the Massachusetts Institute of Technology, recommends an efficiency of 70%. Both authorities agree, however, that a looser fit, like suits of clothing, is a better bet against an uncertain future.

CONCLUSION

All our experience reinforces the continuing and increasing significance of the library on college and university campuses. Building committees are faced with aging libraries, normally at the heart of the campus and often with little room for expansion (Figure 3). They suggest a peripheral location, perhaps where costs may be lower, fidelity to older materials less important, and planning choices less constrained. These exercises are essential for reasons of good stewardship, but, in the end, the alternatives are nearly always rejected unless the new site signals a real shift in the center of gravity of the campus. Otherwise, secondary sites never satisfy the deep, nearly spiritual commitment to the essence of the enterprise that the central locations and best sites do (Figure 4). The experience of college life includes social and intellectual growth, the stimulation and satisfaction of curiosity, and the expansion of personal limitations. As no other building can do, the library, whether past, present, or future, remains the built counterform to those aspirations.

REFERENCES

1. Muschamp H. An emporium for art rises in the west. NY Times 1995 Feb;144:34.

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