Experiencing Architecture through Active and Mindful Spaces
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abstract

Experiencing Architecture Through Active and Mindful Spaces

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The connection between our body and mind is integral in the way we perceive and relate to the world that exists around us. Our perceptions and emotional responses to those spaces can influence and become a powerful tool for design. In turn, architecture can encourage active and mindfullness in a person’s everyday life.

The architectural project is a mixed use development consisting of a multi-family residence, hotel, coffee shop, and spa located off of 14th Street in the Columbia Heights neighborhood in Washington DC. The program provides spaces for dwelling, both temporary and permanent, to encourage both physical and psychological wellness.
acknowledgements

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thesis: actively and mindfully thinking about design
These abstract sketches were used to study the effect of light and passage of time in different spaces and to analyze the experience a person has as they pass through, pause, and contemplate each moment.

“The ultimate meaning of any building is beyond architecture; it directs our consciousness back to the world and towards our own sense of self and being. Significant architecture makes us experience ourselves as complete embodied and spiritual beings. In fact, this is the great function of all meaningful art.”

- Juhani Pallasmaa, *The Eyes of the Skin: Architecture and Senses*, p.11

Like the age old adage “What came first the chicken or the egg?” we can ask the same for our body and mind. Are we a body that thinks, feels, perceives, and reasons or a mind that can flex, stretch, pull, push, and move? Despite what the answer may be, what is understood is that the relationship between the human body and mind is powerful and essential to who we are as individuals and our overall well-being.

In contemporary times the built environment has become as essential to our society and lives as our own bodies and minds are to each other and ourselves. The problem that architects face now is how do we create spaces that can encourage the relationship between both our physical and mental health. The answer lies in many different elements: the elements of light...
and shadow, of materiality, of circulation, of the passage and fluctuation of spaces, and of the relationship between the exterior and interior environments. And it is with these elements that an architect can create an environment that encourages individuals to become more mindful and active in their every day lives.

Architectural spaces can influence a fundamental change in a person’s perspective and understanding of the world. It is within the spaces in which we inhabit, pass through, and see the world in every day that can change our physical displacement and mental condition the most. This makes the spaces we choose to dwell in so critical in encouraging the relationship between the human body and mind.

The program for this thesis was chosen with the intent to create spaces of dwelling both for temporary and permanent periods of time. To study the importance of shadow and light, fluctuations of spaces, and materiality. All of which will, in turn, inform spatial relationships and to allow the mind to wander and the physical body to traverse and be enveloped and released by the environment in which it exists on a daily basis.

The shadows created hold the phenomenological power of what lies beyond and with the manipulation of these within a room, hallway, or exterior space they allow the mind to wander and a person to contemplate the space in which they exist. It is in this absence of light and the consequent loss of space that a person tries to remember the space in which they exist and appreciate what it once was. It is also within the consistency juxtaposed to the variation of the light and shadows that our bodies are allowed to feel the warmth and coolness and the mind can begin to contemplate the impact that the exterior world can have on our interior environment.

Allowing the body to rise and fall, feel lost in tight spaces and open in broader places, and released when it is outside and comforted when it is inside is essential in a design that engages the sensorial system. It is not only the movement and rise or fall within a space but the moment of pause that the body recognizes a change and allows the mind to ponder. When a hallway encloses and suddenly begins to open up, it again, allows for a moment of contemplation and a bodily understanding of the world in which we live.

Manipulating certain materials that will contradict each other and engage each other within the facade can create an architectural imagery that will imply subtleties and nuances to enable a connection and activate an observer’s mind. Allowing manipulation of those materials through transparency, mechanics, and reflection will create a constant tension between what remains stagnant and what elements are always changing. This allows for the interpretation of the building to never be the same for any one individual at any single moment during the day or year. Encouraging contemplation of the passage of time and the exploitation of the material itself.

These concepts brought together in a single design and within a program for dwelling, whether for extended lengths of time or only moments, will allow for a person to sit and understand as well as move through and engage the presence of architecture. Le Corbusier stated, “An architecture must be walked through and traversed. … Architecture can be judged as dead or living by the degree to which the rule of movement has been disregarded or brilliantly exploited.” (George Lakoff, p. 8) It is important to address the passage of time through light and shadow, changing facades, and fluctuating spaces in order to engage both the body and mind in order to encourage a more mindful and active architecture.
design ideas sketch collage:
abstracting design elements through a collage of architectural sections, plans, and details

piecing together the individual design ideas into one cohesive and consecutive plan for spaces
site: 14th st.
     nw washington dc
     columbia heights
14th st. retail center

the dance institute

fire department

open air market

the tivoli theater

columbia heights metro

dc bike share
“I experience myself in the city, and the city exists through my embodied experience. The city and my body supplement and define each other: I dwell in the city and the city dwells in me.”

- Juhani Pallasmaa, *The Eyes of the Skin: Architecture and Senses*, p. 11

Columbia Heights was chosen for the location of this project because it is an area of the city that is highly diversified in its culture, building typologies, and social classifications. It is an area that is growing in popularity and encourages new growth and urban development.

In addition, it meets some of the Guidelines addressed by the “The Active Design Guidelines: Promoting Physical Activity and Health in Design” put together by the New York City Departments of Design and Construction, Health and Mental Hygiene, Transportation, and City Planning (p. 6-7):

1. **Improve Access to transit and transit facilities:**
   Two Metro Bus stops are located within a block of the site and a Metro Stop is within 6 city blocks.

2. **Improve Access to Plaza, Parks, Open Spaces, and Recreational Facilities:**
   Piedmont Park is within 2 blocks of the site. In addition to two recreational fields within 7 to 8 blocks.

3. **Facilitate bicycling for recreation and transportation by developing continuous bicycling networks and incorporating infrastructure like safe indoor and outdoor bicycle parking:**
   A bike share location is one block north of the site.

These are important aspects of the existing site location that will only further promote a more active and healthy population and also reduce energy consumption and greenhouse gas emissions. Not only is it imperative for people to be healthier but to also be aware of and contribute to the healthiness of the environment in which we live.
3d site model:
analyzing existing stair conditions within the surrounding site and pulling those paths through and up to fill and create ideas for future spacial design
design process:
engaging the body and mind through the design of temporary and permanent dwelling spaces
Beginning sketches looked at wall sections, window designs, elevations, sections, and space planning to play with how different elements and rhythm of spaces can encourage mindfulness.

Mindfulness lies in a spiritual sense of the body and the reality in which a person exists in their everyday life experiences, in order to gain awareness of bodily functions, emotions, and physical and psychological consciousness.
Defining the programmatic spaces and allowing them to influence the massing of the building drove the initial plan drawings. Keeping in mind the theoretical sketches and studies of light and shadow, presence of time, fluctuation of interior and exterior spaces allowed for two seemingly separate towers, one the hotel (an experience that is temporary) the other a multi-family residence (a more permanent dwelling space) connected underneath by a spa to re-emphasize the benefits of both psychological and physical well-being.
For the hotel, circulation was where the elevation changes and fluctuation of spaces occur. Inside the rooms contemplation begins to be influenced by the play of light occurring from the design of the facade and placement of exterior windows while within the rooms themselves vertical changes remain singular and constant in order to oppose the temporality of the dwelling experience intended for the hotel. The spa below that connects the two spaces, begins to influence the bodily experience by the rise and fall, not only from the floor below one's feet, but the ceiling above. As opposed to the sliced openings that play with the light above, the skylights above the spa are water filled, which reflects and refracts exterior light creating a calm yet everchanging experience.

light and shadow studies for hotel windows: the windows for the hotel attempt to show a quicker passage of time through using a series of smaller openings in set patterns to allow for a more dramatic play of darkness and light

section sketch

elevation sketch

photographic step study 2
For the residence, elevation changes were kept constant through the hallways and once inside the units a person will experience the rise and fall and the enclosed and openness of the spaces. Openings in the facades become larger and create planes rather than pieces of light to reiterate a more extended passage of time typical for an experience in a more permanent dwelling space.

Exterior skin study model for residence: layering different materials and systems to create a more active facade and encourage a more physical and mental participation with the building.
analyzing and comparing the hotel and residence

elevation and facade study:
elevation and facade study:
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3d step model studies - scheme 2
3d massing models were used to explore patterns of spaces and light. Forms that create arcades and passageways that encourage a person to want to pass through, pause and think, or actively engage their body and climb up through different types of spaces. To feel the coolness and absence of the shadow along with the warmth and comfort of natural light.
Model studies begin to play with the bending and wrapping of the facade integrated with a structural system that supports and suspends the materials of the building. Integrating the building with the surrounding site to connect, respond, and create a new architectural expression for the neighborhood.
final presentation: the plans
final presentation: sections & elevations
hotel section:
expressing elevation changes within the common areas while maintaining subtle and singular changes within each dwelling unit

hotel monumental stair section:
creating spaces of pause to sit, think, rest, and talk within the folds of the stairs.

CNC fabrication of model installation
residence section:
manipulation of levels within the dwelling units engages a person to become active and aware within the space they spend time in their day to day life

residence monumental stair section:
the stair folds up and in and out, engaging the walls and glazing creating spaces that are convenient for everyday living and experiences
east elevation

north elevation

south elevation

photos of model installation
final presentation: perspectives & models
playing with mechanical louvers to create an everchanging facade to allow for a different experience every time a person passes by or through

photos of model installation
view through courtyard:
contrast materiality, manipulation of masses to allow views, and juxtaposing public outdoor spaces with private interior spaces defines the architecture of this mixed-use urban building.
final model

photos of model installation
mindful & active
“When working, both the artist and craftsman are directly engaged with their bodies and their existential experiences rather than focused on an external and objectified problem. A wise architect works with his/her entire body and sense of self. While working on a building or an object, the architect is simultaneously engaged in a reverse perspective, his/her self-image – or more precisely, existential experience.”


The aim of this project was to explore how architectural spaces can influence the relationship and wellness of both the mind and body. I focused my design on three main elements. The first was vertical circulation; designing it to be ever present in the building and to be both a means of passing through space but also to given reason to pause, rest, gather and contemplate. The second was in the mechanical play of the facade and in the different way light and shadow can be manipulated within the different programmatic spaces of the building. And finally in the juxtaposition of the materiality; pairing the warmness of wood with the coolness of concrete floating above a transparent glazed box that reflects and refracts light.

Outside of the elements of design it was important for me to physically connect and immerse myself in the work. I took the time to not only analyze the building through 3d modelling but to also create each drawing by hand. Imagining each space as my pens, and pencils cross the paper to form lines, that turned into shapes, that ultimately became the rooms in my building. To further pursue the “existential experience” I studied the possibility of a full scale mock up of the steps and in this discovered what each step will mean when brought together and experienced by an individual. Through both the theoretical design of the program and intimate experience of conveying the ideas I was able to discover how architectural design can evoke an active and mindful way of living.


figure 1 (collage on p. ii)
google image of salk institute designed by louis kahn:  

figure 2 (collage on p. ii)
bing image of salk institute designed by louis kahn:  
google image of jean nouvel Les Bains des Docks:  

figure 3 (collage on p. iii)
bing image of salk institute designed by louis kahn:  
google image search for nude descending stair:  

figure 4 (collage on p. iii)
google image search for nude descending stair:  
bing image of salk institute designed by louis kahn:  
google image search for people sitting on steps (Accessed December 2010) [fair use]