Susan Joy Erickson. Library Design Issues in the Writings of Architects and Librarians. A Master's paper for the M.S. in L.S. degree. April 2000. 54 pages. Advisor: David W. Carr.

This study enumerates the major design concerns of both librarians and architects in the library building process. A latent content analysis of thirty-seven articles from architectural and library journals was performed to determine the most prevalent issues in each of these professional fields.

It was determined that five overarching themes are discussed in the literature. These are: philosophy of design; the design process; special functional elements; interior design; and occupancy of the building. Major issues under these thematic headings are: vision of the library; allusions in the design; library as gathering place; site context; the library as a gathering place; phases of the design process; flexibility in design; historic preservation; adaptive reuse; climate control and preservation of collections; information technology; lighting, color, and furnishings. Articles are cited as examples to illustrate these issues.

The author offers "lessons for librarians," summarizing the main issues that librarians need to consider as they begin the design process.

Subject Headings:

> Architecture-and-building-Programming-and-planning
>
> Architecture-and-building-College-and-university-libraries
>
> Architecture-and-building-Public-libraries
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LIBRARY DESIGN ISSUES
IN THE WRITINGS OF ARCHITECTS AND LIBRARIANS

By
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Approved by:

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Advisor

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Introduction

My interest in library buildings began in earnest in May 1999 when I attended the University of North Carolina School of Information and Library Science seminar in Oxford, England, on "Libraries and Librarianship." Our visit to the new British Library inspired me to think about the possibilities for library architecture. The building serves as both a special research facility for scholars from around the globe and a tourist attraction with its many "treasures," such as the Magna Carta, for visitors from near and far. Its architecture is well suited to balancing and bridging these two important roles in addition to providing comfortable work space for staff and conference and dining facilities. The success of the building, despite the controversy over its planning and construction, made me want to know more about this building type that is so critical to our profession. It helped me to see how important it is to mindfully design libraries for their multifarious functions as well as making them inviting and a bit awe-inspiring. Libraries have the potential encourage users to think beyond the here and now to the possibilities of what can be in their own lives and in their communities. Libraries can do this not only through the resources they house, but through their very structures. As Robert Oringdulph (1990) writes, "any building reflects a function, but it is also capable of symbolizing better conditions of life. It may tell about what we are but may speak also about our aspirations" (p. 71).

As I observed in the British Library, a building can espouse and evoke the values of the institution inhabiting it. Without anyone saying a word, library structures can make it clear to the user that they have arrived at a place that respects the individual and supports his or her process of inquiry. Library buildings should celebrate knowledge, learning and exploration through their interior and exterior design. Their structures should support access to information in all of its forms.

All users of a library, including those with disabilities, should be able to find what they seek without obstacles. Therefore, the navigability of a building is an important consideration. Signage should be clear and the layout of the furniture and other hardware should support free movement and pausing throughout the space. Public services areas must be visible and inviting so that users can find staff easily when they need them and will not be discouraged from approaching them. Furnishings should not be imposing. Instead they should be designed to support comfortable exchanges between library staff and users.

Critical to the planning process is an open dialogue between architects, librarians, and others involved in the program. Architects and librarians bring highly specialized, and very different, knowledge to the process. Only by utilizing the strengths of all individuals involved can a highly successful project be realized. A potential obstacle to a successful building process is a lack of communication between architects and librarians. Richard McCarthy (1995) argues that "the degree of success of such an enterprise will depend upon decisions made early in the project" (p. 2). "Public bodies," he continues

-making process not really speaking the same language as the

professionals they are proposing to hire" (p. 2). It is this gap in vocabularies that is the focus of my research.

This project is an examination of the content of written work on library design in both library literature and architectural literature. The guiding questions in my research are: What are the differences in the ways in which librarians and architects articulate concerns about library buildings? What are the main issues in library design for each profession? One of the continuing questions for myself beyond this project is: Where can I use my expertise to bridge these gaps in communication? Undoubtedly, the answers will vary with the individual situation.

Implications of the Research

This research will benefit the library community at large by elucidating and enumerating the major concerns of both librarians and architects with regard to the planning of library buildings. Anyone involved in planning library space, whether it be renovation of a service area or office or construction of a new addition or freestanding building, should find this research useful as they begin to think about what elements or issues are most important for that particular space, institution, and its community of users.

The research will also benefit architects by exposing them to the concerns of librarians. It will even benefit architects and librarians who are experienced in building programs because it elucidates the potential communication gaps that may not be obvious to someone involved in such projects.

This research process has been beneficial to me in advancing my own understanding of library design and facilities planning. As my understanding grows I hope to participate at various levels in discussions of library design. With more experience, I hope someday to offer my services as a library design consultant.

Methodology

The research process began with a review of books and journal articles from the library literature that deal generally with the planning of library facilities. These works tend to be focused on the process of the building project. They explain the roles of the architect, project team and building consultants in such a project.

Several articles illustrate the communication gap that can arise in these building projects. Simon and Yourke (1987) assert that "a successful new building is dependent on the establishment of *mutual trust*, which is achieved by *open communication and support* (p. 102)." This trust and support is only possible if each of the participants understands his or her role in the process and respects the roles of the other members of the project team. These roles should be viewed as complementary. Simon and Yourke (1987) offer one possible obstacle to successful communication between architects and librarians. They argue that librarians

> lose track of the fact that architecture, like library work, is a knowledge-based service industry in which satisfaction of the client's needs is the mark of a successful job. They also tend to forget that one of the architect's key roles is as planner. They sift an enormous amount of data and organize it into a plan that will be executed as a building. Much of this information will be provided by the client. Better information, the clearly defined needs and goals, and willingness to commit time and effort in finding answers and resolving policy issues results in a better plan and ultimately a better building (Simon and Yourke, 1987, p. 101).

In the field of architecture, the writings Frank Lloyd Wright and Colin St. John Wilson, architect of the British Library and former head of the Department of Architecture at the University of Cambridge were useful in furthering my understanding of the philosophy behind architecture. These writers both focus on the organic style of building and as result my perspective on architecture is skewed toward this style that emphasizes function-driven design. This seems entirely appropriate, however, for the building of libraries.

Once I had achieved an overall perspective of the history of library building and current trends, I began the content analysis that is the basis for this study. This analysis involved the evaluation of a convenient sample of recent writings by librarians and architects concerned with library building projects. Searches were conducted in Library and Information Science Abstracts (LISA) using a subject search for "library architecture" and limiting the language to English. A similar approach was used to collect articles from architectural journals, searching ArtAbstracts using a subject search for "library buildings". In both indexes, the date ranges were limited to 1998 and 1999, in order to ensure that the most current articles were used.

Based on the resulting abstracts, I selected articles that appeared to be promising representative examples of the range of issues and concerns contained in the aggregate. Once obtained, articles were examined and their content summarized in short phrases. At this point, articles that were determined insufficient (i.e. not focused on the library or merely too brief to offer much perspective) were eliminated from the sample. Significant library building projects from anywhere in the world were included as long as the articles were written in or translated into the English language.

The focus of the research is on public and academic libraries; articles about school media centers and special libraries were included in the sample only if they presented a broad view of library architecture. Articles about personal libraries were rejected. Articles about specific work areas, such as technical services, were included in addition to articles that deal with the building as a whole.

The final sample contained thirty-seven articles. From the library journals, four articles were selected from 1999 and eight from 1998. From the articles generated by the ArtAbstracts search, twelve articles were selected from 1999 and thirteen from 1998. Admittedly there is an imbalance between the number of articles from library journals and the number of articles from architectural journals. Since this paper is aimed primarily at librarians and attempts to explain differences between their concerns with regard to library building projects and those of architects, it seems reasonable to examine more articles from the architectural literature as that is the greater "unknown".

After finishing the analysis, I attended several programs on library buildings at the Public Library Association 2000 conference in Charlotte, NC. I will occasionally refer to sessions from this conference as it was very helpful in furthering my understanding of particular issues of concern to librarians.

Limits of the Research

I attempted to be as objective as possible in my categorization of articles, but since a latent content analysis was used, the analysis is bound to be somewhat subjective. The attempt here is to provide a readable summary of the issues, rather than a large set of charts and statistics.

Expectations

      I expected to find librarians to be more concerned with the functional aspects of

the space, whereas architects would be more concerned with the form of the building. I

suspected that this difference is where most of the communication problems arise. I

proposed that librarians would be more apt to write specifically about their own library

without attempting to place it in the context of library architecture as a whole, while

architects would be more likely to discuss a particular building in relation to the

theoretical framework and tradition of design from which its structure emerges.

Observations

      The architectural journals in the study are generally more international in scope

than the library journals. *Inland Architecture* is the single example of a regional

architectural journal. (In fact, it is so focused on the region, which appears to be Chicago

or perhaps the Midwest in general, that the article selected from the journal did not even

indicate where the library was situated.) Journals such as *Architectural Journal,*

Architectural Record, *Architecture*, and *L'Architettura* span the globe in their coverage

of projects, though their respective countries of publication receive slightly more focus

than others. Library journals in the study tended to be more local in focus, many on the

state or regional level (*Nebraska Library Association Quarterly, Cape Librarian* (South

Africa), and *Missouri Library World)*, and others on the national level (*Scottish*

Libraries, Australian Library Journal).

As I anticipated, architectural journals put buildings in the context of architectural trends, styles, movements and the site and how the building "responds" to it. These journals are also apt to discuss the architect's other works. They place the library building in an "ouevre," so to speak. Library articles were more concerned with what is happening, both functionally and aesthetically, inside the walls. Architects are generally concerned with the art of building libraries, while librarians are more concerned with the business of library buildings.

I began my analysis with the 1999 articles from library journals, then moved to those from 1999 architectural journals. As I read the articles (not in any particular order), I extracted the main issues, concerns, or themes in each. Once I had read several 1999 articles, I began recording these issues on index cards, with annotations. As I moved to the 1998 articles from library and architecture journals, I continued to annotate index cards, creating new cards only when new issues appeared. When I finished reading all of the articles, I examined the cards more closely. At this point, I realized that I could group them into five general categories. These overarching areas are as follows:

1. Philosophy of Design

2. Planning and Design Process

3. Special Functional Elements

4. Interior Design

5. Occupancy of the Building

Philosophy of Design

Philosophy of design incorporates the "big ideas" involved in the design of a library building. Many of the philosophical aspects of design are left to the architects. With few exceptions, discussions of the philosophy of design came from the architectural journals. So few librarians addressed issues falling into this category that one wonders whether librarians think at all about the philosophy guiding the building's design.

Vision of the Library

One of the categories I place under this overarching theme is the vision or image of the library, surely something about which librarians should be concerned. How the building reflects the library as an institution is critical to the effectiveness of the evocative power of the design of the building. Users should be able to gain a sense of the library's mission and values from the structure that the institution inhabits. Architecture has the power to transmit ideas. It can be a medium for a message. When considering issues of design, librarians have the opportunity to exploit this power to get the message of the library across to its patrons. Design can be more than incidental; examples show that it can become a vehicle for the communication of the basic underlying values of the library.

Gerald Melling (1993) refers to this concept in the title of his article "The Body Language of Library Buildings," where he argues that buildings reflect an image of the what the institution inside feels about its surroundings and about the people who come to use it. "Before we construct a building," he says, "we must first construct a set of (Melling, 1993, p. 151). He offers some suggestions:

- A library is public place, a civic amenity...for the people, it should also be *of* the people.

- A library is a refuge ... a place to be quiet, to ponder, reflect, study, contemplate.

- A library is an open mind...

- A library is not a commercial enterprise.

- A library is not an elitist enclave...

- A library is not a high-security prison for books paroled to the public.

- A library is not a closed mind...

As Melling notes, "the predominant value statement ... in all this, then, is the idea of *accessibility*" (p. 152).

As Weise and Tooey (1999) write, in the case of the Health Sciences and Human Services Library at the University of Maryland, Baltimore, librarians were very concerned with the vision of the library. They emphasize the library's central role on the campus as the "nerve center" and indicate that it plays many roles for its various stakeholders from the campus and city. They summarize the vision of the library as follows:

- a signature building that would be a beacon for the University of Maryland;
- a physical symbol of the University's search for knowledge;
- a focal point for the campus and an intellectual commons serving a diverse population;
- a haven for study and research;
- a place for groups engaged in collaborative work or learning together;
- an access point and distribution center for print and electronic information;
- a teaching library to support trends in education, research, and service;
- a functional and pleasant workplace for library and computing staff; and last, but not least,
- an attractive and compelling gateway to the campus (p. 171).

of furnishings supports the collaborative curriculum by offering appropriate furniture in meeting spaces that accommodate groups.

The vision of the library addresses its many roles and stakeholders and places the library in the center of its community. The library has a great deal to live up to, as University of Maryland President David J. Ramsay says, "the library is one of the first places you look [sic] in order to measure the quality of an institution of higher education" (Weise & Tooey, 1999, p. 176). This fundamental role of the library should not be overlooked when designing a new building or addition.

Eric Adams (1999) describes the restoration of the New York Public Library Reading Room as a necessary restoration of the image of the library itself. He argues that the physical deterioration of the library was symbolic of the degenerated role of the library in the eyes of its community. "The deterioration and organizational chaos within the room ... symbolized the New York Public Library's diminishing role as a public resource for information and knowledge, especially in the wake of more recent worldwide information technology (IT) advancements (Adams, 1999, p. 128). A major part of the renovation addressed the previous neglect for IT by installing data/power wiring and conduits at thirty of the forty-two tables in the room. Most of the conduits are for the use of laptop computers, however the library also provides forty-eight computers

offering a variety of programs and resources. These are located in the high traffic area near the book delivery center so that users have easy access to library staff for support, leaving the rest of the room quieter for studying. A new book delivery system was installed to greatly accelerate the delivery of materials to users in the reading room. All furnishings in the room were restored and the ceiling paintings replaced, breathing new life and light into the space.

In a sharply contrasting project, Steven Ehrlich, architect for the new Robertson Branch Library in Los Angeles saw the vision of this particular library as "an emblem for the MTV generation." His aim for the library was to "convince dispassionate young people to substitute lines of resolution for lines of text by seducing them with a chromatic, somewhat unstable icon" (McKee, 1998, p. 127). His design concept for the library is that of a "billboard for books" that says "Library--here!" (McKee, 1998, p. 127). According to McKee's article, "from a block away, you see the buildi   --a looming, glowing, patinated-copper-clad atrium--before you see the library itself" (McKee, 1998, p. 127). In what is an otherwise positive review of the building, McKee criticizes the design, asserting that "libraries are, above all, intellectual retreats, full of curious, subtle discoveries. It seems cynical to have to bait children with trendy imagery to excite their supposedly flaccid gray matter ... Ehrlich's library is more enjoyable as a billboard than as a bibliotheque" (McKee, 1998, p. 130). McKee laments the lack of focus on the reading room, what he believes that "what should have been the main event ... is in fact the sideshow" (p. 130). He admits, however, that the community has responded very positively to the new building.

What McKee may not consider is that, while all libraries share some fundamental principles, different libraries have different purposes and foci in their particular community cultures. While the reading room may be the New York Public Library's crowning jewel, it may not be the most important element for this branch of the Los Angeles Public Library. The important thing is that the new library facility has made a statement in its community that has been received positively. The library has made a difference and has accomplished its goal of making users feel welcome into its space.

The British Library at St Pancras, London is another example of the architect's focus on the vision of the library. This is an important example because it demonstrates the role of a national library to its nation of users as well as to an international community of scholars.

> Though reading is a solitary task, visits to the national library mean partaking in a community of scholarship which aught to be acknowledged spatially. There are of course private study carrels, but a library consisting entirely of these would give no sense of arrival and participation. The ritual of visiting the capital to consult the most venerable authorities, and of sharing the experience with similar folk is surely what any national library is about (Blundell-Jones, 1998, p. 42).

The design of the reading rooms in the British Library takes into account the individual scholar and his/her need to have simultaneous access to solitude for contemplation and larger views encompassing a greater community of scholarship. A variety of spaces for readers is provided, some more intimate, others more open.

The design of a library can evoke its vision to be a welcoming place for the search for knowledge. The design may also enhance the feeling that the individual user has with respect to a community of scholarship. Users are united in their diverse processes of inquiry by the building and institution that supports this process.

Allusions in the Design

The British Library is also full of allusions in its design. Not surprisingly, this is another area where architects take a lead over librarians. The placement of King George III's personal library in the center of the building makes it a key element in the design. Blundell-Jones calls it "the holy of holies and heart of the building" (Blundell-Jones, 1998, p. 40). This design provides a visible connection for the user to the materials housed in compact storage underground. In a closed-stack library, such as this one, visibility of parts of the collection reduces the restrictive feeling of being far removed from the library materials. Visible from the foyer, cafe, and staircases, this connection to the collections is made by the placing the King's Library behind glass walls at the top of the first set of stairs.

> The richly leather-bound volumes ... are placed on moveable shelves so that they can be withdrawn for reader consultation, but most of the time they just bear witness to the purpose and history of the library. The stack is set in a shiny marble floor, so seems to carry on down into the basement, alluding to the storehouse of knowledge below: the visible tip of the iceberg (Blundell-Jones, 1998, p. 42).

Other allusions appear in the artwork selected for the library. Bill Woodrow's seat sculpture "Sitting on History" greets the visitor in the foyer. Designed in the shape of an open chained book, it allows the visitor to relax between its pages. A sculpture of Shakespeare leads users up the steps towards the reading rooms while Kitaj's tapestry "If not, not" informs the whole space with its allusions to Joseph Conrad's *Heart of Darkness* and T.S. Eliot's *The Wasteland* (St. John Wilson, 1998).

MacCormac Jamieson Prichard, in the design of the new Ruskin Library at Lancaster University, England, makes great use of allusion. Peter Davey describes it as "somehow to do with the sea" (Davey, 1998, Eighth, p. 64). He refers to the library as a

"lighthouse-keep" that sits on the old university bowling green. The inner structure is, according to Davey, "plainly a treasure chest" that

> floats up mysteriously into the entrance space through a floor of glass and slate, a metaphor of the sea, like the lagoon-lawn of long waving blue-green grass which will be planted all round the building. The glass floor is already somewhat scratched, and is intended gradually to become largely translucent, like the turbid waters of Venice (Davey, 1998, Eighth, p. 66).

The sea references, Davey points out in a note, "are homage to Ruskin's wonderful three-volume book, *The Stories of* Venice, perhaps the greatest work of cultural criticism ever written" (Davey, 1998, Eighth, p. 68). What Davey does not mention, but is evident from the drawings of the space that are included in the article, is that the overall shape of the building is that of a ship, yet another allusion to the sea. As Davey suggests, Ruskin would probably have disliked the symmetry of the exterior of the building because he believed "that buildings should express their inner workings on their exteriors" (Davey, 1998, Eighth, p. 68).

Much of Colin St. John Wilson's writings on architecture refer to Ruskin and his ideas about the subject. Clearly Ruskin's ideas are a strong influence on Wilson's work both on paper and on site. Wilson designed the British Library from the inside out, allowing its exterior form to be shaped by its interior, which grew out of the functions that needed to take place inside it. This function versus form issue is a major contention among architects. Since libraries are buildings that are meant to serve the public, it seems to me that selecting architects who design for function before they consider form would be the most prudent way to begin the process of building. Ideally form and function become one, as Frank Lloyd Wright said.

An example to the contrary is in the design of the new Bibliotheque Nationale de Paris, where tall glass towers, impressive in their stature, are cooking the books inside. Another impracticality of the design is that visitors must ascend from the street to a podium and then descend into the building itself. Form reigns over function in the design of the walkway conceived as a cloister and from which readers can gaze at the garden, but not enter into it (McGuire, 1998).

Allusions in the design, while not necessary, add to the "meaning" of the building. They enhance the message that the building sends to the user. Allusions in the design bridge the connection between the structure and the objects and activities that are housed inside it.

The Library as a Gathering Place for People and for Information

The library at the Sunshine Coast University in Australia provides a promenade where people can gather, lounge, and chat. This main element of the design "has echoes of the plans of the first buildings of the type for which we have reasonable evidence: the Greek and Latin libraries in Trajan's Forum in Rome. There was the colonnade where scholars could promenade ... " (McInstry, 1999, p. 66). This promenade supports part of the library's role at the university. Lawrence Nield's vision for the library for the Sunshine Coast University was of a place "to make learning open and welcoming" (McInstry, 1999, p. 64) while a the same time maintaining its traditional role as a secure storehouse of knowledge.

Similarly, in Holland, the Mecanoo firm designed a "library where books are secondary in the act of gathering knowledge. The university's building program

requested "a square, a piazza, a public place" (Betsky, 1998, p. 124). The firm

"responded with a building that doesn't resemble a building. Instead, it is an undulated

lawn sheltering a vast space in which students gather to learn" (Betsky, 1998, p. 124).

The building has a grass roof that serves as a gathering place and additionally provides

thermal and noise insulation. Librarian Leo Waaijers cared less about the physical

objects that contained knowledge and more about "how patrons would gather and use that

knowledge. Thus, he wanted the new building to facilitate--as well as represent--the

process of information retrieval and perusal" (Betsky, 1998, p. 127-128).

     Henning Larsen's extension to the Malmo city library in Sweden also respects the

individualized process of information gathering. "At Malmo all is open, clear and

generous. Instead of knowledge being approached as a distant treasure, you are made

aware that it has many facets, and that there are many approaches to it, as is made clear

by glimpses of the different levels of the new wing to the right, and the open galleries that

connect it to the old building" (Davey, 1998, Malmo, p. 53 & 55). Like the British

Library, Malmo links the reader to the outside world through the provision of natural

light and, in this case, with views to a garden. "Larsen's is a pavilion in the park, in

which you are engaged with the wider world and endlessly changing nature" (Davey,

1998, Malmo, p. 56).

     The piazza of the British Library provides a meeting place for visitors. It is a

transitional space that allows the visitor to leave the street behind and prepare to enter the

haven of the library. "Progress is diagonal toward the main entrance, down two shallow

flights of steps and across a slightly tilted plane. The route is not fully prescribed,

leaving an element of choice, but an even rhythm develops in the layout of the paving"

(Blundell-Jones, 1998, p. 40). This choice of path to the library brings to mind, as in the previous example, the information gathering process that is different for each person. Thus Wilson's British Library is, consciously or unconsciously, related to Mecanoo's library at the University of Delft. Blundell-Jones continues describing the courtyard which "encourages varied use and its subsidiary areas are intimate without destroying the sense of the whole" (Blundell-Jones, p. 40). Inside the library, "the foyer is the piece de resistance with inviting steps flowing on and up to the reading rooms. Visible beyond are galleries on several levels linking the two reading room tracts like bridges" (Blundell-Jones, 1998, p. 40). Here again, the reader can make his/her own path and the choices are clear from the beginning of the information-gathering process. It is the complexity of space that makes the foyer distinctive. "Moving around, you discover the foyer as one continuous space, a complex and exciting internal landscape with rich multi-layered views in all directions, yet organized in a seemingly natural way and easy to navigate" (Blundell-Jones, 1998, p. 42).

Patkau, the architectural firm that designed the Newton Library, Surrey, Vancouver, made sure that the institutional nature of the building's function did not interfere with the creation of "an informal place, an invitation to pause and read, but also a meeting-point and exchange of information" (Mari, 1998, p. 36). Clearly this exchange of information may take place between an individual and library materials or through discussion among several people. The focus on creating such an inviting place led "not only to a redefinition of the actual idea of a civic building at the turn of the century, but to the reconsideration of type and its construction" (Mari, 1998, p. 36). The concept of building type is firmly grounded in architectural literature.

Libraries serve as symbols of knowledge, havens for private study and research, gathering places for conversation, resources of information, and as civic monuments representing the best that our society can be. The challenge in designing a library is to reflect these various roles in a design that welcomes, protects, and supports the user.

Harmonizing the building in the context of its environment

A building's response to the context of its site is an important consideration for both librarians and architects as evidenced by the articles in this study, however such exterior elements are addressed by architects more often than by librarians.

William P. Bruder has designed the Teton County Library in Wyoming in such a way that it blends in with its surroundings. The materials used in the construction of the exterior and in the design of the interior make connections to the site's environment and give the library its regional flavor. "Rugged 'tree trunk' columns and rough sawn internal planking combine with furnishings of cherry, oak and leather to exude rustic homeliness and warmth" (MacDonald, p. 71). MacDonald argues that "this is clearly a building well suited to its rural community, but it also a new civic landmark that distils bold tectonic poetry out of a utilitarian brief. Bruder's notion of American regionalism is underscored by a romantic pragmatism that responds energetically to both users and context" (MacDonald, p. 71).

Cruz and Ortiz' design of Seville's library in Spain is designed, like their other projects, as "an intuitive response to program and content, unhampered by prior stylistic or typological assumptions" (Slessor, 1999, p. 117). The library's exterior is understated, showing a healthy respect for the medieval city in which it is integrated. The architects

have made it a priority with this project, as well as others in the city, to preserve the

integrity of the historic city. The library maintains its independence as a self-contained

entity while relating "to the surrounding buildings by maintainin

(Slessor, 1999, p. 120). As we have seen before, the interior also relates to the outside

world. Tall glazed walls bridge the reading rooms and the courtyard. "Landscaped with

palm trees, manicured hedges, and rows of slatted wooden benches, the courtyard

informally extends the library's interior spaces" (Slessor, 1999, p. 120). Slessor (1999)

describes the space as "a delightful, luminous pavilion with a secret garden that enhances

the simple human pleasures of browsing and reading" (p. 120).

By sharp contrast, the Los Feliz branch of the Los Angeles Public Library

successfully responds to very different contexts. The great challenge for this building is

that one side of the site faces a suburban neighborhood and the other an urban street.

Barton Phelps and Associates responded to both contexts as well as to the diversity in the

user community. As a result, "the architecture reads differently from various angles

because of the multiple contexts acknowledged and sustained in the design's own site-

specific responses" (Giovanni, 1999, p. 112). The corner site anchors the building to the

pedestrian traffic. This is the high impact side of the building since it faces the urban

street. The building slopes down toward the parking lot behind it in order to be level with

the residential suburban landscape and to gently guide visitors to the entrance. The

interior's response to the multiplicity of users in the community is equally diverse with

study carrels, armchairs, a community room, and a children's reading room. "The

architect creates a unique assembly of familiar parts and functions that acknowledges the

diversity of the community and the site. Exuberant and restrained, generous and

disciplined, the building is a seasoned and literate work that knows its place and audience without forgetting the most civilized of its responsibilities--delight" (Giovanni, 1999, p. 114).

When buildings do not respect their contexts, architectural critics take note. In a rather scathing review of the library at San Diego Mesa College, Peter Jensen chastises the architects for their design, referring to the library as a "campus bully". He seems to suggest that librarians cannot distinguish good from bad architecture when he cites that they "fondly refer to their new $20 million library ... as the campus' 'first building to have any architecture'" and claims that "they may have been better off with less architecture" (Jensen, 1999, p. 81). His dismissive tone aside, his description of the library indicates that it looms over the campus, has a "sweeping view of striped asphalt and car-tops" and appears to have "a very tenuous grip on the hillside and could tumble off at any moment" (Jensen, 1999, p. 81). As he points out, this is not a suitable design for "earthquake country". He warns that "if this building sets the tone for future campus development, as administration claims, all sense of inviting, human-scale design will be bullied right of the mesa" (Jensen, 1999, p. 81).

The British Library serves again as a positive example here. Its organic design by the architect Colin St. John Wilson takes its cue from the English Free School. It bows in reverence to its towering Gothic Revival neighbor the St Pancras Hotel. The English Free School grew out of Gothic Revival and the Organic Architecture of Frank Lloyd Wright. Wilson "felt that an irregular articulated building exploiting the givens of the site and displaying the disposition of the programme would sympathize with St Pancras. His red brick and slate roofs echo the station directly: even the red paint of the library

metalwork has its counterpart across the road, but essential kinship with the older building is much deeper: a kinship of process and inner articulation" (Blundell-Jones, 1998, p. 36).

Mecanoo's library in The Netherlands was also posed with the challenge of responding to a strong architectural style. In this case, it was the Brutalist style lecture theater constructed in 1964 by van den Broek and Bakema. The grass roof provides a neutral landscape from which the conical structure housing four levels of reading rooms emerges "with study places encircling a central light-filled void" that on the exterior "heroically signals the building's presence on campus" (Van Cleef, 1999, p. 45).

At Bryn Mawr, the first Collegiate Gothic campus in America, the tone had already been set. Henry Meyerberg, in the first project for his private practice, accepted the challenge of integrating a new library extension with the established campus architecture. A prolonged project ensued lasting over ten years (nothing compared to the 36-year British Library project, but then not on that scale either) surviving several changes in thinking about the scope of the project and the proposed site. This gave Meyerberg time to mature in his style of building. "My designs went from Collegiate Gothic contextualism to Modernism--one that is referential but still abstract" (Stein, 1998, p. 85). He conceptualized "the project as an archaeological site and the space between the old and new as a dig. This idea suggested the structure" (Stein, 1998, p. 87). In the four-story atrium reading room, the centerpiece of his design and heart of the "dig", he "imbues the space with Bryn Mawr's liberal arts mission. He survey the college's collection of art to incorporate pieces of it into his design" (Stein, 1998, p. 91). In the end, Meyerberg designed the Rhys Carpenter Library to include a "signature space

that will serve as a communal focus for the various departments" (Stein, 1998, p. 87) in the context of a more traditional design.

A building's contributions to the civic and cultural landscape are of particular importance to the architects. The new mediatheque in Evreux, France provides such an example. "The mediatheque itself is a nebulous yet essentially contemporary typology, that may variously encompass such elements as a library, theatre, cinema, bookshop and gallery. The design of the building invigorates the civic and cultural landscape because it "registers as a bold modern presence" (Joubert, 1998, p. 63). amidst a combination of fifteenth-century and post-war buildings. It exploits "the creative tension between a new intervention and the existing historic fabric" (Joubert, 1998, p. 63).

This bridging of old and new space is also a recurring theme for the writings in architectural journals. The Landau City Library is located in a "mixed-use redevelopment" of a 19th century slaughterhouse site (Koenig, 1999, p. 114). The use of industrial materials marks the transition from the old elements to the Modernist addition. Ansgar Lamott used two steel bridges to "literally and figuratively link the historic and modern structures" (Koenig, 1999, p. 119). "The architect's solution consistently forged a dialogue between old and new--juxtaposing lightness with heaviness, transparency with opacity, and traditional elements with simple machinelike interventions--to achieve an integral whole" (Koenig, 1999, p. 114).

Planning and Design Process

The planning and design process is the area where most of the library journal literature focuses. Given that architects are well versed in the components of the process and librarians are more often than not new to it, this comes as no surprise. Some of the articles I have categorized into this section deal with specific aspects of the building program or with particular issues to consider during the design process. Four articles deal specifically with the stages of the building program.

Raymond Holt (1989), in his book *Planning Library Buildings and Facilities: from Concept to Completion*, outlines five basic elements of the facility planning process (p. 3). These are as follows:

1. Fact Finding Phase - (Needs Assessment; Evaluation of Options)

2. Planning Phase - (Preparation of the Building Program; Funding; Selection of Design Professionals and the Project Team)

3. Architectural Development Phase - (Conceptual Design; Schematic Design; Design Development; Construction Documents)

4. Interiors and Furnishings Phase - (Furniture and Equipment Layout; Casework Design; Furniture and Equipment Selection)

5. Construction Phase - (Bidding and Award of Bid; Site Work and Foundations; Construction; Finishing)

6. Occupation, Orientation, and Evaluation Phase - (Moving; Orientation; Post-Occupancy Evaluation and Remedial Work)

In her article "Architectural Follies" Serena Fenton (1999) simplifies these steps and attempts to help librarians understand the process of planning a new library facility. Fenton, an architect-turned-librarian, advises librarians to make certain that they are

involved in the process. "I'm convinced that if we libraryfolk truly want to make our libraries better places, we need to understand where, when, and how to make our ideas heard. We need to be involved in the architectural process--the sooner, the better" (Fenton, 1999, p. 27). One of the main questions she attempts to address is: How can the two professions work together to create efficient and aesthetically pleasing libraries? Effective communication is the answer. Fenton's advice to librarians is "speak up soon, and speak up often" (Fenton, 1999, p. 27). One of her main objectives is to assure librarians that architects do not control the building process alone. She emphasizes that architecture is a service-oriented business. This argument has been made before and the service-mindedness has been compared to that of our own field.

The stages of the building program are outlined by Fenton (1999) as follows:

1. *Schematic Design Phase* - In this phase, the architect is on an information gathering mission. The objective is to "resolve some fundamental issues, such as how the building will fit on its site, how its parts will fit together and interact smoothly, how the library or media center will be used" (Fenton, 1999, p. 28). As she explains, this is the kind of information that librarians need to provide. This is the point at which she suggests that librarians offer their ideas, with accompanying pictorial examples if possible, for what kind of general look and feel of the place is desired.

2. *Design Development Phase* - This is the point at which specific dimensions for rooms and furnishings should be provided. Day-to-day functions should be outlined and mapped out for the architect. It is at this point that it is critical for librarians to articulate all of their needs and priorities to the architect. At

the end of this phase, the architect will supply the library with drawings.

Fenton emphasizes the importance of asking questions and resolving problems

before signing off on the drawings. As the plans progress, she stresses,

changes will be more difficult and expensive to make.

3. *Construction Document Phase* - It is in this phase that "architectural drawings

    cease to be artistic renderings and finally become formal, legally binding

    documents. Since these documents are used to secure contract bids and guide

    the actual construction of the library, the information contained in them needs

    to be precise" (Fenton, 1999, p. 29). This is the point at which details such as

    the location of data conduits and the interior design elements can be reviewed.

4. *[Construction Phase]* - Once construction begins, communication between

    architects and contractors becomes of critical importance. Librarians involved

    in the program should make themselves available at this time as questions will

    undoubtedly arise.

5. *Punch List* - This is a list of miscellaneous items that need to be addressed

    before the project is considered complete. It should be created towards the

    end of construction and continue into the post-occupancy stage. Staff and

    users will discover minor problems as they begin working in the new building.

Mary Ann Grundborg, reporting on a workshop on library planning, concentrates

on what she terms the "preplanning process" or "programming phase" (1999, p. 24). She

too emphasizes "the importance of being involved from the very beginning" stating that

"the best results have come when the librarian has been an active presence throughout all

stages of planning and work" (Grundborg, 1999, p. 24). In addition to the phases Fenton

outlines, Grundborg mentions the bid phase, the move-in phase, and the dedication phase. Her argument for her focus on the programming phase is that it is "probably the most overlooked phase in spite of its vital importance to the entire project" (Fenton, 1999, p. 25).

Curry and Henriquez (1998) conducted an enlightening study that focused on three public library building projects in Canada. They interviewed three librarians and three architects involved in the programs in an attempt to analyze the way in which the two groups of professionals differ in their views of the library planning process. The steps they outline in the planning process are: the selection of the project team; site selection; architect selection; the building program (i.e. the written document the library supplies to the architects); the design process; library interiors (especially lighting); information technology; furnishings and carpeting; acoustics; heating, ventilation, and air conditioning (HVAC). I read this article before I began this project and credit it in part for the inspiration for my topic. Besides being well-written and argued, it presents case examples illustrating the characteristics of the communication between librarians and architects.

The authors assert that librarians are less confident because they have a lack of knowledge about the planning process. They are less sure of their roles in the process than are the architects. Not only does library education rarely provide any kind of introduction to the process, but librarians apparently rarely seek out information on the topic available in the professional literature. As Curry and Henriquez (1998) discovered, despite the wealth of information on "library planning and the responsibilities of building teams, only one of the librarians reported consulting the literature to gain information

about library planning" (Curry and Henriquez, 1998, p. 82). Certainly librarians have constraints on their time, but given the importance of a building program to the library and its users, it seems ironic that information professionals would embark on such a project without attempting to gather information about the process.

Glen Holt (1999) considers this information gap from an economic perspective. "Library professionals need to recognize that the cost of an architect's time to educate them about building essentials can be even more expensive than the cost for a librarian to educate an architect about libraries" (Holt, 1999, p. 35). It is therefore, I would argue, more cost effective to spend some time educating ourselves about basic concepts in architecture prior to meeting with architects. The more we can do to work towards a common vocabulary, the more smoothly the building process will progress. The more knowledgeable we are about the components of the building program and about issues important to library buildings, the better the building program document we will produce.

Both librarians and architects stressed the importance of a good building program. One of the architects indicated that "it includes especially qualitative things" (Curry and Henriquez, p. 83) in addition to describing the relationships between functional entities and providing specifications for spaces, furnishings, lighting, etc. A librarian described the process saying, "what you are doing is literally building the building in your head" (Curry and Henriquez, 1998, p. 84).

In most cases, librarians tend to give little input in the design of the exterior, focusing their efforts on the interior. Curry and Henriquez (1998) warn that "this 'hands-off' attitude could pose problems for public librarians ... because a library exterior conveys such important symbolic messages to the public about the institution's purpose

and its (hoped-for) relevance to society" (p. 85). The section of this paper on the vision

of the library confirms that architects are more concerned with the institution's purpose

as projected in the building's exterior.

John D. Edwards (1998), in writing about the planning and construction of law

schools, lists as one of his ten guidelines, "acquire the necessary background materials

and information" (p. 425). His list of essential tools include planning guides such as

Planning Academic and Research Library Buildings (now in its third edition

(2000) by Leighton and Weber), a dictionary of construction terminology, an

architectural ruler and a tape measure. He also emphasizes the importance of consulting

articles on planning.

Edwards recommends using a library building consultant. Fred Schilpf and John

Moorman, presenters at the Public Library Association (PLA 2000) conference, agreed

adding that you should "never hire a consultant who works for your architect". The

consultant should be an advocate for the concerns of the library. Ellsworth Mason (1989)

describes the role of the library building consultant "to serve as a guide in planning and a

constant reviewer of planning documents throughout the planning process" (p. 4).

Richard McCarthy (1995) discusses the benefits of using a library building consultant,

indicating that because the consultant often comes from a library background he or she

will understand the needs of the library more easily than the architects might. In

addition, the consultant "will be better able to anticipate problems and opportunities

particular to the library environment" (p. 9).

Edwards (1998) and others recommend seeking input from library staff. This is

contrary to the suggestion by Glen Holt (1999) to "involve as few staff as possible in

The Wester Hailes and Edinburgh City Libraries took an aggressive approach to seeking user input.

> "Before beginning to consider the main aspects of service design, the library staff embarked upon an extensive consultation process with community groups. The library tapped into the well-established representative structure, which already existed in Wester Hailes. Staff participated in community forums, organised and attended discussion groups, gathered questionnaires, and exchanged information. This approach allowed staff to form valuable partnerships at an early stage, shaped the development of the service to meet identified needs, and encouraged a sense of community ownership. There is a definite feeling of collective responsibility for the success of the service as a direct result of this process, which cannot be undervalued" (Kilmurry, 1998, p. 56).

What is especially nice about this user input process is that the library plans for it to continue beyond the opening of the new building. "This initial work has laid the foundations for a long-term commitment to the consultation process, and current plans are being made to establish user forums which will aim to encourage local people to continue to shape the service" (Kilmurry, 1998, p. 56). As Kilmurry points out, it is necessary to establish this connection to the community in order to ensure the success and survival of the library.

The most creative example of user input is actually from the design process for a

The

Works". "By equipping students with recording instruments, cameras, clipboards,

drawing materials, thermometers, lux meters, noise meters, etc., it encourages them to

carry out an 'audit' of the school, and to improve its design" (Godowski, 1999, p. 51).

What I love about this method is that it involves the kids, validates their ideas, gives them

fers them a great

opportunity to learn from the experience.

One of the more cumbersome aspects of enlisting input from outside the library is

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case scenario example is surely the British Library that persevered through the reigns of

by such influence. In the case of the British Library, the decision to separate from the

British

spatially constraining area around the Museum in Bloomsbury turned out to be for the

sighted move, for although the area has not been very salubrious,

travel links are good and will improve when the Continental trains come through. Just by

its presence, it will produce an upgrading of the area" (Blundell-

Still, rising costs and political constraints limited the original plan, which was fortunately

configured to be built in stages. "The site was meant to accommodate a much larger

library in fully expanded form, but with rising costs and a stranglehold on public

nned to sell

the rest of the site. Let us hope that Blair & Co will take a longer view" (Blundell-Jones, 1998, p. 36). Such decisions are often unpredictable, but creating a plan that allows the building to be constructed in phases allows flexibility so that at least the minimum space can be built while allowing for future expansion.

Holt and Godowski propose adapting design ideas from retail models. In "Rules for Financial Survival in the Construction Zone" Glen Holt (1999) argues that the superstore bookstores like Barnes and Noble and Borders have raised the expectations of library users. People want to see the kind of fixtures, furnishings and decor that upscale retail stores offer provided in libraries as well (not to mention the cafe fare, but we'll get to that later). Holt's argument for this model is that "store design tends to change much faster than library design, and to find fixtures that 'move goods,' stress attractiveness and usually are cheap enough to replace in only a few years, we often look to retail models" (G. Holt, 1999, p. 34).

Godowski describes a similar approach to Tower Hamlets in England where the designers have taken a retail-oriented approach to the design of its formerly under-utilized library.

> After a considerable period of local consultation, it has decided to replace its existing libraries with seven new cultural centres, known as IDEA stores. While these will be designed as landmark buildings on high streets ... part of the strategy to make them popular depends on introducing other elements within the centres in addition to libraries--in particular, retail, cafes, adult-education and exhibition space (Godowski, 1999, p. 50).

The design consultant/architect's experience in retail is essential to successfully creating the desired welcoming environment. This mixed-use model is gaining popularity in the public libraries in the United States. The PLA 2000 session "How to Build a

'Mixed-Use' Library" focused on the Multnomah County Library in Portland, Oregon, the plans for which site it on a block that will occupy retail and mixed-income housing.

In "Libraries That Delight" (1998), Glen Holt argues that "the need to create libraries that delight begins with the recognition that America's recent customer-service revolution has altered the standards by which our patrons judge the quality of public library facilities and services" (G. Holt, 1998, p. 180). He traces this value of customer service back to the pioneers of the American department store who, he says, "defined shopping as an experience to be enjoyed along with meeting consumer needs" (G. Holt, 1998, p. 181). Such experiences raise the standards for library service. The Internet has had a similar effect on service expectations. In order to remain a viable alternative for users, libraries must provide an experience that is inviting, immediate, and individualized.

Clearly our services and the design that houses them must focus on the user. Glen Holt outlines what is necessary to provide "libraries that delight": a distinctive exterior appearance that people will recognize and remember, convenient parking, classy, clean interiors that provide segregation of use areas, well-trained staff, and the funding to make all of these things possible. He promotes building long-term relationships with the user community and predicts that in the process of fostering lasting relationships and satisfying experiences, libraries "build relationships that not only endure but shift as individuals and institutions move through their life courses" (G. Holt, 1998, p. 183). As members of an organic community, libraries "are essential to the community fabric--and the public will support them financially" (G. Holt, 1998, p. 183).

As discussed before, the Los Feliz branch of the Los Angeles Public Library responds to its complex and diverse community. Serving urban and suburban neighborhoods, it responds to the multiplicity of its community with a diversity of interior spaces. Some special features are a fishbowl foyer where teenagers gather, friendly, smaller scale areas for children, a community room, an amphitheater, and a skylit reading room that the architect refers to as "'the space of light,' where people bring their books to read in a luminous hall that imparts a sense of community" (Giovanni, 1999, p. 114).

Flexibility in Design

Designing for the current and future needs of the users means creating a flexible design. The Teton County Public Library placed a high priority on flexibility. "[M]aking one sculptural space for the various library functions ... generates both functional flexibility and an agreeable sense of informality" (MacDonald, 1998, p. 71). It also allows for future changes to be made more easily. In an age of uncertainty about what information formats will endure and what new technologies will develop, it is best to use flexible design wherever possible. At the same time, we must design for today's needs. As one PLA 2000 presenter quipped, if Bill Gates is unsure of the future of fiber

nnections, how can we try to predict it?

Another of Edwards' top ten guidelines is: "reiterate the need for incorporating functional concerns with architectural goals, including maximum flexibility for future

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features that give maximum flexibility for the future" (Edwards, 1998, p. 433). He offers

the possibility of leaving the basement of a building unfinished until that space is needed. This defrays the cost of the initial building and allows room for future collection growth (basements are especially good places for compact shelving because they support the heavy load better than upper levels) or for technological innovation. Often the basement is used for computer lab space because of the lack of natural light, which can cause screen glare. On the other hand, Edwards (1998) suggests providing natural light in a basement space so that it will be more appealing to library users.

As Edwards (1998) warns, "in a building that will be constructed with poured concrete floors and columns, it is especially important to anticipate that furniture, personnel, and usage patterns may change. Conduit should be installed so that floor boxes are in place where future users may need access to power or data" (p. 434).

In the design of the Glen Ellyn Public Library, columns were used instead of walls so that the interior spaces have an airy feeling and allow for future alterations. As a result, the open plan provides adequate compliance with ADA. This mix of practical functionality and aesthetically pleasing design is what we should be aiming for in our library buildings. Frankfurt's new building for the Deutsche Bibliothek has also kept flexibility in mind. Its public spaces, like the Glen Ellyn Public Library's meeting rooms, can operate independently from the library. The Deutsche Bibliothek offers a 300 seat auditorium, a large restaurant (160 capacity), and a double-height exhibit area. "This constellation of function rooms gives maximum flexibility for events combining lectures, presentations and catering from the public restaurant" (Dawson, 1998, p. 60).

Larsen's open plan for the Malmo city library in Sweden leaves room for future modifications. Currently, the overall space takes an approach toward intermingling stack,

public and staff areas with the central area in the form of a large glass atrium. As Davey

(1998) illustrates, even if initial revisions need to be made, "the fundamental arrangement

of fine spaces will remain, and will be capable of alteration in detail without loss of

dignity to give greater or lesser degrees of privacy as the management changes its

priorities" (Davey, 1998, Malmo, p. 58). What seems like a good idea at the time in the

design phase may turn out to be a bad idea as people begin using the space. A flexible

design will allow changes to be made later on.

In the renovation of Stockholm's Royal Library "new interventions are clearly

such: light and designed to be easily removable when needs and fashions alter" (Miles,

p. 86). This kind of changeability is especially important for historic preservation, but

should be in our minds as we design new buildings as well "for nothing can be so certain

as a library's need for change" (Miles, 1998, p. 86).

Historic Preservation and Adaptation for New Use

Historic preservation projects were discussed in the journal *Preservation*, which is

indexed in ArtAbstracts. Library journals did not discuss such projects in any kind of

detail. The renovation of the New York Public Library Reading Room was the focus of a

previously mentioned article by Eric Adams (1999). The other article from *Preservation*

is by Richard Ingersoll (1999) and discusses Massimo Carmassi's restoration of a 19th

century market hall and slaughterhouse. In the spirit of creative adaption of space,

Carmassi inserted a public library and archive in the market's upper story and rear court

(Ingersoll, 1999, p. 108). "Within the original neoclassical order, Carmassi installed a

casual new order of steel frames, glass planes, brass details, and cypress-clad boxes"

arranging the numerous freestanding structures in skewed relationships that reveal complex interior vistas" (Ingersoll, 1999, p. 110).

In the design of Yale's new Irving S. Gilmore Music Library, Shepley Bullfinch Richardson and Abbott (SBRA), an architectural firm with a long history in building libraries, took over an unused courtyard in Sterling Memorial Library. One of the most spectacular features of this space is the placement of roof trusses that help the new space fit in with the collegiate Gothic architecture of the library that surrounds it (Dugdale, 1999).

Adaptation of space can be a creative way to add visual interest. By juxtaposing new and old elements, designers show a respect for the past, while bringing the library into the present. Attention to new user expectations and needs combined with respect for local heritage give the library local flavor and connect it to the community. By inviting

community input into the planning and design process, the library can be fairly certain that the new facility will encourage support from its users.

Special Functional Elements

It is in the general area of functional elements where most of the surprises emerged. I expected librarians to be more concerned with functional details than they were. It was the architects however who led in this arena as well.

Climate Control and Preservation of Collections

In the analysis of the sampled articles, I observed that the architects more often than the librarians wrote about climate control systems for heating, ventilation and air-conditioning (HVAC). While I did not expect librarians to discuss technical aspects of HVAC systems, I was surprised that they rarely discussed the importance of such systems as they are so critically important to the preservation of collections and to the comfort of users. Of the authors from the library literature, only Curry and Henriquez (1998), mentioned HVAC. From the architecture perspective, HVAC and preservation of collections are discussed by Betsky (1998) in "Through the Roof", by Davey (1998) in "The Eighth Lamp", by Blundell-Jones (1998) in "Speaking Volumes", "Culture Pavilion" (Dawson, 1998), and by Van Cleef (1999) in "Book Bunker". In Wilson's British Library (Blundell-Jones, 1998) and in Mecanoo's Delft Technical University Library (Van Cleef, 1999), and Arat-Kaiser-Kaiser's Deutsche Bibliothek in Frankfurt (Dawson, 1998), the architects have designed stack areas that take advantage of the stable underground environment. While these areas must be safeguarded against flooding, they

are not as susceptible to the climatic changes of the above ground environment.

Additionally, this placement of stack space, especially suitable for closed-access

collections, allows for a more open plan for reader and staff spaces above ground. There

is more opportunity to take advantage of natural light for these spaces if stack space is

relegated to subterranean levels.

The Ruskin Library at Lancaster University, England, is designed for passive

climate control. Davey (EL, 1998) argues that Ruskin himself "would have welcomed

the way in which the internal climate is balanced by drawing in cool air at night from the

little moat which follows the curve of the walls, so largely obviating the need for air

conditioning" (p. 68). Hugo Stehkamper (1988) promotes "natural" air conditioning as a

cost effective solution because it does not require the maintenance that mechanical

systems do. While mechanical systems can fail, a "natural" system is part of the

building's very structure, and barring natural disasters, will remain stable for hundreds of

years. He cites the Cologne City Historical Archives in Germany, the depository for

town documents since around 1408, as a testament to the effectiveness of this kind of

design.

In addition to the aforementioned articles, "Missouri Botanical Garden Builds a

New Home That Reflects Its Mission" (Wiens, 1999) discusses collections and their

preservation. Although this article appears in a architectural journal, it is clear from the

description of the project that the director and staff of the Herbarium and Library offered

substantial input into the design of the space. Not only did they design the space so that

materials are on the cool side of the building, but they also succeeded in their goal to

provide a "green architecture" for the space. According to Wiens (1999), Dr. Peter

Raven the garden's director charged everyone involved in the project with creating a

sustainable facility. As a result, the library facility was placed on the fourth floor to take

advantage of daylight, which offers 60 percent of the light in this space. Recycled and

recyclable materials were used wherever possible. A high efficiency heating and cooling

system was placed on the ground floor to minimize potential damage to the collections

due to rupture of the system. Below this level, the building's steel and rubber isolators at

the base of the structure protect it from seismic activity. Finally, the project team

planned for future collection growth by building expansion space in sections into the

design.

Information Technology

Another issue strongly related to future growth is the incorporation of information

technology (IT). For both new and renovated buildings, this is one of the few issues of

great concern to both librarians and architects. As most of us know from our own

experience, retrofitting work spaces to accommodate changes in technology can be

expensive, cumbersome, and usually produces an ugly mass of wires.

When IT is part of the design for a new library, there is room for flexibility in

terms of the provision of conduits and cable trays both for present and future needs. In

addition, IT training rooms can be built more easily into new buildings and additions, as

in three Scottish libraries in the study, the Caledonian Library and Information Centre in

Glasgow (Haythornthwaite, 1998) and the Wester Hailes and Edinburgh City Libraries

(Kilmurry, 1998).

In the case of renovations, if done well, IT provision can be discretely accommodated by making adjustments to existing space and furnishings. Adams (1999) commends Davis Brody Bond for his successful treatment of IT needs in the renovation of the New York Public Library. As mentioned earlier, the original library furnishings were carefully refurbished to include conduits and cable trays without detracting from their renewed beauty.

For technical services, rewiring alone can lead to the need for renovating work space to accommodate the necessary hardware (Thornton, 1998). Before renovating, Thornton's library was using seven separate wiring schemes throughout the building, many of which were used for technical services. With the incorporation of local area networks (LANs) and the move from terminals to a PC environment, the need for multiple wiring schemes can be eliminated. Such renovations offer increased efficiency in work areas, but in the short term create a need for retraining staff as will be discussed later when post-occupancy issues are addressed.

For some academic libraries, partnering with campus computing centers expedites projects that involve renovation for technology. As David J. Nutty indicates in "Renovating for Technology: Partnerships Produce Quick Results," it makes sense to work with other providers of information technology within the larger organization. This kind of partnership was particular effective at George Washington University, where it "led to an almost instant transformation of an underutilized, basement-level reading area at the Gelman Library" (Nutty, 1998, p. 414) into a cutting-edge technology lab that the University's Computer Information and Resource Center assists in staffing. The library has provided space in exchange for services.

In Curry and Henriquez's study (1998), they observed that "when librarians and architects were asked if any issues pertaining to information technology surface during the design of their library, members from both groups, but particularly librarians, noted that future technology requirements should have been *more* of an issue" (p. 86). Planning for future technology is important in this rapidly changing environment even for short term considerations. If built to suit current needs only, IT accommodations may be outdated by the time the library opens. Change is inevitable in many aspects of library work, but flexibility and foresight can be incorporated into the design in order to keep up with change as easily as possible.

Interior Design

The interior design of a library is comprised of several components. Ideally these separate pieces should all work together to support the overall design so that the library feels like a single cohesive space. Planning of interiors combines functional and aesthetic elements. Color schemes, furnishings and lighting fixtures can create a mood for the library interior. Since users and staff will spend most of their time inside the library, it is no surprise that this is the area of most concern for librarians.

In her PLA 2000 session "Planning Branch Library Interiors: Lessons Learned About Function and Style," Carol B. Myers, Chief of Public Services for the Charlottle-Mecklenberg Public Library, emphasized the importance of creating welcoming spaces. She suggests that planners think about the elements that will be easy to change. The fixtures and layout will need to last, but elements that wear quickly like paint and fabric can be changed to keep the library's appearance from looking dated. She also suggests

thinking about ways to make the space memorable. In two of the branches, the planners were able to incorporate very unique elements--an aquarium in one, and an aviary in another.

Other experts suggest using an atrium as a focal point for the library, however some view this as a waste of valuable floor space. Atriums add a great deal of visual interest and energy to a space, as in the aforementioned Yale Music Library (Dugdale, 1999), but they do not allow for future expansion of staff, reader, or stack space. The desire for this open and airy space must then be balanced with the need for spaces devoted to services and collections. If an atrium is part of the building program, its placement must be carefully planned with consideration given to logical extensions of space for future growth in collections and services.

Based on the articles in this study, architects are more concerned than librarians with giving the space an open and airy feel. With the exception of Haythornthwaite (1998), it is the writers appearing in architectural journals who promote atriums (McKee, 1998; Stein, 1998), garden courtyards (Slessor, 1999; MacDonald, 1998; Dawson, 1998; Davey, Malmo, 1998) and grand reading rooms (Dugdale, 1999; Blundell-Jones, 1998; Stein, 1998). They are the ones who want to create visual energy with such spaces, whereas librarians seem to be content to do this with color, lighting, and furnishings.

Lighting

Based on the tallies of the articles dealing with this topic, lighting appears to be one of the most important aspect of library building design. I can see the importance of lighting in my own work at home. Like most readers, I want natural light during the day

and both ambient and task-specific lighting for working after dark. In addition, I want

different types of lighting for different activities. Lighting affects us not only physically

through our eyes, but also emotionally. Spaces will feel cold and institutional or warm

and inviting, depending upon the level of attention given to lighting. With the variety of

fixtures available today, there should be no excuse for leaving this element of design as

an afterthought. Lighting does not have to be expensive, but it does need to be

strategically planned just like every other element in the design of libraries.

Curry and Henriquez (1998) devote a section of their article to library lighting,

which they argue "is not only a particularly complex problem but also a controversial

one. Architects, illumination engineers, librarians, ophthalmologists, and even readers

differ in their opinions on the best library lighting in terms of quality, function, aesthetics,

intensity, and costs" (p. 85). They mention areas that pose particular problems with

respect to lighting: bookstacks, study carrels, group study tables, areas with high ceilings

and lighting for the visually impaired (Curry & Henriquez, 1998, p. 85).

Lighting has been given significant attention in several projects, including

Henning Larsen's design for the Public Library in Malmo Sweden. Peter Davey (1998)

describes the "continuous skylight [that] circles the whole space, so that the volume

continuously changes with the time of day, weather and the seasons" (p. 55). This is such

a feature element in the design that Larsen's motto for it is "Ljusets Kalender" or "light's

calendar". The passing of light over time is like a sundial in the entrance space (Davey,

1998).

Cruz and Ortiz's library in Seville, Spain uses clerestories to bring natural light

into the space. Because these skylight-like panels are on a vertical plane, they offer

diffused l

collections away from the harmful rays of direct sunlight. In addition, "louvered screens

on the more exposed elevations help diffuse the glare and intensity of the Sevillian sun"

(Slessor, 1999, p. 120).

An often overlooked detail that was mentioned at several PLA 2000 sessions is

seem at first to be a practical alternative to real skylights that often cause leakage

are rarely designed with maintenance in mind so that changing bulbs becomes a large and

expensive production. For the sake of future efficiency an

maintenance of such fixtures should be considered before they are approved in the

design.

Color

Fenton (1999) warns against selecting trendy colors that will soon be dated, or as

Fred Schilpf and John Moorman, in the PLA 2000 session "27 Snappy Rules for Good

and Evil in Library Architecture," humorously put it "today's trendy color scheme is

Steven Ehrlich used color to attract attention in the Robertson Branch Library,

Los Angeles. McKee (1998) describes the use of color in his article "Reading and

The copper element is the punch line in Ehrlich's composition: "I wanted it to
green volume doubles as
main entrance, stair hall, and skylit

tiled in rich bluestone, and the walls are clad inside as out with patinated copper shingles that overlap coarsely (p. 128).

Colors, especially those inherent in construction materials (wood, sandstone, concrete, etc.), can serve to delineate functional areas of the library and thereby assist in providing navigational cues throughout the space. In addition, such contrasts in materials offer visual interest. In Lamott's design of the Public Library in Landau, Germany, color is used to visually distinguish functional areas. "Asphalt, indicating public activities and circulation, gives way to woodblock and carpet in the part of the old building reserved for books and study. Within it, the various zones are described by furniture (book stacks, carrels, communal tables) conceived as architectural elements" (Azulay, 1999, p. 84).

Color also creates mood in this library where wooden furniture and sandstone soften the modern metal elements. The mixture of soft and hard, old and new, create a space that is visually interesting, inviting and easy to navigate.

Occupancy of the Building

Punch List

The final piece of the formal building process is a document called the "punch list" which is created prior to occupation of the building. Any loose ends and unsatisfactory details that need to be addressed by the construction crew or the architect should be included in this list. According to Edwards (1998), "most contractors agree to make repairs up to one year after the construction is completed" (p. 442).

Thornton (1998) describes a problematic situation in the renovation of the technical services unit at the Auraria Library of the University of Colorado at Denver.

Inaccurate CAD drawings for the area failed to indic

pillars. As a result, the modular office panels selected for staff workstations did not fit

into the finished space. While this example represents a bigger problem than most punch

e point that problems will inevitably arise and need to be

addressed as they are discovered.

Post Occupancy Increase in Use of the Facility

Five authors (Blundell-

Weise & Tooey, 1999) noted a significant increase in use after occupancy of the building.

services are offered in the new facility. The rise in readership at the British Library can

be attributed to   -line

In the case of Yale's Irving S. Gilmore Music Library, it is the inviting

atmosphere provided in the new space that is what caused an increase in use. In addition

to circulation doubling in the year following its opening, Music Librarian Kendall Crilly

claims "we not only have the traditional music students, but now we're one of the most

popular libraries on campus for everybody. Un

happen to like the space" (Dugdale, 1999, p. 63).

a significant impact on the work processes that it houses. An increase in use alone has

ramifications for staff, particularly in how they will manage the heavier workload. The University of Maryland offered several "change workshops" to prepare staff for the predictable impacts of the new building (Weise & Tooey, 1999, p. 176).

In some cases, such as the renovation of technical services at the University of Colorado at Denver's Auraria Library, the physical changes were prompted by a need to revise work processes (Thornton, 1998), rather than the other way around. Because staff were involved in the planning process from the beginning, the need for post-occupancy training was minimized.

Lessons for Librarians

- Be active participants in the building--speak up early and often.

- Listen to architects and let them do their jobs; respect their role in the process and be clear about your own.

- Be attentive to both functional and aesthetic elements of the design; sometimes these are closely intertwined.

- Help the architects understand the needs of your particular library and all of its various functional areas by communicating effectively in meetings and in the documentation provided in the building program.

- Borrow successful ideas from retail models.

- Use elements of the design to create a welcoming environment for users.

- Choose colors schemes that will endure; use today's fashion colors only for elements that will wear out before they become outdated.

- Select furnishings that will be durable.

Provide room in the design for growth of collections and services.

- workflows and retrain staff after occupancy in a new facility.

symbol of knowledge, we invite respect to the institution and by association to ourselves

and our profession. I

reverence that we have for the work that goes on inside it (both our own work and that of

our users), our library buildings will evoke the nobility of the search for knowledge while

ting users in a non-

specifically refers to public libraries) in our nation.

increasing pessimism, depersonalization and distrust, the public library and

potential. Given this unique position in our culture, and the architect's continuing
dilemma of making civic architecture in the American landscape, the program for

need to be hospitable and friendly and simultaneously dignified and orderly, the
character of the public libr
to identify itself with the history and precedents of all libraries before it and yet
ground itself in its own community, condition and time. It is all of these
library that have fascinated and befuddled us in
the search for architecture that celebrates and nurtures a society in need of both
("From the Architect's Point of View," p. 99).

Possibilities for Future Studies

Future studies might involve a content analysis of interviews with architects and

I would like to follow up this research by contacting librarians in my area who are in the

n--

after--and volunteering my time to get as involved as possible in the project. I would market my objectivity and knowledge to them in order to persuade them to let me participate. This would be most effective in situations where the library's budget does not allow for hiring a consultant. I would ask for permission from all parties involved to record and transcribe the meetings. I could then use a content analysis to study the verbal communication among the people involved. After conducting several of these studies, I could assemble findings and attempt to publish them for the benefit of the profession.

Communication is the key to the success of any project that involves a diverse group of individuals. By understanding the issues that are of primary concern for the various groups involved in a project, such as building a library, those involved will be prepared to work through those issues to find solutions that are amenable to all. I hope that in this paper I have contributed to this understanding.

Appendix: Content Analysis Data

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