Thesis submitted to the faculty of
Virginia Polytechnic Institute &
State University in partial fulfillment
of the requirements for the degree
of MASTER OF ARCHITECTURE

Profeesor William Galloway
Chairman

Professor William Browne

Professor Michael O’Brien

Professor Heinrich Schnoedt
But... how can man withdraw himself from the fields? Where will he go, since the earth is one huge unbounded field? Quite simple; he will mark off a portion of the field by means of walls, which set up an enclosed finite space over against amorphous, limitless space... For in truth the most accurate definition of the urbs and the polis is very like the comic definition of a cannon. You take a hole, wrap some steel wire tightly around it, and that’s your cannon. So the urbs or polis starts by being an empty space... and all the rest is just a means of fixing that empty space, of limiting its outlines... The square... This lesser rebellious field which secedes from the limitless one, and keeps to itself, is a space sui generis of the most novel kind in which man frees himself from the community of the plant and the animal... and creates an enclosure apart which is purely human, a civil space.
new bridge across the mississippi river
ellis auditorium convention and museum district
court square business district
historic steamboat landing
main street shopping district
beale street entertainment district
mud island park and outdoor events
the peabody historic hotel
Since the earliest beginnings of civilization, mankind has strived to form urban space by limiting its outlines and bringing a system of order to the wilderness of nature. Thus street and place mark the public space clearly bounded by built mass, the enclosure of the more private space. In many modern cities of the United States the urban counterpart of street and place, the continuous building mass is largely missing. Colin Rowe describes this phenomena as the unpleasant condition of urban texture of the modern city. If we want to fix the urban wilderness of the American City, we have to redraw its outlines and redefine its spaces.
front street, public promenade, 1920
memphis skyline today
beale street, entertainment district

history site context
The site is located in the business core of downtown Memphis. It extends over the entire length of a city block facing the riverfront to the west and the downtown shopping and business district to the east. Like the historic and today abandoned warehouse on the site, a number of similar warehouses are left lining the waterfront and marking the transition from river to city. However, with the decline of the cotton trade via steamboat and the following decay of the warehouses, the downtown became separated from the waterfront.

The city of Memphis was founded in 1819 by three land speculators from Nashville. Like many other cities in the United States, the plan was laid out as a square grid derived from the Greek and Roman antique. The Mississippi river was the catalyst for rapid growth in business, trade and commerce. Front Street, then called Public Promenade, which runs parallel to the riverfront, became the vibrant heart of the city at the end of the 19th century. Today many attractions like the Beale Street Entertainment District still recall their glorious past.

The originating urban proposal for Memphis and similar many other American cities clearly identified street and place bound by a strong and continuous building mass. Towards the end of the 20th century however not much is left. With suburbanization and the decay of the city core the urban texture became more and more fragmented. In addition, the loss of building density further weakens the urban space left. In order to regain dense urban spaces we have to redefine the outlines and repair the texture of the urban fabric by drawing new connecting elements.
topography
street grid
water
parks + greens
building mass
superposition

context

west elevation from the mississippi river

unexploited waterfront today
In order to strengthen the urban fabric, it was important to search for architectural means to re-connect the existing urban fragments. In other words, how can we fix and strengthen the texture of the city. Today the spatial organization of the project area in Memphis is dominated by strong protective brick walls that separate the slim but deep warehouses running from the riverfront to the downtown. The direction of public space however is parallel to the waterfront. Reorienting the wall layout could serve to re-connect the waterfront with the downtown and create useful public spaces in between. Thus, the new added layer will enhance and help to complete the urban fabric.
1. spatial connecting of waterfront and city
2. The Russian Dance, painting by Theo van Doesburg
3. rhythmic of walls
4. walls and spaces

Existing warehouse
the barton cotton building
shops
pavilions
hotel and loft tower
A series of cast in place concrete walls form the scheme of the project. As the continuing element, they unite the urban landscape with the interior of the building. They contribute to the city by forming a point of arrival for the Memphis downtown. Further, they organize the layout of a riverfront park. Within the architecture itself, they carry the loads and structure the space.
opening of the existing building to the neighboring lot

concrete wall slabs structure the space and provide a space for the utilities

clips form the enclosure of the spaces of the extension
One of the existing retaining walls of the warehouse is removed to allow for extension of the existing horizontally organized spaces into the neighboring lot. Here, the concrete cast in place walls add a sequence of vertically arranged spaces. They assume the load bearing function of the original retaining wall for the existing building as well as the extension. The space within the double layered wall slabs is used partially for vertical distribution of services and utilities. The organization of the walls responds to structural needs as well as spatial demands. Independently concrete clips form the enclosure of the extension. They outline and bound the private spaces to be created. As independent elements, they are held up by the wall planes as well, allowing for a free formulation of the continuous urban space below.

**Section a—a**
- Tinted skylight
- Elevated floor for convenient wiring of spaces and recessed air, heat and electrical outlets
- Indirect artificial lighting of the interiors
- Shading and screening devices
- Roof terrace with skips, water channel and teak wood decking
Typically, the boundaries that form urban space are the floor of the streets and the building masses. In some cities, such as Rome, the public space of the streets extends into the interior of a building, thus creating a sequence of spaces that form a gradient transition from public to private. In this project, the facade of the extension gives form to a similar sequence of spaces. The use of independent clip elements for the extension allows for numerous unique conditions of spaces that are characterized by different scale, height, lighting and openness.
noon - lighting conditions in public and private spaces
In contrast to the existing brick facade, the skin of the extension is mostly transparent. Glass panels are the dominating elements. They allow for the interior activities of the building to become part of the public street space. Shading and screening louvers can be individually adjusted. Besides that they control the amount of light to reach the inside, they also manipulate the openness or opaqueness of the interiors to the outside. On the ground levels the glass elements are flexible accordion-style and can be folded to the sides. Thus the cafe and the stores can extend into the street and courtyard.

The glass skin facade continues through the whole project. It wraps around the wall planes and defines the spaces of the courtyard and entrances to the staircases.
river front side

- cast in place concrete floor slab
- pre-cast edge elements with thermal break
- insulated double layered glass planes
- c-channel with wood infill for lateral load support
- fabric shading elements with guides
- raised wooden floor
- cavity: space for wiring and duct work
- air duct and vents for climatic control
- folded up overflow barrier
- teak wood decking
- wet roof with slope and insulation
- zinc covering
- concrete pre-cast edge elements with thermal break
- water drain channel
- wet terrace with slope and insulation
- folding up overflow barrier
- steel and teak wood railing
- zinc covering
public and private realm
As the cast in place concrete walls structure the spaces in the project, the wooden furniture forms and closes off the different spaces within. It becomes the extension of the wooden floor that folds up to make the furniture. At that point the furniture in its whole depth becomes the transitional space between the individual rooms. The warmth of the wood surface complements and contrasts the cast surface of the concrete walls. Also the wooden infill introduces a different level of scale. The continuous concrete walls belong to the superstructure of the project. The wooden elements only belong to the spaces they form within two pairs of the walls. The lowered top part of the furniture allows for daylight or indirect artificial light to reflect up against the ceiling and into the depth of the space. A constructive gap between the wooden floor and the concrete walls make a space for recessed electrical and air outlets.
On the ground level towards the riverfront, the existing warehouse opened onto a loading dock originally used for handling the cotton bales. The extension of the building adapts the platform motif with an outside terrace for the restaurant. From here visitors have an open view of the riverfront and marina with the steamboats.

Similarly to the interior of the building, the exterior terrace steps down in levels to reach the plane of the street, marking the region of transition between public and private space. A proposed gallery opens onto the interior courtyard which can also serve as an outdoor exhibition space for sculptures. The service and utility rooms are arranged at the back side of the floor, which does not receive any natural light.
Spacious openings in the floor slabs and a wide stair lead the visitor to this level of the building. New double story window openings are cut into the south facade on Gayoso Avenue. They are arranged in line with the windows on the two upper floors. In addition to bringing light to the interior, they foster interaction between the street and the interior shops and offices.

The second level of the warehouse was used for the storage of cotton. It did not have a direct entrance from the street and was lit only by a few scattered window openings. Because of its location within the building, it benefits most from the light and air circulation provided by the interior courtyard. The bookstore extends down into this level.
The main entrance from the city side of the project is on level three. A bookstore and cafe open onto Front Street and form a transition between the public space of the street and the interior of the project. A series of stairs provide a path of public access to the interior courtyard. The path continues through the entire project, linking the streets on both sides of the project with the interior. At various points along the path, enclosed staircases allow for vertical circulation to all levels.

The office spaces are also designed for maximum flexibility, relying on movable wooden panels for individual partitioning. Restrooms and kitchenettes are organized in line with the staircases for shared access by two office units.
The top level of the building contains 5 apartments. The orientation of these spaces connects the original building and the extension visually and spatially. The wooden furniture elements separate the individual rooms within each apartment. Their depth becomes the transition space between the rooms.

Glass block and translucent glass serve as screening devices. In addition movable wood panels allow the individual to manipulate the apartment layout. With the flexible layout, the spaces of the apartments lose their traditional rigidity and become fluid. Skylights with colored glass cast indirect light deep into the interior of the apartments.
epilogue
Opposite to a general approach to urban architecture that defines the street edge as the boundary to private ownership that separates public and private, I tried to extend the public space into the realm of the private. I believe that urban activity only exists because of such overlay of different spaces and functions. The task for the architect is to control that overlay, just like we control the opaqueness of glass and the use of materials. We have to identify the sequence of spaces from public to private. The hierarchy of the spaces that are organized by means of proportion, light and material – acknowledge the different scales of public and private. That outcome mark a new layer of texture that adds and tries to complete the existing urban fabric.
I want to dedicate this thesis to my family who always supported me on my way in life.

I would like to thank the Fulbright Commission, the Virginia Polytechnic Institute & State University, the Department of Architecture and Urban Studies and my committee Prof. William Galloway, Prof. William Brown, Prof. Michael O’Brien and Prof. Heinrich Schnoedt who offered me the great opportunity to study in their Master of Architecture Program.

I like to give my special thanks to Prof. Rengin Holt who always encouraged me and without whom this book would not be complete today.

Also my appreciation is with all my friends I met during my study in Blacksburg and supported me with their joy, critic and humor.
education
05/2001
04/1999
M.Arch Program
at Virginia Polytechnic Institute & State University

05/1998
German Fulbright Scholarship

05/1997
Master Degree in Architecture (Diplom) waldstät-ter TIfH Berlin/University of Applied Sciences, Ger-
many

08/1996
Study of Architecture & Urban Design, HAB Weimar, Germany

experience
2001
Nalbach/Nalbach Architects, Berlin Germany

2000
Graduate Teaching Assistantship at VPI for Prof.
Rengi Holt in Graphics

1999
Koppes, Architects & Partners, Berlin Germany

1997
Wolf Lin Graphic Design, Berlin

workshops
2000
International Workshop (USA GRC) DWA, VPI, Prof.
Reimund Fein

1999
IBA Architecture and Industrial Landscaping Work-
shop, Prof. Dr. Kohlmaier

awards
2001
Graduate Faculty Award for Excellence in Architec-
ture, School of Architecture and Urban Studies, VPI

2001
Exhibition Award, HNTB Washington D.C., USA

2000
Honorable Mention, National Housing Competition, USA

2000
ACSA Wood Competition 2000, Second Prize / Crafting of Space

1999
Honorable Mention, All Virginia Regional Competition, Urban Rehabilitation Richmond, USA

1999
IBA Architecture and Industrial Landscaping Award First Prize / Buhlthouse AG, Germany

1998
Elderly Living Design Challenge Berlin, First Prize / Germany

All images in this publication have been taken by the author himself and are not protected by any copyrights.
Except images on page 9-14. They have been taken from the internet in 10/2001 by the author and are also not copyright protected.