Thoughts on architecture...

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A design thesis submitted to the Graduate Faculty of Virginia Polytechnic Institute and State University in partial fulfillment of the degree of Master of Architecture

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Blacksburg, Virginia
July 1999
Abstract

Architecture is more than mere building. Architecture is a process involving the study, observation, and solution of aesthetic and pragmatic problems. The act of building solves the pragmatic questions, but it is the architect’s intellectual commitment and line of inquiry that ultimately produces architecture.

This inquiry provided the opportunity to develop and elaborate a position on the thinking and making of architecture. The study of the urban condition, structure, enclosure, multi-functional elements and photography became a base of knowledge from which to begin. The range of ideas presented were the result of a line of inquiry that became this thesis.

Quality is not inherent in an object. It must be expressed through the ideas by which it was created. In the same respect, this project does not represent the concepts, it presents them.

...the first imperative is to gain the critical knowledge that will permit the choice of the coordinates within which his or her career will develop; these are the coordinates to which his or her buildings will refer.
Thoughts on architecture...

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The Urban Context

The discussion of urban places most often begins with images of large metropolitan cities such as New York or Chicago. Urban conditions on a smaller scale are frequently overlooked.

Within an urban context, buildings must respond to the surrounding condition and man’s presence within it. They must support the density and structure of the area, contribute to the variety of uses, provide quality spaces, and create an interactive edge bounded by the street and the adjacent structures.

Buildings are often seen as fragments within urban areas. Views are obscured by adjacent buildings, prohibiting a person from observing the entire structure at one time. Instead, individual spaces are perceived. These areas exist as spaces between buildings, facades, thresholds, entrances, windows, balconies, light, and material.
Density

Urban areas are inherently dense with people, buildings and activities. This density provides opportunities for interaction and makes a lively environment.

The town of Blacksburg's primary density occurs along Main Street, the major axis through town. Tightly packed buildings create an urban wall that spatially defines Main Street and the environment. The buildings contain retail shops, restaurants/bars, and other commercial spaces on the first floor and offices or apartments on the top floors. The variety of uses contributes to the density and becomes vital to the success of downtown.

The urban wall that is presented along Main Street exists as a series of solids and voids; patterns of blocks and streets. The solids develop in relation to circulation and open, shared spaces. They are limited by the street and the lot size. Consequently, the facade of the building often reflects the size of the lot. The voids become streets and alleys. No space is left unclaimed.
Variety of Scales

Three different scales exist within the urban context, that of the town, the building, and the person. At each scale, the urban context and the presence of man come together.

At the scale of the town, the urban wall, and more specifically the joining of adjacent buildings, becomes important. Each building boundary marks the threshold between the building and interaction with pedestrians. Within this scale, the relationship between the street, the sidewalk, the building facades, and the pedestrian becomes important. The street is experienced from close at hand and is differentiated by the horizontal rhythm of facades. The rhythmic placement of the buildings provides for the discovery of the spaces in-between.

At the scale of the building, the experience of individual spaces creates energy along the street. Here, the memory of a place is recorded. The retail shops, the restaurants, and the apartments respond to the street through their facades, creating an edge engaging pedestrians and creating the possibility for interaction.

Material is understood at the scale of the person. Here, the project becomes tactile. The difference between the materiality of brick and glass is noticed. The sound of the street and the smell of the bakery become prominent elements within the architecture. Awnings, overhangs, and benches provide a human scale to the street.
Transition

The crossing of streets... intensifies the sense of meeting, opens up new aspects of the place... and is often emphasized by particular formal means. 2

Within Blacksburg, the building/street relationship is often expressed by corner columns. Not only do they express the crossing of streets, but they also give prominence to the commercial corner entries.

Thresholds eliminate an abrupt, singular transition between inside and outside. An in-between space is created in which many activities can occur, including meeting an old friend, protection from the weather, or simply an opportunity to window shop away from pedestrian traffic. The variety of storefronts also become an interactive edge, engaging the participation of passersby.

The study of storefronts demonstrates the variety of thresholds existing downtown...
Engaging the alley

The alley creates an opportunity to increase the density of downtown Blacksburg. Instead of filling in the void within the urban block, a public space is made. By replacing the occasional vehicular traffic with only pedestrian traffic, shoppers are encouraged to travel through the alley, linking Main Street and Draper Road both physically and visually.

Secondary entrances to offices and retail spaces already open onto the alley. The placement of several primary commercial and residential entrances along the alley activates the space. The site becomes more than a walkway, it becomes a place where people meet.
The new intervention will condense and activate the alley, supporting the density of the urban wall.
Balconies engage the alley and the adjacent building at the apartment level. At the street level, the repetition of columns, the varying edge of the storefronts, and the shared stairs of the apartments create moments to discover, luring people through the alley.
Most buildings do not reveal their construction. The expression of structure is an important design opportunity available to the architect. Decisions regarding the nature and quality of assembly, how the wall meets the floor or how the beam meets the column, are made in relation to budget, function, codes, ideas, and positions on architecture. Inhabitants experience the building in its totality. In many instances, structure can be the generator of architecture.

Revealing the structure of a building brings another important layer of intention to the palette of the designer. It delineates spaces by making a place for a desk, a shelf, a wall, or a stair, allowing the way a building is constructed to help inform how it is experienced.
The frame and enclosure are no longer tied together. Each is expressed individually.

The steel structure becomes the form and life of the building.

The exposed metal frame supports the freedom of partitioning spaces.
While the structure helps regulate vehicular and pedestrian traffic, the enclosure is allowed to be a separate entity.

Structure is expressed on the interior as the column makes a place for a sink.
Frame

Architecture must of necessity be embodied in structural and constructional form, in comparison to other arts.\(^3\)

The structure of this project is a steel frame. There is a clear separation between the frame and the enclosure. By separating the two, they are allowed to exist independently, each bringing different qualities to the building. The columns establish the regulating lines within the structure. According to Le Corbusier, the regulating line is the basis of construction and helps to establish the relationship between structure and volume, structure and geometry, structure and enclosure, and structure and circulation. The steel frame creates the possibility for an open plan. The only spaces partitioned off are the “cores” which house the bathrooms, stairs, and ductwork for the mechanical systems.

The framing plan affects both the interior and exterior spaces of the building. The spacing of the columns determines the boundaries of each unit within the project. A unit consists of 4 columns arranged in a 19'-6" square. A 5'-0" spacing between units becomes the core.

The cantilever is an important element within each unit. It provides balconies for each apartment and allows the steel columns to not touch the existing brick wall. The brick wall is retained simply for its coarse texture and is not relied upon structurally. The direction of the girders and beams determines where the cantilever is possible. Generally, there are two different orientations for the units. The interior units engage the alley and the two end units primarily engage the streets. Therefore, the direction of the framing plans switch depending on the location of the unit.

Study of 3 different framing plans
The repetition of the frame creates an order within the project. Its linear quality regulates the movement through the site, in which the pedestrian, shopper, or resident becomes an active participant. The exposed frame on the street level interlocks the path and the commercial spaces functionally and visually. By repeating the same unit down the alley, the rhythm of the existing facades along Main Street is continued.

The frame also repeats itself vertically within each unit. The density of an urban site limits horizontal expansion. The most freedom is obtained vertically. The multi-floor nature of each unit is emphasized and assists in the idea of living vertically. People become the connecting element between vertical and horizontal.
Cantilever allows light to enter the back of the apartments from a skylight above.

Cantilever becomes a balcony.

Separation of the structure from the enclosure.

Cantilever engaging existing wall.

Girder/column study.

Frame repeating the length of the site.
Street Level Plan:
Main Street shop is shown in an expanded configuration while the alley shops are shown in a single bay configuration.
Second Level Plan:
Entrance into apartments including living, kitchen, dining, balconies, and interior stairs
Third Level Plan:
The upper level includes bedrooms, bathrooms, and 2-story spaces.
The steel frame allows the structure to act independent of the existing brick wall and the glass enclosure. The first floor steel approaches but does not bear upon the brick.
The cores become both interior and exterior stairs, bathrooms, and a place for the roof drainage.
Enclosure

The enclosure helps determine how we experience space. A space enclosed by solid walls creates a different atmosphere and evokes different emotions than a space enclosed by glass walls. Walls limit space and inhibit light from penetrating to the interior. Openings allow light to enter, from small slivers to large openings where the exterior merges with the interior.

The enclosure also determines how the building reacts to the street, to adjacent buildings, and to people. Movable openings and balconies create an interaction between interior and exterior and more specifically between the inhabitants and the street.

Each apartment has the opacity of the existing brick wall to act as an inward focus and the transparent glass wall to project the room into the alley with the balcony.
The translucency of the etched glass both absorbs and reflects light, changing with the time and the condition of the sky.

The horizontal glass strips of the enclosure vary in the degree of transparency depending on the interior spaces behind them.

The entirely translucent enclosure allows the maximum amount of light to penetrate the interior. The metal frame of the facade corresponds to the metal frame of the structure.
The curtain wall, consisting of small panes of glass and steel mullions, creates a unified facade.

The old and the new are expressed separately.
Transparency

The transparency of the urban window exposes movement and energy inside the building to the street. It also allows the structure to become visible from the exterior of the building. Different qualities of light enter the spaces and views are afforded up and down Main Street.

By allowing the structure to visibly connect the building vertically, the enclosure at the apartment levels and at the retail level can now act separately within the same facade.

An early study of transparency along the Main Street elevation
Alternative #1: Enclosure relating to function on the interior

Alternative #2: Enclosure relating to space on the interior

Alternative #3: Enclosure acting as a continuous surface, unifying the interior. This became the chosen alternative.
Articulation of the plane

On the ground floor, large panes of glass are held in an aluminum frame creating an uninterrupted view into the retail spaces, projecting goods to the street and drawing shoppers inside. A change in scale occurs at the apartment levels. Smaller panes of glass are set in a thin steel frame. This helps to define these spaces as more private and also creates a transition between the open spaces on the interior and the dense coarsing of the brick wall on the opposite side of the alley. The two-story curtain wall unifies both floors of the interior space. Awning windows open out toward the street and the alley, inviting interaction between the inhabitants and the pedestrians below. Some panels slide open onto balconies merging the inside with the outside.

Study of how the enclosure relates to the frame

Steel frame window detail

Elevation perspective of one unit
Separation of the envelope from the frame reveals the assembly of the structure. The dimension of the separation becomes a threshold allowing the column and the enclosure to be clear and distinct.
Main Street elevation:
The context of downtown Blacksburg becomes important along the Main Street elevation. The limits on height, regulating lines, and the massing of the street all contribute to the elevation.
Draper Road elevation:
The emphasis of the alley and the extension of the path connects the Draper Road elevation to Main Street.
Alley elevation: The horizontal rhythm through the alley ends with the rhythm created by the Farmer’s Market pavilions.
Opposition of materials

Materials were chosen for their inherent qualities and combined to create a rich texture within the architecture. The collage of materials celebrates the simple beauty of the steel frame. The rough brick wall retained on the interior opposes the smooth, clear qualities of the glass and steel curtain wall. The steel emphasizes the transparency of the glass while the glass softens the powerful appearance of the steel. The crisp lines of the steel become a regulating element within the building.
Multi-functional Elements

An important part of any design, especially in a dense, urban site, is that of multi-functional elements. Not only do they reduce visual noise by replacing multiple components with fewer ones, they actively involve the user. Part of the design is left up to the inhabitants through the elements multiple interpretations. These elements become distinctive features that enliven and give purpose to spaces.

Hertzberger talks about form having ‘competence’ - namely the implication of accommodating capacity for meanings... Architects should not merely demonstrate what is possible, they should also and especially indicate the possibilities that are inherent in the design.\(^4\)
Precedents

12 Willemspark School, Herman Hertzberger

The base of the column becomes a place to gather with friends or to sit by yourself.

13 Students House, Herman Hertzberger

The material wraps around vertically to delineate the kitchen and then changes direction and becomes a dining table.

14 Music Centre 'Vredenburg', Herman Hertzberger

The knee-wall becomes a place to wait with friends or have a snack.
The interior stairs become a multi-functional element within the apartment. Placed within the living space, the stair helps to visually define different spaces without needing a solid wall or partition. The floor of the kitchen becomes the first tread of the stair aiding in the delineation of spaces. The open stair is constructed with metal channels as the stringers and perforated metal treads, thereby allowing the maximum amount of sunlight to penetrate into the interior of the apartment. The treads of the stairs extend to become the dining table and bookshelves.
The concrete base of the building also acts as a multi-functional element. It becomes an external stair, a threshold, the base for the steel frame, a seat, and a knee-wall. The knee-wall in turn becomes a seat on the exterior and a possible display shelf within the retail shops.

Models showing how the stairs visually divide the living space and become the dining table and shelves.
Within the building the only permanent items are the service cores. The rest of the spaces are designed using furniture, including the multi-functional elements previously mentioned. Similarly to the multi-functional elements, by designing with temporary pieces, part of the design is left up to the inhabitants, giving them control over the design of their environment.

Partial 3rd floor furniture plan showing the cores as interior stairs and bathrooms with the apartments

Partial 2nd floor furniture plan showing how furniture is used to delineate spaces within the apartments

Partial street level floor plan showing the cores as external stairs and office space within the retail shops
Photography as a Means of Discovery

Architecture can reveal the true essence and understanding of a town. It provides a recognition of orientation and a sense of identity within an urban setting. It is a direct presentation of man’s presence. An unspoken dialogue occurs between architecture and the street and the people. This interaction often remains unnoticed and yet it is vital to every town.

Photography provides insight and focuses on more defined moments by reducing the visual realm. The photographer’s decision of choosing a frame allows for the examination of the townscape one frame at a time. The collection of information within a photograph is a way of studying existing conditions and discovering what is critical to the underlying function and its success.

Beyond simple documentation, the following photographs represent the unseen or unfamiliar. They are a chance for expression, while acting as a source of discovery.

The presentation of architecture in other arts is the ‘pure looking’ of a child’s way of experiencing things, for the rules of architectural discipline do not regulate the experience or the way it is presented.
Bollo's, Blacksburg, Virginia
Private residence, Blacksburg, Virginia
Anything Goes, Blacksburg, Virginia
Weather tower, Blacksburg, Virginia
Gillie’s, Blacksburg, Virginia
Thoughts on Architecture

- It is the architect's intellectual commitment to the profession and to his/her intentions that ultimately produces architecture

- Architecture is embodied in its materials and construction

- Quality is not inherent in an object...it must be expressed through the ideas by which it was created

- The expression of structure is a generator of architecture

- Clarity of form and material

- Architecture is silent

- Architecture is about seeing opportunities

- Places are stronger than people

- Express permanence, express temporariness

- Architecture occurs when there is a dialog between space, light, material, and man

- Buildings are seen as a whole only when they are being experienced

- Essence is achieved when minimum is no longer made with subtraction

- Detail

- Generate events
Notes/Credits

Images

Unless otherwise noted, images are reproductions of original drawings, renderings, or photographs by the author.


Quotes


Acknowledgments

My sincere thanks and gratitude go out to those who have touched me along the way. Without your support and encouragement, this work would never have been possible.

I want to express special thanks

...to my family for all of their love and support. I owe you my trust in life and belief in myself.

...to Greg for your contagious smile and for making Blacksburg such a special place.

...to my friends and classmates for sharing your experiences in our mutual pursuit of architecture. My work would not have been the same without your influence and inspiration.

...finally to my committee members, Mike O’Brien, Hunter Pittman, and Jack Davis, for sharing your knowledge of architecture. Your varied insight helped to develop and broaden the scope of my thesis.

This has become a new beginning...
Vita

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