MAINTAINING SOCIALIZATION IN A DIGITAL ENVIRONMENT:
A COMMUNITY INFORMATION CENTER

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"If people can get all the information they need all by themselves at home on their computer without any intervention of the library, we have a problem."
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ABSTRACT

This thesis is directed at exploring how architecture can re-establish a sense of community while utilizing new technologies in a manner that promotes social interaction among its users. Here, the methods of establishing a sense of community are studied through community identity, civic dialogue, and social interaction. The idea of incorporating the latest technology stems from society’s increasing dependence on computer technology and the problems of social interaction associated with its use. A joint-use library, or community information center (CIC), in Fort Wayne, Indiana, will be used as a platform to study these issues of community and technology. The proposed site in Fort Wayne, Indiana, offers a rich cultural heritage and many institutions of higher education to collaborate with in an effort to bring the community together with the most beneficial utilization of new technologies.

ADDITIONAL ACKNOWLEDGEMENTS

I owe a great deal to those who have assisted me in completing my college education. To all of my family and friends, I thank you for your friendship, love, and guidance.

DEDICATION

To my wife, Nicole-
For helping me better understand myself and supporting me unconditionally now and forever.
COMMUNITY: The Need For Interaction

According to the Ronald B. McCabe, a library director in Wisconsin, "there is a critical need for places that foster public dialogue and informal social interaction" due to the recently emergent individualism in American culture. Further, "communities need general, public places in a society dominated by specialization and privatization." In a 1996 report by the Benton Foundation on libraries and communities in the digital age, it is noted,

"Libraries are civic integrators. They are community nerve centers. They constitute, along with other vital local institutions, the basis of civic life. They provide a forum through which community members interact with each other, both through the use of meeting space and through the collection, dissemination, and implementation of information. They offer programs, services, and collections that support direct civic participation..."

"Library leaders see a continuing role for the library building. As a central and valued community meeting space, the library will become more of a civic integrator and a locus of community information on health, education, government, an other local services. Library leaders also express considerable concern about the "information have-nots," individuals who do not have access to computers or online information. And they argue for a social activist role for libraries in which citizens could receive literacy information or acquire health and job information. They nevertheless express reservations about the library becoming marginalized by taking on exclusively the role of information safety net."


The library as a viable ingredient to community life is at a turning point in its evolution, or as some would say, in its reaction to societal trends. Even so, many questions lie in front of library leaders concerning the future of the library. Will the library find a competitive niche? Is advertising required for the library to survive? Should the library lead the technological advancements? Who will fund all of this?

The Benton Foundation eloquently summarizes this vision in its 1996 report:

"Americans continue to have a love affair with their libraries, but they have difficulty figuring out where libraries fit in the new digital world. And many Americans would just as soon turn their local libraries into museums and recruit retirees to staff them. Libraries are thus at a crossroads, for they must adjust their traditional values and services to the digital age. But there is good reason for optimism as libraries and their communities take up this challenge. Libraries have enormous opportunities nationwide to influence and direct public opinion because strong public sentiment already supports key visions for the future of libraries. Moreover, the growing use of home computers seems, at least at this juncture, to complement - not compete with - library use. So libraries and their leaders now must chart a role for themselves, giving meaning and message to their future institutions and their central role in community life."

TECHNOLOGY: The Need For Access

An additional factor is the introversion of society coupled with the increasing use of computer technology, severely limiting the human contact necessary for proper character development. Today's children spend too much time isolated in front of a television or a computer monitor and not nearly enough time developing social skills crucial for a productive career and healthy personal relationships in the future. Another issue in the realm of technology lies in the increasing access to information from within the home, expressed in the Benton Foundation study:

"The individual clicking a mouse while sitting at his or her home computer is seen as a threat to the library's future. As one interviewee put it, "If people can get all the information they need all by themselves at home on their computer without any intervention from the library, we have a problem." Another interviewee wondered about the role of the library—and the librarian—in an "any time, any place" information world. Still others worried about the continuing meaning and viability of the "local" public library in a world without information boundaries."

It is possible to use technology effectively as a method of creating social dialogue. The continuous evolution of technological products gives society endless possibilities in communications and information retrieval as well as additional freedom and flexibility in how these products are applied to everyday life. Here lies the need for a community-oriented library to introduce and familiarize the public with the new tools vital to the successful integration of technology and community.

In a sense, computers can be thought of libraries themselves. They "store" information in a "place" and offer access to that information. The concept of access to information and knowledge is a cornerstone of the public library system and of America in general. The library in the past has acted as a link to information existing in the library catalog and is now becoming a link to the catalogue known as cyberspace. This shift in the role of the library will be beneficial to society as long as the computer does not replace "the place", or community function of the library, which would attack the viability of the traditional civic icon known as the public library.
INTRODUCTION TO PROJECT

This thesis is directed at exploring how the architecture of a library can re-establish a sense of community while utilizing new technologies in a manner that promotes social interaction among its users.

The dichotomy of community and technology will be explored through the careful design of a community information center in the form of a joint-use library. McCabe believes that “as the public library is committed to neutrality and as it belongs to and serves the entire community, the library is an ideal civic space for the promotion of public dialogue.” He also offers three paths of realizing this need that begin to infer certain programmatic elements:

1) Establish community identity through materials, services, and programs related to local history, organizations, economy, or any characteristic that defines the community.
2) Promote civic dialogue through sponsored lectures, public meetings on important issues, and candidate forums to prepare citizens for elections.
3) Provide opportunities for social interaction in the form of coffee/lounge spaces, group discussion areas, and informal meeting niches.

A joint-use library, specifically, is necessitated by the need for collaboration with the institution(s) of higher education, which shares the common mission of public education for a democratic society. This teamwork among civic institutions is the primary vehicle for maintaining the viability of these fundamental American values.

PROGRAMMATIC SUMMARY OF MAIN COMPONENTS

LECTURE HALL
This public forum seats up to 240 people for class events or public speakers. It is the product of public and educational interaction and portrays the importance of technology in both sectors of society.

INFORMATION GALLERY
The “info gallery” is an open computer lab that offers professional instruction on electronic research skills and introduction on the new interfaces found within the library and functions as a general computer research area when instruction/demonstration activities are not in session.

PUBLIC LOUNGE/CAFÉ
This is a space dedicated to the public for the sale of food and beverages, not found in traditional libraries. This intent of fostering informal social interaction between patrons alters the stereotypical silence commonly witnessed.
RESEARCH/PRECEDENT STUDY

ARCHITECTURE

CARNEGIE LIBRARIES

PHILLIPS EXETER LIBRARY, LOUIS KAHN

SAINSBURY CENTRE, SIR NORMAN FOSTER

THE NEW YORK PUBLIC LIBRARY, GWATHMEY SIEGEL

BRITISH PAVILION, NICHOLAS GRIMSHAW AND PARTNERS

PHOENIX CENTRAL LIBRARY, BRUDER DWL ARCHITECTS

"THE HIGHLAND STREET PUBLIC LIBRARY, Z. EVANS, STUDENT DESIGN"

QUEENSBOROUGH PUBLIC LIBRARY, POLSHEK PARTNERSHIP

TECHNOLOGY PRODUCTS

ROBOTIC PARKING SYSTEM

SGG PRIVA-LITE TOUCH SCREEN GLASS SYSTEM
Carnegie Libraries

Key Concepts
- relationship of the public library to the community
- free access to information and cultural knowledge

Typical Character

Exterior: Masonry construction is used with a prominent entrance with high steps. The Classical style exhibits simplicity in the mass, plan and roof.

Interior: High, open space lit by natural light. Wooden movable furniture as room dividers.

Plan: One story with basement half exposed. Separation of adults and children reading rooms. Circulation desk on axis at main entrance. Service spaces in the basement or grouped together. Adults and children go to right and left, librarian in the center. Supplementary elements are generally in the three rear sections. This is an example of a sextapartite plan.

Plan derived from cloister organization, with columns surrounding a hierarchical space. The circulation desk is in the center, enabling a complete control over the entire floor. People entering and leaving can be monitored at the same time.

Typical Carnegie plans separate served and services onto different floors. Served (reading rooms and stacks) being on the ground floor and service (offices, restrooms, janitorial) in the basement.

Spatial Organization: The front elevation shows the general plan of library. Center is control area and stack area. Sides rooms are reading rooms.

Building Systems: The interior of library is free from unnecessary walls. Columns support roof.

Facade Composition: Facades of Carnegie libraries are divided into three bays. Most have vertical symmetry and strong datum lines that define base, middle, and capitol. Elevated entrance style is comparable to a temple ideal. Facades are usually Classical, or Renaissance Revival styles.

Volumetric Order: Center Volume (dark): Center of libraries are larger than front and back, used for "live" stacks. Space is open to large skylight above. Space is unobstructed by unnecessary architectural forms. Volumes on the Sides (light): The front and back of typical Carnegie libraries are used for service areas. Usually two levels and compact. Space is not wasted.

Daylighting: The walls of typical library are thick and cut at an angle to bring more light in.
- traditional, focal organizing space (reading room is central hall)
- perimeter book stacks act as a secondary enclosure to protect central hall

The library is made up of the main central area, which is open to the entire height of the structure. The stacks surround this open area. Along the edges of the building, next to the windows are the study carrels for visitors to sit and read. The top floor of the Exeter Library holds the rare books, and on the roof is a reading terrace.

Front Facade
The four facades of the Exeter Library are repetitious and symmetrical. They cover each side of the building but do not meet at the corners. The broken corners provide access to the open arcade that encircles the building on the ground floor. Following this arcade from any corner brings you around to the front entrance. The exterior of the Exeter Library is made of brick to match the surrounding buildings. Since all of the facades are virtually identical, it is difficult to determine where the entrance is located. Some critics think that this is a great disadvantage to the building, while others say that it is a private facility, and that a grand entrance is unneeded.

Natural Light
The central open area is lit up by a 4' high clerestory that wraps around the 51' high ceiling. The natural light that comes through this clerestory fills the room and makes it seem larger. The light also helps the concrete roof and enclosing walls from seeming too massive and overpowering. It gives the visitor a feeling of connection to the outside while at the same time lets in light for the readers. The window directly by the readers have screens that can be adjusted to let in as much or as little light as the reader wants. These windows are an example of Kahn's interest in a variety of types of natural light.

NOTE: This information is courtesy of [http://gladstone.uoregon.edu/~asaven/analysis/site_rsp.html](http://gladstone.uoregon.edu/~asaven/analysis/site_rsp.html)
According to author Dennis Sharpe: “It is a highly tuned and well-engineered shed for art of considerable sophistication serving as a research institute with public access gallery... The white walls and roofs take the form of continuous trusses and all services are housed within the ‘outer wall zone’.”

The Sainsbury Centre is an example of how a simple wall can come alive if given an opportunity to do so. Foster has created a double-skinned enclosure that incorporates the structural and mechanical duties needed to run the building. This move exemplifies the purposeful idea of architecture as a simple enclosure of space.
- "hybrid" of traditional print material and computer technology
- reflects this dichotomy in material palette

- kit of parts approach
- each wall uses innovative materials to accomplish environmental issues
- technology is inherent in every component and connection

- innovative use of laminated glass on north elevation and elevator shafts
- emits only indirect light in response to severe climate situation

- explores advertisement of technology through exterior projection panels
- investigates impacts of fully electronic library collection
- attempts to provide a community center with access to knowledge

- transparent facade "advertises" learning
- high-tech curtainwall
- public square acts to funnel people into entrance on corner
According to their website:

"Robotic Parking, Inc.'s patented Modular Automated Parking System (MAPS) integrates computerization with mechanical lifts, pallets and carriers to park and retrieve cars in multi-level, modular garages (i.e., units that are standard in size and design, and can be arranged or fitted together in a variety of ways).

Underground applications are particularly well suited for this system. Because only half the space is needed, one can realize as much as 50% cost savings on the excavation alone. Also, due to lower lighting and ventilation requirements (since no cars are driving around and no one is walking inside), lower insurance costs, lower personnel expenses, land savings, etc. the overall development costs can be significantly lower than for a conventional garage."

According to their website:

"SGGPRIVA-LITE TOUCH SCREEN®, is a completely new interactive medium in the area of the shop window presentation. The system recognizes the finger position of the user within a data- or videoprojection automatically and moves this then immediately in a mouse movement. Therefore, for the first time SGGPRIVA-LITE TOUCH SCREEN® makes an major input "on fingertip" for big projections and reprojections possible."
SITE INFORMATION/ANALYSIS

PHYSICAL DESCRIPTION

CULTURAL DESCRIPTION

SITE PHOTOGRAPHS

SITE RESPONSE
The proposed site is on a predominate intersection in Fort Wayne, Indiana. At the northeast corner of Crescent Ave. (north-south) and Coliseum Blvd. (east-west), this location is directly adjacent to a local college-Ivy Tech State College-and a local university-Indiana University Purdue University Fort Wayne (IPFW). Both roads are heavily trafficked, although Coliseum Blvd. is more traveled, as it acts as the artery to the commercial hub of the north side of the city.

The site itself is relatively flat, with trees wrapping around the north and east sides. A few small residential units exist to the east, past a tree buffer.

The site is on an imaginary line between a residential zone and a highly active social/institutional zone. The area just to the west of the site is full of activity with the academic institutions, public parks, shopping centers (not to mention the largest mall in Indiana), a recently renovated sports facility, expo center, and ballpark, all within two miles. The residential neighborhood to the east consists of typical middle-class ranches, sometimes split-levels. To the north and south are mixed with residential, commercial, and small institutional facilities.
These images give a basic understanding of the atmosphere of the project site. Photograph One illustrates the partial visual boundary between the residential areas existing to the south, across Coliseum Blvd. Photo Two shows the view of IPFW from the site, across Crescent Ave. Again, trees shield much of the visual connection between the two points.

Photo Three is relating the proximity of the intersection and the view of Ivy Tech State College beyond. Photo Four is taken from across the intersection, directly at the project site. For this project's hypothetical scenario, the existing building will be nonexistent. Notice the density of the treeline in the background which acts as a solid, dark background for a potential light-toned structure sited on the corner.

Photo Five is intended to depict the substantial amount of vehicular traffic to the north and show the view of the developing IPFW campus, which is not evident as of yet. The topographical plan relates the existence of a small amount of level changes on the site. For the purposes of this project, the original site will be assumed as a flat terrain.
In addition to recognizing the importance of the intersection during the siting and early design of the project, the surrounding precedent of academic orientation needed to be taken into account. From contextual analyses performed at the outset of the process, a pattern of similar orientations appeared in both of the academic institutions. The IPFW campus, as well as the Ivy Tech campus have aligned their structures with Coliseum Boulevard. (This is illustrated in the diagram to the left) In response, the two main educational components of the program (lecture hall and information gallery) are also oriented to Coliseum Blvd. This begins to develop a conceptual link between the local academic institutions and the community information center itself.

The diagonal orientation was adopted in order to reinforce the idea of equality of public institutions, such as the public library and relevant to the program, provide building skin surfaces at an angle to the vehicular passersby. This allows the opportunity to utilize the skin of the building as a billboard.

The two main components of the design include a lecture hall and the actual library. The lecture hall is conceived to display a protective shell-like enclosure, blocking views into and out of the forum space. Contrary to this design move, the library component is mostly glazed, providing patrons a view of the dense, wooded area it is nestled into.
DESIGN PROCESS

STAGE ONE: ORGANIZING PROGRAM

STAGE TWO: REDEFINING PURPOSE

STAGE THREE: THESIS PRODUCT
   DESIGN DRAWINGS
   MODEL PHOTOGRAPHS

PROJECT REFLECTION

BIBLIOGRAPHY
The diagram to the left illustrates this project's focus on the skin as a communicator. Recognized here is the traditional notion of the library as a secure house of knowledge (lecture hall) in addition to the futuristic idea of high-tech skins allowing environment and views to penetrate the envelope (library). Also, the importance of flexibility of the interior using technologies, such as the access floor system for computer cabling, is denoted.

The concept shown here represents the move toward separating the lecture hall from the main library component of the facility in order to accommodate possible operating time schedules. Notice the shift in the rectangular grid differentiating educational program elements from the rest of the design.

A partially above-ground robotic parking garage is also modeled to begin to explore the critical entry sequence and wayfinding methods. Both of these topics are crucial to the effectiveness of any library.
As discussed previously, the purpose of this project is to begin a new precedent in library design by using technology to increase socialization between patrons. In other words, taking the typology of information repository and redesigning it into a launchpad for electronic exploration. Achieving the socialization aspect of the mission is dependent upon group use of the electronic interfaces. The consideration of small to large group spaces has evolved into spaces that facilitate interaction and avoid the introversion and social disfunctions that home computer usage commonly causes.

Structural development has taken into account space frame technologies and exposed steel members in order to maximize flexibility, a characteristic not usually found in library buildings.

The study model shown here relays the progress in organization, scaling, entry sequence, and structure, among others. Each development is investigated keeping in mind the overall goal of using technology to encourage socialization. The use of exterior pavilions and kiosks is tested to add another layer of interaction.

Clean lines evoke ideas of precision and efficiency, a quality of all digital instruments.
The final design of the Community Information Center gives way to a new, visionary outlook to the way a library looks and performs. The combination of learning and entertainment caters to the needs of today’s society and provides internet access to the “information have-nots.” Through public lectures and video conferences, interactive media panels, and access to E-book readers, tablet PC’s, and notebook computers, citizens from all walks of life can learn the advantages of new technology in day-to-day activities.

The overall mission, adapted from Carnegie Libraries, is to educate patrons through socialization and interaction. This is achieved by providing spaces that foster the clustering of people and allow them to use technological interfaces together. For example, junior high school student could attend a class field trip to the CIC that introduced them to finding reliable internet sources for term papers. A college student could attend a class or job fair here. A politician could communicate with his constituents over a video conference call. An elderly citizen could attend a public lecture on changing Medicare benefits in the lecture hall or research them on their own.

The public library is beginning a transformation from a simple repository of information to an information and community hub that has reaches far beyond its own walls.
1. Ramp to lower level
2. Robotic parking apparatus
3. Stair to main level plaza
4. Elevator to main level plaza

1. Entry foyer
2. Main stage
3. Seating for 240
4. Administrative
5. Service/Mechanical
6. Emergency Exits
1. Stair to main level
2. Main electronic collection
3. Media panels
4. Open to Info Gallery below
5. Outdoor terrace
7. E-classroom
8. Storage/Mech.

1. Entry
2. Information/Circulation
3. Administrative
4. Information Gallery
5. Media panels
6. Snack bar
7. Data Terminals
8. Seating
1. Interlocking concrete blocks
2. 2" rigid thermal insulation
3. Roofing membrane
4. 8" x 10" limestone parapet
5. 2' x 10' x 3" cememtious roof planks with acoustical treatment on underside
6. 8" steel tube space frame (welded)
7. 1" tempered glass panels connected with spider clips
8. 2" limestone panel curtainwall system
9. 48" sq. steel tube column (behind)
10. 24" sq. steel tube column
11. Wall-mounted projection system
12. 10" conc. slab
13. 1/2" expansion joint
14. 1" tempered glass
15. Autoclave aerated concrete block foundation wall
16. Reinforced trench footing
17. Engineered fill (from site excavation)
REFLECTION

Early in my educational career, I was exposed to the idea that "knowledge is power." Without knowing the overwhelming significance of that statement I became involved with reading for pleasure. Oddly enough, I was interested mostly in biographies of presidents and other common historical figures. This interest in reading remains with me today. The reason for sharing this information is to note the vital role the library has played in my development as a student as well as a person. Along the way I've taken advantage of numerous library facilities by checking out books, attending workshops, and participating in class field trips. More important than my personal stories is the fact that libraries provide everyone access to informative materials, most of which are not accessible anywhere else. It also provides the local community a sense of ownership of a public establishment. However, this institution and its mission of equal access to information are currently struggling with its place in today's society with regards to rapid advancements in technology.

The debate concerns whether the public library's role should be a reactive or proactive one. In the past, it has taken a staunchly reserved approach in addressing societal trends. By only satisfying existing patron's needs and desires, involving activities, computer access, and involvement with local schools, public libraries have failed to keep up with its at-large community. With this project, the cooperative efforts of local universities and public library organizations attempt to take a proactive approach in addressing (Fort Wayne's) social and technological needs. The lecture hall facility combines entertainment with education through public forums, guest lectures, and workshops. Also, the electronic library complex utilizes interactive media panels to inform and entertain visitors and passersby and spaces designed to instruct patrons on interface navigation. This project also "advertises" with the exterior media panels in order to promote activities within the library and educational partnerships.

The question at hand is whether the leadership of the library community can initiate a proactive program in order to solve the decline of the public library's place in society. With home computer use on the rise and library usage threatened, the time has come to address the problem at hand. This CIC project demonstrates how architecture can alter a typology and solve social and technological difficulties. Maybe an architect will reinvent the library.
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