I, Trevor Schur, hereby submit this original work as part of the requirements for the degree of Master of Architecture in Architecture.

It is entitled:  
The Urban Connection: Re-Imagining Plazas and Lobbies

Student's name:  
Trevor Schur

This work and its defense approved by:

Committee chair: John Eliot Hancock, M.Arch.

Committee member: Michael McInturf, M.Arch.
The Urban Connection: Re-Imagining Plazas and Lobbies

A thesis submitted to the Graduate School Of the University of Cincinnati
In partial fulfillment of the Requirements for the degree of Master of Architecture

In the Department of SAID Of the College of Design, Architecture, Art, and Planning

by

Trevor Schur

B.S. Architecture State University of New York at Buffalo

May 2012

Committee Chair: John Hancock
Abstract

Cities thrive on social interaction, yet the dominant urban building types populating them produce lobbies and plazas that could do much more to enrich such interaction. This thesis will re-imagine the plaza and lobby typologies. These spaces are pivotal for the interaction of people because they are the interstitial spaces between one’s commute and their final destination. They should be designed for an abundance of interactions among different users, groups, activities, and cultures. Yet plazas and lobbies today are flawed: lobbies are too direct not allowing interaction, and plazas are too indirect causing diffusion. Designers and theorists such as Jan Gehl, Richard Rogers, and Rem Koolhaas have studied human interaction in the city and proposed innovations for how to design these urban spaces. These past precedents have been analyzed through their circulation, program, user groups, boundaries, and impact on the senses.

Based on this analysis, this thesis project seeks to create a greater consciousness among users of their surroundings, and to trigger motivation, interest, engagement, and interaction in these spaces. On a site adjacent to Union Square in New York City, the diverse populations and multiple transportation systems are brought into interaction with each other in innovative combinations, each becoming a spectacle that attracts others. The design process begins with providing accessible circulation paths among several main programs in place on the site, then moves to activate flexible activity spaces, then articulate those with materials and patterns that can enhance a conscious understanding of the space.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Illustrations</td>
<td>5</td>
</tr>
<tr>
<td>Introduction</td>
<td>7</td>
</tr>
<tr>
<td>Intent</td>
<td>8</td>
</tr>
<tr>
<td>Argument</td>
<td>10</td>
</tr>
<tr>
<td>Site</td>
<td>26</td>
</tr>
<tr>
<td>Proposition</td>
<td>31</td>
</tr>
<tr>
<td>Methodology</td>
<td>32</td>
</tr>
<tr>
<td>Design Goals</td>
<td>35</td>
</tr>
<tr>
<td>Bibliography</td>
<td>38</td>
</tr>
</tbody>
</table>
List of Illustrations

(http://www.nytimes.com/imagepages/2013/04/07/arts/07SEAGRAM1.html)

Image 2: Photo of the Piazza De Campidoglio (Accessed September 20, 2014)
(http://entertainment.howstuffworks.com/arts/artwork/michelangelo-buildings8.htm)

(http://entertainment.howstuffworks.com/arts/artwork/michelangelo-buildings8.htm)

(http://www.dsrny.com/#/projects/high-line-two)

(http://www.dsrny.com/#/projects/high-line-two)

(http://docomomo-noca.org/buildings/levis-plaza/)

Image 7: Leadenhall Building Exterior Rendering 1 (Accessed August 18, 2014)

Image 8: Leadenhall Building Exterior Rendering 2 (Accessed August 18, 2014)

(http://www.weissmanfredi.com/project/seattle-art-museum-olympic-sculpture-park)


(https://picturesdotnews.wordpress.com/tag/port/).


(https://picturesdotnews.wordpress.com/tag/port/).


(http://www.ignant.de/2013/03/25/city-of-culture-of-galicia/).

Image 14: Site Plan (Trevor Schur, Digital Diagram, 2015)


Image 19: Catalyst Diagrams (Trevor Schur, Digital Diagram, 2015)

Introduction

Cities thrive on social interaction, yet the dominant urban building types populating them produce lobbies and plazas that could do much more to enrich such interaction. This thesis will re-imagine the plaza and lobby typologies. Given the increase in population and the stress of living in close proximity with other cultures, it becomes essential to create spaces that allow people to learn and be motivated by others. These spaces where people interact within the urban density, between their commute from home and to the office, need to be enriched. The goal of this thesis is to create more consciousness of one’s surroundings, and stronger connections through interactions with the environment, and with each other.

The primary places that allow for a congregation of people in the city are plazas and lobbies. However these spaces have flaws in their design and purpose. Most lobbies focus on funneling occupants to one core and displacing them to their destinations from there. This thrusts every user of the building into small confined spaces together causing stress and awkward situations. Plazas are generally open spaces used for meals, and meeting points for people in the city. They become a space that is the opposite of the lobby because they don’t force people anywhere. People choose where and when to interact. These two types of urban spaces have opposite effects on the user.

If the plaza and lobby goals were combined, then the urban density would provide more innovative environments for people to interact in. Creating an environment in the city in which the spectacle becomes the user rather than the building they occupy is essential for this concept. The circulation of a user is essential through the spaces they experience to get to their destination, whether it is an everyday commute, once in a lifetime experience, or just a leisure trip. Understanding the users’ goals within the space will allow these spaces to connect to or disconnect from one another.
**Intent/Discussion of Research**

The existing lobby and plaza spaces that we are populating today have a greater potential to foster this conscious interaction. Each type of space could be designed in a way that provides the user with more appropriate, stimulating and comfortable space that they can interact in. In order to determine what types of designs are helpful or harmful there certain aspects of the space that need to be analyzed. Circulation, program attractors, user groups, boundaries, and connections through the senses, were the five categories studied throughout this thesis research.

The circulation of the space was looked at in terms of whether or not the paths were directing people or merely providing options to the user. For this aspect of the design the types of circulation were broken down dependent on the user’s goals. The initial user looked at within the lobby and plaza space was the “knowledgeable user,” one who is aware of their final destination and will take the most direct route to get there. Another type would be the “leisurer,” one who is aware of their final destination however is not opposed to being distracted or traveling a different route. Then lastly the most flexible occupant is the “explorer,” one who has no real destination and is open for investigation and enticement. Using this wide spectrum of occupants, the spaces can be understood in a manner that will relate to the already diverse urban environment that exists in most of the precedents, and more specifically to the project of this thesis.

Functional attractors dealt mainly with program and their location/proximity to their surroundings. There were two different categories created to depict these attractors termed here “catalysts” and “sponges.” The catalyst was an aspect of the program that due to its size, popularity, or need attracts people. A catalyst does not need other elements to attract people to its resources, while the other type was a sponge which does not draw attention by itself. The sponges become dependent
on other catalysts in order to be popular and allow for interaction. These functional attractors allowed for programs to be placed with more of a purpose in certain locations on the sites studied.

Because this thesis focused on the patterns of urban societal life, the user groups and their diverse types of people were important to analyze. This allowed for an understanding of who was using the space, why they were using it, when they were there, and how they used it. This analysis allowed for knowledge of the site at all times, and allowed for an understanding of what program elements needed to be implemented in the spaces provided.

Boundaries already existed in the urban environment when dealing with so many means of transportation. The environment was already dense and when cars, bicycles, subways, and pedestrians are all within a few feet of one another it can seem overwhelming and dangerous. Boundaries were then created because of the proximity these elements have to one another. These elements such as roads and sidewalks became separators that may disrupt interaction between people, programs, or cultures. Other boundaries such as physical walls affect how the space was interacting with the occupant.

The final element that allowed for designs to be critiqued and developed was the senses that humans use every day. The occupant’s sight, smell, taste, touch, and hearing create emotions that allow for the occupant to form an opinion. Each human uses these senses every second, some more unconscious than others, and when the space triggers these senses, the mind becomes more attuned to their surroundings.

These five aspects of the experience of urban space were the basis for this thesis’s intent and approach, and allowed for past studies to be critiqued and for the project portion to be designed. They allowed for psychological ideas to transform into physical design strategies. The intent of this thesis was to create more awareness of the diverse aspects of the urban environment one is surrounded by. It is seen that in general, people live in an unconscious mindset between their mode of transportation into
the city and their entering the final destination space. These areas, typically such as lobbies and plazas, therefore those areas need to be studied and altered in order for more interaction to happen that will help people to interact with, understand, and care for others, in a more diverse mix, rather than close up to everyone and try to protect ourselves.

Argument

The urban environment has been studied for years and many designers have weighed in on the best forms of practice in order to create a successful city. The most important thing to understand is that every city is important and needs to be addressed based on its strengths. However there are certain strategies that work better than others. Throughout this thesis, research has been done specifically using lobby and plaza designs. However there were also precedents examined that were about the pure density of people and may have a different program associated. Architects such as Richard Rogers, Jan Gehl, Peter Eisenman, William Whyte, and Weiss + Manfredi were studied because of their experience and success with urban projects and theories.

This investigation began with specific lobby designs of the past, present, and future. Dating back to the turn of the 20th century lobbies have become prominent spaces in buildings because of the skyscraper and building typologies that force multiple practices within the structure. The Chrysler Building was designed by William Van Alen and completed in 1928, in the, which was popular at the time, art deco style. The diagram below shows the plan of the lobby. The red dots show the circulation paths that are created based on the placement of the entrances and elevator cores. The elevators reside in the center of the plan with the entrances occurring on three different sides of the square shape. Because of corridors and security everyone is funneled down these restrictive paths and into a congested lobby around the elevators. Thus the only option is to enter each elevator with multiple
people, and each person gets off at their respective floor. The general idea of an elevator ride is an
awkward silent one with everyone staring the same way. It becomes a boring routine that everyone has
to partake in, but not everyone necessarily wants to. Buildings following this pattern still define and
control our cities today.

The Birj Khalifa was built in 2012 and was designed by Skidmore, Owings, and Merrill LLP. This
building has garnered attention for being the tallest building in the world and has become a focal point
of discussion in architecture. This provides an excellent point of comparison with buildings such as the
Chrysler building, in order to understand if and how lobby design has progressed within this building
typology. The Birj Khalifa consists of three main programs; hotel, office, and residential. The plan of the
structure can be seen below, showing that elevator cores all still exist within one place on the site in the
center again. The entrances differ from those of the Chrysler Building in that they are in very close
proximity to the elevator cores. There is a lot less distance being traveled to get to these elevator cores.
Also each entrance is designed based on the three programs, so one of them is the hotel entrance,
another being the office, and finally the residential entrance. Also the elevators are separated from one
another so these programs do not overlap within the elevator. This makes the occupant ride with only
people that are partaking in that programmatic aspect of the building. While this is a more progressive
style than Van Alen’s design, it is still lacking a unique experience for the user. Both of these examples
given are a mere glimpse into these time periods, yet they are also seen as pinnacle designs for their
time and therefore draw a lot of attention.

Other lobbies were studied as the chart below shows. Certain aspects from each of these
examples were more successful than others. Also some proposals seem to have potential based on the
theories provided. One specific example of a more successful design would be to separate the elevator
cores. Providing the user options for accessing their destination causes them to consciously think of one
having an advantage over the other. This is a step in the right direction by making the user able to control their circulation.

Another precedent was a proposal designed by Christopher Christophi and Lucas Mazarrasa as part of the annual Evolo skyscraper competition:

“The Hyper-Speed Vertical Train Hub aims to replace existing flagship train stations and create new key connective points for the exchange of people and goods with the new hyper speed network. The proposal will ‘flip’ the traditional form and function of the current train station design vertically, and re-form it into a cylindrical mass to increase the towers train capacity.”¹

Their design took mass transit and combined it with the façade of the building. The subway systems rose from underground to travel up the building façade, then drop the passengers off on different floors. This proposal actually negated the need for a general lobby and elevator cores. The ground floor then becomes an extravagant green space that was to be utilized by the city. While this proposal would allow for less interaction, it also emphasizes important aspects such as public transportation and green space, two things essential to a city.

Through analysis of these building lobbies it was concluded that lobbies generally funnel people into one space and disperse them from there. This causes people to come together, which would be good for interactions however there are no other pieces of program or reason that they should be connected to that space. The lobby becomes a stagnant space that defines the building and not the occupants within it.

Plaza design is different than lobby design mainly because people tend to choose to attend a plaza, while people are generally forced to enter a lobby to get to another point in their journey. Therefore there are many more options and motivations for people to interact in a plaza. The plaza has

become a place of meeting up with friends, eating lunch, or reading for leisure. A few plazas were critiqued in this research in order to fully understand what aspects exist and perform well within a plaza.

The first plaza looked at is in New York City and was built by the famous architect Ludwig Mies Van Der Rohe. The plaza sits at the base of the Seagram Building on Park Avenue just outside the Four Seasons restaurant designed by Philip Johnson. Park Avenue is a congested street full of cabs and cars in Midtown New York. Many office buildings surround the plaza. The street is the biggest boundary that exists for the occupants of these offices. Mies Van Der Rohe used the space (the plaza) to combat this boundary. He set the Seagram building back over 100 feet from the street in order to create a plaza. The speed of the street is a lot less of a force when standing 100 feet away at the entrance of the Seagram Building, compared to the more of a normal ten feet of sidewalk.

The Seagram plaza is a vast flat concrete surface in New York. It has two water elements that draw the attention of the common occupant. There are a few steps and curbs that divide up the space, however the main procession through the middle is very wide and flat. These open spaces created by the architect, who was known for a very minimalist approach to design, gives the user a lot of choice. Choice was a missing element from most of the lobbies studied, and in this instance it becomes a
negative as well. People can easily avoid interaction, and once again, there are no elements of program
that connect the users. The only elements that exist are places to sit, and water features.

William Whyte studied the Seagram plaza specifically in order to understand public spaces in
cities. He wrote a book called *The Social Life of Small Urban Spaces* that described this research. He took
into consideration time of day, sunlight, heights of elements, and user groups for his studies:

“The day at Seagram’s starts slowly. At 8:50 three people sit down: soon they leave. From then
until about 11:30, the total number of people at any one time fluctuates between two and five. A
sudden upswing at 10:35 is caused by 26 school children who stop to rest. But it is around 11:30 that the
tempo really picks up. Shortly after noon, the number of sitters is up to 18. When a space begins to fill
up, people don’t distribute themselves evenly over it; they go where other people are. At Seagram’s, the
corner of the steps is where the buildup often begins. And the dense areas get denser.”

This quote depicts the method that Whyte used to study these spaces, focusing on time of day
and the number of people that utilized the space. He brought up the fact that a mere 3 people used this
plaza in the early stages of the morning. For creating an urban space in today’s world having only 3
people utilize it would not be seen as efficient or productive. This is one disadvantage that a plaza like
this has because of its lack of program. Whyte also referred to the people densifying themselves even
though there was no real difference in terms of physical elements that people had to choose to sit on.
He mentioned that they gathered near the corner of the street and he later went on to describe how
people gravitated toward the sun. These elements such as time and the sun will be part of a conscious
design goal in order to make these spaces successful.

---

Another plaza that was studied was from Rome in the 16th century and the work of Michelangelo. His Piazza de Campidoglio was a very popular public space in Rome. The major difference between this plaza and the Seagram’s was the attention to scale. While Mies Van Der Rohe tended to create spaces that were focused on efficiency and homogeneity, Michelangelo in this plaza created many elements of different scale. His task at hand was to connect 3 buildings with a plaza and have that flow into the city of Rome. Along with the plaza, Michelangelo redesigned the facades of the adjacent buildings and added a new building to complete the symmetry in order to mesh them together. There were multiple scales that he related to through his design, the first being more of a monumental scale. These were the larger elements that he was dealing with, the building facades with their giant order, and the sculpture in the middle. He aligned these faces and created a square for them. Then there were the smaller, inset columns and the arcades behind them into the buildings. He meshed these with a pavement pattern that connected them with the center of the space. He went from a linear design (buildings) toward a radial center (the sculpture). Then he broke down the design into a human scale. This is specifically where his design contrasted the Seagram Building. Michelangelo broke down the plaza with many steps, columns, doorways, arcades and areas of
seating that all could be related back to the elements of the human body. He understood ergonomics and how it created an engaging experience for the users of the space.

The High Line designed by Diller and Scofidio was seen as a precedent because of its unique path of circulation through New York City, which interacted with the surrounding environment like no other project. Rising above the ground and creating green space for leisure, the design provided a park atmosphere, but it could also be used as a circulation path to get to certain destinations efficiently.

Comparing this to a plaza such as the ones creating by Mies Van Der Rohe in front of his buildings shows two opposite strategies. The High Line provided direction and specific spaces used for certain activities, while Seagrams provided an open area with no direction of circulation. The High Line becomes a more linear plaza that winds through and above the streets. Other buildings are now connecting to the High Line. This affects many aspects of the buildings and their occupants, one of those spaces being affected is their lobbies. People can now enter on multiple levels of the building. The High Line is redefining public space in the urban context. It has more similarities with Michelangelo’s piazza because of the aspect of scale. The details created by Diller and Scofidio are very unique to this project. They created many benches, sidewalk paths, and green spaces that enrich the user’s experience tremendously. The images below show some of those smaller scale elements.
Another more recent project that has an influence on plaza design was that of Levi’s Plaza in San Francisco, California. It was designed by Lawrence Halprin in 1982. This plaza’s critique was based on a personal experience. The plaza was a little smaller in scale to the Seagram’s plaza. Its peak hours, as was a trend with most of the plazas looked at, were during lunch hours. This is a negative critique on these spaces because in a world of efficiency and not wasting things it should be important to utilize these spaces all the time. The most unique part of this plaza was the fountain. The fountain lay directly adjacent to the main wide circulation path through the center of the site. The fountain was broken down into many smaller pieces articulating a smaller scale to the plaza.

There were stones that could be walked on across water, and also steps to climb. The fountain became a playground, however the user groups were not just children. Workers traversed the steps to the top of the fountain to gain access to a more sought after sunny spot. It created a playful atmosphere within the plaza and gave the user unique control of their space. This was a successful portion of the plaza that hosted many lunch gatherings.

These lobby and plaza critiques were essential for comprehending how these spaces were successful or not, and what factors were important to that success or failure. Specifically knowing that the sun, time of day, amount of program, and type of circulation are all keys to creating a successful space for urban interaction was helpful for this thesis. However there are other factors that needed to be researched to further inform the general goals and platform for city designs.
Jan Gehl is a Danish architect and urban designer that wrote a book called *Cities for People* which analyzed the successes and failures of the cities we live in today. This piece of literature studies the city as a social melting pot that needs to be designed with certain goals in mind in order to thrive. Gehl’s first chapter pointed out different attributes of a city that should be focused on: safety, sustainability, health, etc. “It is equally urgent to strengthen the social function of city space as a meeting place that contributes toward the aims of social sustainability and an open and democratic society.”³ Gehl made a direct connection of the people to the city space which they occupy, and how that affects their social functions which allows for innovation and the spread of ideas.

Gehl’s analysis continued to progress into design rules for accomplishing the social functions discussed. He focused one of the sections of the book on how the building met the street. “Ground floor building design has a disproportionately large impact on the life and appeal of city space. Ground floors are what we see when we walk past buildings. It is also from the lower floors that people inside can follow what is going on outside, and vice versa.”⁴ This analysis described the location of the problem of interaction within urban spaces, as the connection of the street to the building. Gehl described successful design as using “soft edges.” This meant that transitions into spaces did not contrast so much with the urban fabric on the street and did not feel like passing through a barrier. The importance of pedestrians was addressed by Gehl as well. He sees the circulation of pedestrians within the space as a key to successful urban design.

These points of emphasis by Gehl articulated, are directly related to the ideas of this thesis: to make that space between the commute and the final destination a space designed to make people conscious of their surroundings, including the diverse cultures they could interact with or the local spaces that are specific to the city they are occupying.

⁴ Gehl, Jan. *Cities for People*. (99)
Richard Rogers presented a lecture called *Architecture and the Compact City* in the 2010 Utzon Lecture Series that described the connection buildings need to make with the urban fabric. He articulated what he understood as the best solution to city design being “The Compact City.” A compact city according to Roger’s was a well-connected city that encouraged walking and utilized public transit. It was also a socially inclusive one for both the poor and the rich. Another focus was the car and how it was responsible for a third of the carbon dioxide emissions in the world. The city was described by Rogers as a body that is made up of a cellular structure. The city had nodes connected through public transportation, and then once those nodes of public transportation existed the people “densified” around those nodes. These ideas are, however, not necessarily true in all cities and the urban fabric already existing within those cities will not change. Therefore the designs that Rogers showed in the lecture are specific to their site and could not work in all aspects. There is not one utopian city that could be adopted into any environment. This is a concept that is important to understand because the goal should not be to design a space that can exist anywhere. It should rather be about setting up rules that can create a space uniquely suited to enhance any environment. The difference is that setting up a set of rules will allow things like site forces to become unique to the project, and creating the same module everywhere will fail because of many reasons like user groups, and the climate.

Gehl and Rogers provided this thesis with important knowledge of the basic aspects of a city. It is essential to know that each city has a different goal in terms of their infrastructure and also that the history of the city will play a major role in defining its design. These factors are important to understand for this thesis in order to set out rules for designing in any urban scenario. These other precedents

---

researched shed light on public space in general more than on traditional lobby and plaza design, but definitely relate to the space that will be created in this thesis project.

The Leadenhall Building was designed by Richard Rogers and lies in the heart of London, finished midway through 2014. The structure is the tallest in London and will provide offices for many companies as well as a public space for London at the ground level. This building is significant because of its height in relation to other London towers as well as the structure being an all steel “megastructure,” with no concrete. The designer’s prominent history and respect in the architecture community also makes this a topic of conversation.

This precedent has many connections to the task given in this thesis. The ground floor lobby space is one of the more successful ones in skyscraper design in connecting to the urban fabric and human experience. The base is made up of a seven-story open air public space, in which there are design elements that relate to the human scale, that the above glass façade cannot articulate as well. Some of these elements include; escalators, planters, trees, canopies, and vents. The way that the escalators are exposed, allows for circulation to become a spectacle. Then the above floors taper back which allows the occupants in those offices to look down into the plaza. These sight connections make the different occupants more connected by being able to understand the different spaces they are working in.

The connection of the tower with the public transportation is not as emphasized as it could be. The elevators all reside on one side of the building, thus creating one main direction that everyone is headed. With the flow of people moving in one direction there is less interaction and more of a procession to one side of the site.
Weiss and Manfredi is an architectural firm located in New York City who focus their design efforts through the horizon line. They see the culmination of the building being most important when it connects with the ground. Their Olympic Sculpture Park in Seattle, Washington, was finished in 2007 and was built as an art museum and park. The faceted design travels over train tracks, highway, and steep topography. Weiss and Manfredi stated in their book *Surface/Subsurface*:

“...The design, a continuous constructed landscape for art, transforms the city’s connection to the water by rising over the existing infrastructure to reconnect the urban core to a revitalized waterfront. The park unfolds as a continuous Z-shaped landscape that wanders from the city to the bay, alternately revealing and concealing the train and roadways below. This hybrid landform provides a new pedestrian infrastructure layered over the existing site with a system of mechanically stabilized earth..."
and capitalizes on the forty-foot grade change from the top of the hill to the water’s edge.”

Image 9: Photo showing an overall view of the Olympic Sculpture Park. (http://www.weissmanfredi.com/project/seattle-art-museum-olympic-sculpture-park)

The directionality of the paths guides viewers to different art pieces. There is an understood path to be taken in order to get from point A to point B. However that path is filled with an abundance of options for leisure. There are seating options, grass locations, and art pieces along the way. These options give the user the opportunity to wander at their own pace and potentially gather in smaller groups, which may spur interaction with others. The program of an art museum is a possible connection that users might have with one another, encouraging interaction.

The infrastructure of this precedent was very intense. The architects were dealing with trains, cars, and pedestrians all on a site that has a 40 foot change in elevation. All these roads and railways were boundaries that the architects alleviated through elevated circulation paths. This created a separation between the speeds of pedestrians, and the speeds of cars or trains. Allowing the pedestrian

---

to travel above the cars and trains, also causes these vehicles to become a spectacle traveling underneath them.

This project was also successful in creating flex spaces like the one in the image on the right where a user has different opportunities to interact with their surroundings. This space has a direction and focuses the users attention towards another sculpture however there are opportunities to travel through the space, and also stop and enjoy the sights. This is all done on the same plane.

Reiser + Umemoto was another firm whose projects aided this research of the public spaces being analyzed. Their office is in San Francisco, California, and has won several competitions in Taipei recently that brought them a lot of attention. For this thesis the Port Terminal in Taipei was a significant precedent critiqued.

This design, similar to Weiss and Manfredi’s Sculpture Park, deals with an underpass of cars, as seen in the image below. Above the cars Reiser and Umemoto designed a pedestrian walkway that was enclosed. Another significant aspect of this enclosed circulation path was that the structural elements
were exposed. The large cross braces can be seen traveling along the path. This created a spectacle and a sense of awe for the massive elements of structure. Reiser and Umemoto make it very apparent that there is a boundary between the pedestrians and cars. In some cases boundaries can be an advantage.

Along with the boundaries, this design focuses on creating a conscious awareness of the entire site. There are views such as image on the right all around this terminal that allow the occupants to see into every aspect of the bustling site. They utilize peer pressure and merely seeing someone else performing a certain task may cause someone else to partake, or be intrigued. These design strategies are very similar to Richard Rogers and his goals of causing the act of “people watching.”

REX- Architecture firm is based in New York City and performed a remodeling job on the offices for Activision Blizzard in 2013. Their design scheme connected four levels of offices and was located in the center of an existing building. They created a layout that included seating, break space, and an auditorium. The structural members were shaped in an “N” pattern and gave a basis for the form. Then the floors lowered or raised to connect with the existing offices. These ideas provide a unique vision for gathering spaces, combining different levels of space using circulation and seating. These are design schemes that can influence the spaces provided by the project of this thesis.
Peter Eisenman, a famous architect once known for his involvement with deconstruction, has designed his cultural center project in Galicia to do an excellent job of blurring the boundary a building has with the ground. Eisenman not only took advantage of just a 2-dimensional sidewalk plane, but also created less of a boundary through running the paved surface up walls and onto roofs of the project. As seen in the image below, the “roof” of the building actually becomes an extension of the sidewalk. People began to wander up the side of it and interact at different levels. This is an excellent example of utilizing ground patterns to cause directionality and shows a productive ambiguity between normally discrete elements such as plaza, ramp, roof, etc. It also relates back to the idea of scale that Michelangelo began to implement through those ground patterns.

![Image 13: Peter Eisenman's Galicia exterior view](image)

The final precedent for this thesis was also done by Peter Eisenman and directly relates to personal experience. The building is the Aronoff Center that is the home of the architecture department at the University of Cincinnati. Eisenman creates a complex circulation system and connects two other campus buildings at the same time. As a student in this building for three years it has become a home. Remembering the first few attempts to get to class and meetings and seeing how difficult it was to know
the fastest route was a struggle. However over time you learn the fastest route and then it becomes a source of pride. The knowledgeable user path and the tourist path are very different in most cases. One is about efficiency while the other is based mainly on interest. The interaction that goes on throughout these complex circulation paths is very abundant, and at the most basic level, creates curiosity from every user. This building created a conscious effort to move throughout space that caused an emotion. That is a successful space.

Site

The project site is in one of the world’s largest and most complex urban environments: New York City. Toward the south end of Manhattan there is an already stimulating park and plaza called Union Square, which brings together a diverse group of people at all times of the day. It hosts a subway stop that is the third busiest in New York. Two major academic institutions lie a few blocks to the south, Cooper Union and New York University. Multiple hotels sit on the outskirts of the park generating tourism. In addition, with the many retail shops and restaurants for the offices that rise above the square, this area becomes one of New York’s melting pots. The site for the project is on the south east side of Union Square, as seen in Image 14.
Image 14: Site Plan showing site outline and subway paths
New York City experiences a moderate continental climate. The annual average temperature is 55 degrees Fahrenheit. Also the temperature rarely goes over 90 degrees in the summer or below 0 degrees in the winter. The precipitation average is 46 inches a year. The fact that there is a colder winter will affect the use of Union Square and therefore shelter will need to be a factor when looking at design proposals for the site.

The infrastructure of this area already consists of multiple major intersections. Broadway diagonally cuts through the north west end of Union Square with famous sites such as Times Square and the Flatiron Building a mere few blocks away. There are multiple bus routes that drop workers, tourists, and residents off around the park. Then the subway passes below ground, utilizing three major lines: Broadway, Canarsie, and Lexington Avenue.

It is important to first understand what the park of Union Square already brings to this area of the city. At a base level the park fills up for lunch hour for the surrounding offices. This attracts street vendors, there are many apartments surrounding the square, as well, which causes people to wander the park at all times during the day, using it to walk dogs, read, relax, etc. With this much activity along with tourists from the hotels, there is an increase in street performers and retail. Then add the annual activities that Union Square organizes such as concerts, farmer’s markets, holiday markets, and other performances, and this is clearly a bustling area.

With all the activities described above, understanding the user groups was essential to knowing who would use this site and when. In order for this project to be successful the site needed to be utilized at as many times of the day as possible.

Another point to take advantage of the site was to understand how other buildings in this area confronted the street. This could then be compared with some of the other precedents looked at. There are series of images below that give a spectrum of different methods used in Union Square.
The first method is the least successful. This brick office building seemed to have a standard relationship with the sidewalk and the street in terms of distances. The sidewalk was a little larger and opened up with street vendors at points, however the building did not do too much to draw people in or out of the space. As most buildings in this area are prone to do, this building has retail on the bottom floor with offices above. The shapes of the retail are unique to the other geometries of the façade, using a triangular arch. This arch was a very two-dimensional aspect of the façade and while it opens up for entrances it does not draw too much attention. The spaces look darker and actually less appealing with
this method. There are distinct boundaries and sections of space seen: building, sidewalk, and street. All of these boundaries are also in close proximity to one another, which was not a successful strategy.

The next building was another office that has a café at its ground floor. The café takes advantage of the sidewalk and places seating outside. This was a step in the right direction to address the pedestrians in a more assertive manner. However, the office entrance can be seen as a distinctly different path of circulation and these two functions therefore seem to be very disconnected. So the choice of program helped in this case but circulation still largely failed to create an enriched environment.

The third image related back to ideologies that Michelangelo integrated into his design. These two buildings were designed with ornamentation that can relate to the human scale. Using columns that impede on the sidewalk and draw attention to themselves was a successful aspect of that facade. Also the other building used a subtractive process to their façade that draws the user into the space because of interest or curiosity. All of these elements of the façade are then detailed using natural curvilinear ornamentation, which gave the space a more inviting character.

The final image shows the most successful area around Union Square and it was because of its aggressive maneuvers. The sidewalk was no longer just where the curb stopped, but instead spilled into the street and used art to enrich a public space. The planters and sculpture make this spot a destination for others such as tourists, and locals, and it even drew street vendors because of the popularity. Then adding elements such as seating provided a reason to stay and enjoy the space. These are the kinds of elements that need to be added to spaces in order to cause people to gather and enjoy the diverse cultures around them.
Proposition

The project portion of this thesis will take the analysis from precedents in practice and theory and implement them into the Union Square site in New York City, creating a plethora of opportunities for people to consciously interact with their surroundings every day. The project will feed off of the already bustling area of Union Square. On the site will exist many program aspects to complement the surroundings and provide circulation options for every user group.

The program for the project includes five different types of space; transit, food, retail, public spectacle, and public interaction. Then within those five groups there are catalysts and sponges, reflected in the prior research. Beginning with transit, the catalyst of the group would be the transportation hub for subway lines, while the sponges would be bus stops, taxi stands, and elevator/escalators. Then in food the major catalyst is the restaurant that is seen as a four star sit-down restaurant. The other catalyst would be cafés that reside at multiple points on the site. These food destinations will attract people with no prior knowledge of the site, while the street vendors become sponges from other program aspects. The retail group includes mainly sponges that thrive with the dense population such as shops/boutiques, service shops, and markets (farmers, holiday). The public spectacles are catalysts with stages and water elements including season uses such as ice skating. Finally the public interaction group allows for the people occupying the spaces to get involved. Rock climbing walls, lounge spaces, human-sized chess boards, and smaller fountains will become sponges for these other catalysts described. Also above this vibrant scene will exist an office tower that will feed more people throughout the site. This tower will provide a destination for some of the occupants of the spaces below, and will be formed based on certain forces from elements of the programs below.
These program elements will provide this area with a thriving environment throughout the day and night. This site will contribute to the already popular Union Square becoming a major destination in which conscious interaction is inevitable.

Methodology

The first stage in this project came from analysis of the site and implementing those forces into program location. Beginning with the catalysts, the programs were placed on the site. Locating them based on site forces such as subway platform locations, university direction from the site will accentuate their use. Certain programs relate to more specific user groups and thus their location on the site is heavily influenced by those forces. Those locations are not seen on one plane, but they have certain depths that make each focal point part of a 3-D system of nodes. The diagram below shows each catalyst and their locations on the site.

Through precedent research a form of triangular pieces was decided as an advantageous layout for the site. It would allow for flexibility and unique forms to be created on the site. With the catalyst nodes already in place, and using a two dimensional pattern the form began to evolve. The triangular
shapes rose and fell to align with the nodes. Then the sponges of the program were dispersed based on accessibility, and proximity to the catalyst.

With all the elements of program in place, the next step was to connect them through circulation. So this included adding pathways, bridges, etc. to connect the elements of program as well as connections with the surroundings site elements. This process began to break down the scale of the site to a human one. The program components have been set on the site with certain heights taken in account, for example the subway station sits 15 feet below the street level to accommodate the subway. The initial goal of the circulation is to connect the major points of the site and for everyone to be able to access them easily. Therefore the primary circulation is made up of ramps that are no more than a 1:20 foot ratio in order to be deemed ADA accessible. These ramps traverse across the site to allow for ample access to the subway station and street. Giving access from the north to the south end of the site and going from the cafes on the street to the subway these paths give a base point for the rest of the design and program. The functional attractors and primary circulation are now in place, thus the next step is to place the cores for the towers above. This process can be seen in the diagrams in Image 20. There are two separate towers one on the north end of the site and the other on the south east corner. These towers were placed based on the sunlight access for the spaces below, and the height of the surrounding buildings. The form of them reflects the triangular design superimposed on the site in the beginning steps of design. Separating the cores and allowing multiple points of access to the towers on the site create access to them more efficient and accommodates multiple user groups. Now with the towers and cores in place the site is set for all the primary functions. Now the site can be analyzed based on what space has not been utilized. This “leftover” space will become the opportunities for the sponge aspects of the program. They become types of flex space that will adapt to their users and programs at the time. The spaces can include food trucks, grass areas, and seating. At this point the only circulation designed has been the primary circulation. Therefore the design looks to secondary
circulation and connecting everything on the site not only performance wise, but visually by exposing circulation as its next step. The secondary circulation begins to connect the user to other elements of program that may interest them as they traverse their way to their final destination. The secondary paths of circulation consist of ramps, stairs, and elevators. The final step in the process correlates to the aspect within each program including structure, trees, chairs, and surface patterns. In another attempt to cause a conscious understanding of the spaces we interact within this final step will take influence from the structural grid already in place by the subway station below Union Square. The grid is superimposed on the site and gives coordinates for where those columns, trees, and chairs will reside.

*Image 20: Diagrams of Methodology*
Each element of this methodology will coincide with others in order to accomplish the thesis goals to enrich the users experience and knowledge of the spaces around them. During all of these processes multiple factors will be considered because of their importance to these types of space. These factors include sun patterns, site forces, user groups, and time of day. Along with those factors the breakdown of scale is essential to relate to the human. As seen through Michelangelo and Diller + Scofidio’s work scale can articulate a space in a unique way. Utilizing a scale that is directed toward the human body will cause more interest and interaction. So with the larger move described above it is important to break down those spaces using material patterns, stairs, seating, and structural elements.

**Design Goals**

The methodology of the design showed the process in which this space will be formed, however the motivations behind those moves came from the research done with lobbies and plazas. There are multiple goals that this project looked to accomplish in order to be deemed successful within the criteria concluded from the research. These goals included: exposing circulation, revealing transportation systems through sight and sound, material selection, blurring street boundaries, and connecting parks.

There are multiple instances in which stairs, ramps, or elevators are exposed either to the elements or merely covered by glass in order to draw attention. This attention gained will allow people to understand where they and others are going, and motivate them to use stairs because of the spectacle it has become on the site. There could even be opportunities to have performances or display objects in these circulation corridors, similar to how Bernard Tschumi designed the performance hall at Columbia University. The front of the building was a glass façade that revealed a ramp system that is not only circulation, but a performance space. This one space began to effect other spaces within close
proximity through its program. That was a goal for this thesis for certain spaces to activate others around it.

Mass transit was a particular point of emphasis especially because of its prominence in New York City. However New York’s most famous means of transportation is the subway that takes place underground. So in order to draw attention to it the site needed to dig into the ground. Creating large paths that cut through the site allowed for access to the occupants, but also utilizing glass can draw attention from above. While all these strategies are external views looking in, there was also a strategy used for the subway to spread out into the site. This took the grid of structural columns in the subway and created new extensions of it on the site. This began to blur the boundary of the subway platform with the site. So in certain instances the users wander through a series of columns such as the image below, but are still within the public space of the site, thus creating a curiosity to the subway system that is a major artery of New York City.

Patterns on materials are aspects of design that may seem miniscule in effectiveness, however are vastly underrated. As seen in the Eisenman’s Galicia project, there can be a lot of interesting compilations created. Eisenman caused the user to consciously see the building’s mass rise on the same surface that they were walking on. The user began to experience the façade of a building not as a perpendicular plane that they passed through, rather a surface they traversed over. The patterns of material can aid the blurring of boundaries goal in this project. Especially allowing them to be placed on not just horizontal surfaces, making the user experience them in a different way. This different experience will give the user a conscious understanding of the power that mere lines can have on a site. These patterns can provide knowledge such as directionality to the occupants.

One of the major design goals that was specific with this project was the already existing park across the street. Union Square gives this area of the city a distinct feeling, and this project will feed off
of that park and utilize its programs to connect with the existing square’s programs. Not only will the project physically connect the user to the park (bridge/pedestrian walkways), but it will also connect through programs that will accentuate events such as concerts and markets in Union Square.

It is important for these interstitial spaces being created to be connected with their surroundings and take advantage of the already successful aspects of the area. Thus the city will become connected and diverse groups will be more likely to interact with a conscious understanding of their surroundings. Lobby spaces tend to funnel people into elevator cores secluded from the public and subconsciously disperse the occupants into their destination with no understanding of the interstitial space. Plazas, on the other hand tend to provide open environments for people to interact within but in these spaces there is no direction, or necessarily purpose (program) and people tend to interact with the few people they are familiar with. Using spaces that balance and extend these two extreme conditions will allow for more interaction and more effectively connect the urban fabric at street level with the built environments above.
Bibliography


