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hereby submit this work as part of the requirements for the degree of:

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Prolonging Architectural Design: How Can Image Be Manipulated to Extend Vitality?

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Prolonging Architectural Design:

How Can Image Be Manipulated to Extend Vitality?

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ABSTRACT

The term image is complex – full of personal interpretation and developed meaning. It is a loaded term; not necessarily a negative - it can be a positive, and at the very least surely should not be ignored. However, image in architecture can detract from the ongoing significance of a building. If "the goal of architecture is to help us see in new ways," a building must resist an image association that is shallow and quickly grasped.

There must be aspects of image that can make us want to experience a building again as architecture after our initial understanding and introduction to that building rather than just a destination. What makes us think of a building as architecture after we have a general understanding of that building? Can certain aspects of image be exploited to extend image and to create an ongoing architectural dialogue in a building?

(Img. 1)

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THESIS ESSAY: INTRODUCTION

Architectural imagery construes meaning and captures the built form in manners not necessarily conceptualized in design, which can be a holistic approach to spaces and place; one that, through iteration and development, strives to solve issues of program, form, and content (amongst others). The success of such a pursuit is one that is constantly debatable. However, the base of any supportive or unsupportive critique is not a constant. Depending upon which impressions of a space the criticizer owns, any range of readings of the same context can be developed and considered at least moderately rational. An example of a foundation that would impart an impression distinct from the assumed three-dimensional norm is one given through the interpretation of two-dimensional imagery – a photograph for instance. Because of the intrinsic nature of photography and its obvious and clear relation to image, this thesis will explore issues of image derived from photographs as an example and case study to highlight and explain issues inherent to image (to be clear, this is not solely an exploration of photography's impact on architecture).

There are many ways to view space. Each set of eyes has its own manner to do so. (Img. 2)

The term image is complex – full of personal interpretation and developed meaning. It is a loaded term; not necessarily a negative - it can be a positive, and at the very least surely should not be ignored. However, image in architecture can detract from the ongoing significance of a building. If "the goal of architecture is to help us see in new ways,"[1] a building must resist an image association that is shallow and quickly

1 Van Berkel, Ben and Caroline Bos. "After Image" Pg. 2

grasped. This thesis will explore aspects of image which can be exploited or manipulated to create a deeper image. There must be aspects of image that can make us want to experience a building again as architecture after our initial understanding and introduction to that building rather than just a destination. What makes us think of a building as architecture after we have a general understanding of that building? Can certain aspects of image be exploited to extend image and to create an ongoing architectural dialogue in a building?

To begin the discussion of image, an example will be made of photography that relates directly to aspects of image. It is a medium that, by definition, creates disjunction in the viewer's comprehension processes. Not only is the viewer of the photograph removed from the physical context of that which they are viewing, but also the knowledge gained and its source differs from what would be imparted by an actual visit to the subject. According to Mitchell Schwarzer, Chair of Visual Studies at California College of the Arts, "the photographic appropriation of reality amounts to a restructuring of reality into something different, added, or lost."[2] Essentially, photography removes the viewer from the object captured and hides valuable information from that same viewer (creating a sort of 3rd person view), while at the same time placing emphasis on other similar, yet different information. What photography does to reality relates directly to society's current methods of perception. It places values on

Early on in the discourse concerning architecture and photography, Kenneth Frampton explored exoloitations possible in the mechanical medium of the photograph. (Img. 3)

2 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media Pg. 165

information sets that would not necessarily be worth such value. It is a readily transportable medium, and therefore is associable with large of amounts of varying information. The typical citizen is confronted with multitudes of inputs that he must process and realize in small amounts of time. How he processes this information has a direct effect on his understanding of architecture's stated meaning. Therefore, how he perceives drives his reception of the world around him. What is difficult here is that no two people will perceive in the same way. The process of perception is too complex to be uniform from person to person; it is a combination of not only what is presented, but also how it is presented, how the viewer meets what is presented, and what the viewer associates with what is presented. Thus, when applied to architecture, perception is variably complex and difficult to define. It is a mechanism through which image is created, a mechanism that must be fully explored to understand architectural image and its aspects. Perception, however, does not define image; it is a mechanism that leads to image.

Perceptions of architecture are based on varying levels of understanding. It is possible to learn of or experience a building in many ways. Thus, it is possible for different people to understand, or perceive, in different manners. Buildings, due to their large and obvious impact in our landscape, can focus peoples' attentions and organize understandings of their surroundings. However, the basis for understanding varies from viewer to viewer. Perception is based in the manner/actions

Shown here is a rough illustration of the development of a perception. Many sources join to form a perception, which in turn helps form an image association. (Img. 4)

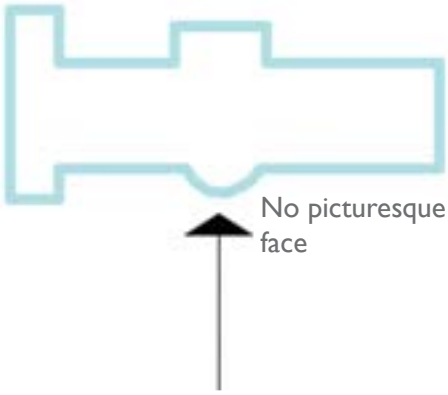
undertaken while created.[3] In this way, perception is grounded not only in our reactions and knowledge (that which is had prior to the action of perceiving), but also in the manner upon which we view a thing. For instance, a person who views a building on a regular basis in a manner which is removed from the building (while driving or walking) will understand the building to be something different than a person who uses the building on a daily basis; and that person will understand the building differently than the person who only views the building from afar (via imagery and the media). Thus, viewers of buildings create many different, personal realities that, collectively, can define a building.

What is formed by perception, for the purposes of this thesis, will be referred to as image. Image, loosely defined in regards to perception, is a mental representation. It is that which is created from the processes of perceiving that a user of space defines that space by. Objects of all sorts have images associated with them – as do buildings. It is a personal definition; a personal conclusion. Generally though, image is too complex to define. It is composed of realities and associations that differ from person to person. Each object or person has an image it projects, and that image is in turn re-projected by each unique viewer of that object or person. Image can add to an object's vitality. It can include associations that were never intended to be

Complex images: shown here, the buildings are combinations of individualtiy, commonality, and randomneity. (Img. 5)

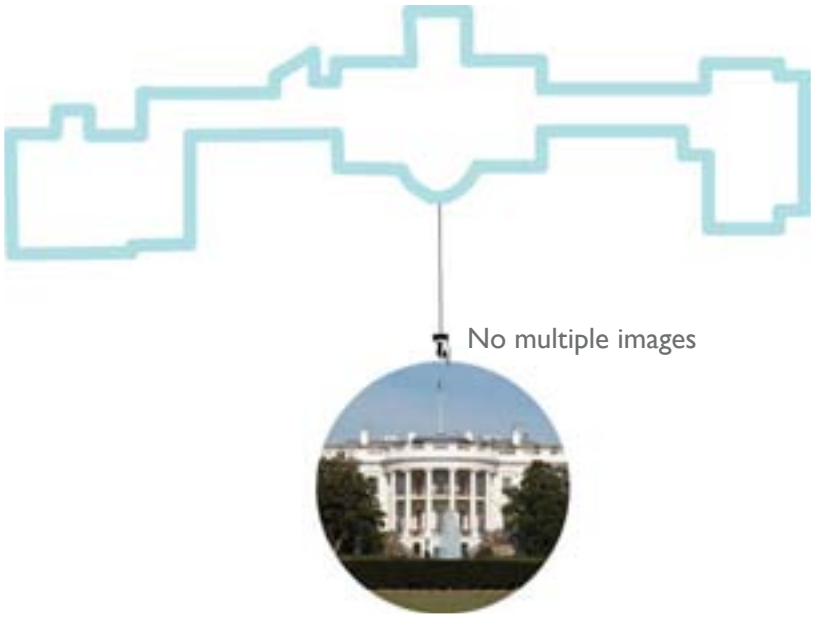
3 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media. Pg. 165

linked to that object (an advertisement, for example)[4]. However, this ability to link to connections also can limit an object's vitality. Image creation can take away from the experience of a building and reduce it to flat information. As stated above, the term image is complex – full of personal interpretation and developed meaning. It is not a negative, necessarily. It can be a positive, and surely should not be ignored. However, image in architecture can detract from the ongoing significance of a building. For instance, photography can reduce it to flat projections – creating a flat face for a building. This is aided by buildings with iconic faces. Buildings have the ability to be more than a flat face. They can be experiential. They can be difficult to fully comprehend. Buildings set firmly in a specific discourse, create flat meaning and project similar images. Further, if a building is sign pervasive (overly expository) it is prescriptive. One can be told what the architecture and therefore what the image is to be. Overly pervasive signs detract from individual thought and lessen the significance of the image of a building. Finally, newness is an image detractor. The new construction symbolizes vibrancy and success and this is a positive thing. However, newness is fleeting and quickly is replaced with not old, but average. There seems to only be states of newness and not-newness. Once a building enters the not-newness stage of its lifespan, it no longer is able to attract architectural attention as it once was able to do. This is where image is again a shortening element. If "the goal

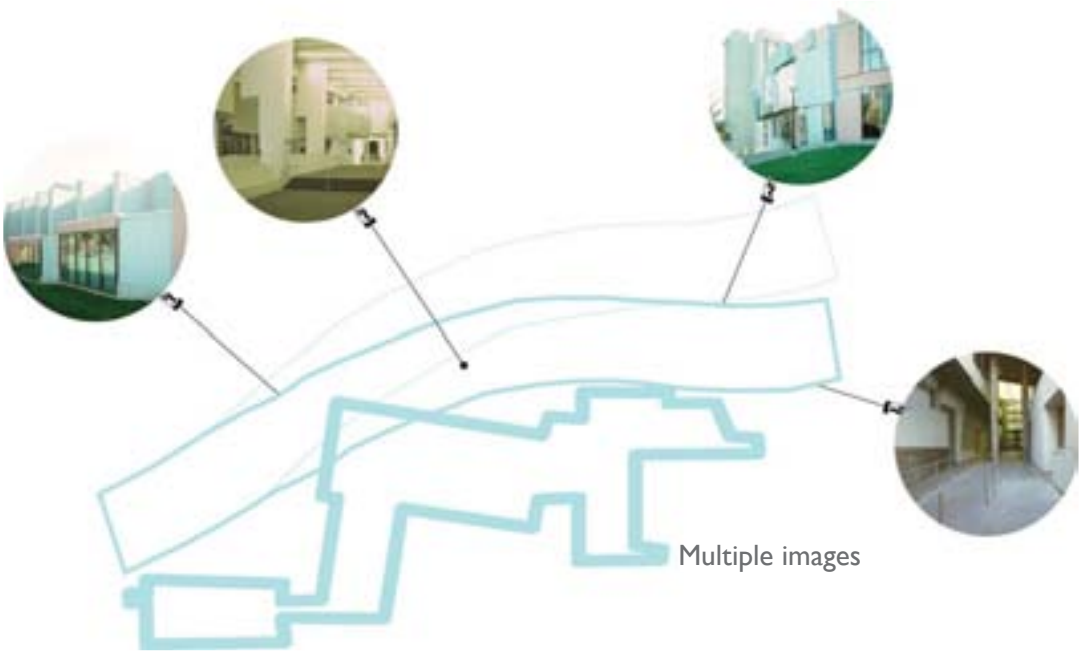


Non-experiential with an iconic face (the White House as an example). (Img. 6)

4 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media. Pg. 168



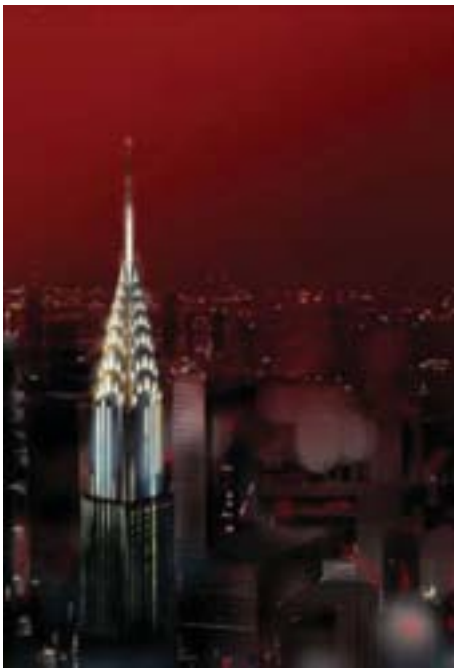
"It's architecture reduced to two dimensions and one sense, the visual...this is architecture to look at."
- Robert Campbell (Img. 7)



Designs should include mutlple imageries. They should enable their visitors to recall them with more than one strong visual in mind. (Img. 8)

of architecture is to help us see in new ways,"[5] a building must resist an image association that is shallow and quickly grasped. There must be parts of image which can be exploited to create a deeper image.

If we define certain aspects of image, as it is a complex idea, we should be able to find ways to manipulate image creation. If the process of perception ends in image creation, and therefore an end to perceiving a building, is there a way to prolong the mechanisms used to create image? A building's relevance is shortened for each user by his or her ability to create an image. When the building is discovered, or understood to a certain degree, there is little left for a user to discover on an architectural level – thus shortening the building's relevance. If we are to "see in new ways,"[6] a shortening of relevance does not accomplish this. Instead, techniques used to extend the image must be employed. If this is possible, new ways of seeing would then need to be employed. Image would not be able to dominate a building; it would simply be an extended process that would place an emphasis on experience of space over informational understandings. The goal of extending image is to instill a desire to return to buildings by users not simply as buildings, but as architecture, similar to their initial visit to the space.



This image highlights the high profile nature of the Chrysler Building in New York City. It is well known and understood and therefore has a fairly generic image and meaning. (Img. 9)

The following will be an exploration into image extension. Several key issues of image will be discussed, ranging from

5 Van Berkel, Ben and Caroline Bos. "After Image" Pg. 2
6 Van Berkel, Ben and Caroline Bos. "After Image" Pg. 6

restructured reality to style. These will be used as background for the following section about image extension itself. Here this document will discuss architecture as a stage, as more than skin deep, and as non-iconographic. The final section of the document will attempt to place these issues concerning image extension into methods for design.

Image is a creation made of many smaller aspects that can also be independent of each other. Several of these aspects are particularly valuable to the designer when image extension is desired. In particular, these aspects seem to be the strongest portions of image that serve to shorten the relevance of a building. Understanding how image detracts from the vitality of a building is the first step in finding a means to extend the building's image.

One of the largest contributors to image creation is architectural photography. Photography is a tool for quickly dispensing information and for quickly describing information. It is a medium which removes the need to experience space in order to understand space. "Instead of experiencing our being in the world, we behold it from outside as spectators of images…"[7] Viewings of photographs often suffice for first person understandings of the built environment. This is problematic. When photographs become the main conveyance of understanding, understanding itself becomes easily manipulable; for example, the author of a photograph can place his subject in many lights and control, to a certain degree, the image presented by his work. Also, photographs can seemingly remove an object from its actual location (and therefore its actual context) and render location unnecessary.[8] The net effect of photography is to "stress information at the expense of experience."[9] This

There are many sources of architectural imagery; Architectural Record is an example of one source. (Img. 10)

7 Campbell, Robert. "Experiencing Architecture With Seven Senses, Not One." 2007.
8 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media Pg. 16
9 Frampton, Kenneth. "A Note on Photography and Its Influence on

creates a sort of image, in the sense discussed earlier, that is readily discussable – a restructured reality. The negative effect here is similar to that discussed by Heidegger. The overwhelming prevalence of media creates information gathering and comparison judgments all too readily available and accessible. The "distancelessness"[10] felt by the presence of media was one that Heidegger feared would restructure our value judgments – would help us create a restructured reality.

Photography is a tool widely used to publicize and market a firm's work. It is a great tool as first person experience of every building is not practical, if not impossible. However, it can detract from the completed work which it captures. Photography places emphasis on information, and in the case of architectural photography, it can place emphasis on the completion of a work, not its life in progress. In other words, architectural photography captures the building once and does not explore temporal issues – the building is a snapshot in time.[11] In this manner, photography reduces a project's impact. It removes the viewer from the actual building and allows him or her to make associations that do not necessarily belong to the building (for instance, with other architecture seen in pictures or in commercial marketing). By removing the building from its immediate context, photography allows buildings to be compared with other similar buildings through time and distance. These

Architectural photography. (Img. 11 & 12)

Architecture." Pg. 40

10 Heidegger, Martin. "The Thing." 1954

11 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media Pg. 167

associations are not direct but can help define a building's image.

Another manner in which photography can reduce a project's actual impact is through time related understandings. It allows for an unnatural connection between things now and things then. It allows for a building to be compared (favorably or unfavorably) to what has come before as a continuation of a discourse that it may or may not belong to. The main manner in which architectural photography promotes imagery which detracts from the lifespan of a building's architecture is by limiting views of buildings to the views that the designer and/or photographer desire. The power to define which spaces and aspects of a building are important is removed, in a sense, from the user. Architecture, in this manner, is a defined medium. It misses out on a secondary level of experience (all the senses other than simply sight) that can make a building more than just ordinary. Some of the real joy and intrigue of a building is captured not in sight, but in other senses. However, as noted by Robert Campbell, a well respected and well know architecture critic, much new architecture is designed for only one sense (sight).[12] When buildings are designed primarily for exterior spatial effects, the net affect is a lessening of the importance of spatial experience. Spatial experience relies on more than just sight; it relies also on the other senses. These receptions can add to the spatial experience of a building and strengthen that buildings vitality – thereby making its image deeper than a simply

12 Campbell, Robert. "Experiencing Architecture With Seven Senses, Not One." 2007.

visual image.

What is interesting though about pictures is that while they may be manipulated by their author, they only manage to capture a small moment in time. This allows for interpretation by the viewer that is not entirely supported by the actual space captured. It can become a sort of third person view, where the viewer can almost assume to be in and know the space. This is problematic as well.

Third person views create a need for assumption. Viewers must gather all information presented photographically and create a semi-reality based upon this and their own ideas. This assumption process, which might lead to correct presuppositions, is one which has the ability to take from the unique qualities of the space captured. Herein lays an issue with contemporary architecture and its relationship to photography. If captivating vistas and forms are all that is desired from design, then photographic imagery is therefore a beneficial tool to be utilized. For instance, understandings of a massive and well known project such as the Sears Tower lead to generalizations of the people that occupy and frequent its spaces. If one was to infer that the tower represents a place of corporate power and decorum, then one would most likely also assume that any user of the space must follow these representations in their actions and dress, or both. In this manner, observers of architecture develop their own notions of user behavior and personality. Applied notions take power from the user of space and hand it

The Salk Institute's central water feature is aligned with the sun so that at specific times of the year the sun's light makes the water glow. Photography can capture this or not, but it can never express both possibilities. (Img. 13)

Sears Tower. (Img. 14)

to second hand viewers.

Photography, due to its inherent nature allows its viewers to perceive what they desire. Schwarzer describes the viewing and comprehending of images as such:

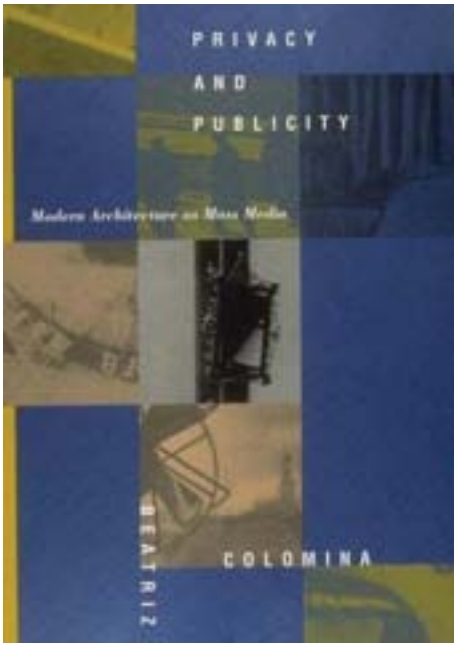
> "Because it is two-dimensional, photography can convey extension and duration only by making viewers perceive space and time. Caught up in an image, we let our imaginations wander; we connect the image with the intentions of the photographer… Photographs require us to imagine the life of a building in a greater cultural dimension. Far from limiting our understanding to the precise objects that have been captured on film, the fixity of the art stimulates us to find meanings beyond the frame."[13]

While this may be true (searching for meanings beyond the frame), we usually look beyond the actual project for loose associations to help us understand the project in an unnatural light. We can define work based on our own connections. This expedition of meaning shortens the vitality of the image of a building. Once it is understood relative to another building, we no longer have a need to research or experience a building. Photography is a limiting agent for image.

Beatriz Colomina writes on the issues surrounding

13 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media. Pg. 165

power in regards to the photograph and how the viewer of an image creates their own personal understanding of the image. Colomina is an internationally renowned architectural historian and theorist who has written extensively on questions of architecture and media. Currently she is a professor at Princeton University where she continues her research and her writing. Her insights into the relationship between media and architecture, while not necessarily covering the exact topic as is discussed here, will form a major part of the underlying research for this project. Colomina's research into culture modified by media form an interesting connection to privacy issues relating to occupants of space. Her book Privacy and Publicity: Modern Architecture as Mass Media is one of the major texts to be examined in the course of this thesis. It is a description of the processes that architecture must follow to be realized as modern, or contemporary. The book employs a comparison and a historical case study centering on Le Corbusier and Adolf Loos as the two main subjects. Both architects were concerned with the representation of their work and the implications of this representation. The study leads to a discussion of the place contemporary architecture has, when depicted in media, in regards to culture and our relationships with others.



Privacy and Publicity by Beatriz Colomina. (Img. 15)

One passage from this text describes the relationship between photography, manipulation, and general comprehension; it discusses some of the exploits and thoughts of Le Corbusier. He was keenly interested in architecture as a conceptual

language; to the extent that he would carefully monitor as much published material about his work as possible (he even kept a stockpile of sketches made from photographs others had taken of his work).[14] Le Corbusier was very aware of the presented reality of the photograph and how it could detract from the conceptual statement his designs, especially his early ones, attempted to portray.

> "For Le Corbusier the relationship of the architectural work to a specific site and its material realization are secondary questions; that for him architecture is a conceptual matter to be resolved in the purity of the realm of ideas, that when architecture is built it gets mixed with the world of phenomena and necessarily loses its purity."[15]

Photography allows for architectural work to reenter the world of conceptualization through mechanisms, which serve only to deceive or hide. Le Corbusier routinely manipulated images to better serve the rendered scene's concept(s).[16] He desired an architectural affect - he was much more aloof towards the occupants of the spaces he designed. In his eyes, the function of photography was "not to reflect, in a mirror image, architecture…"[17] He saw photography as a means of idea

Le Corbusier surely knew about Sigmund Freud's studies of psychanalysis. The two shared a mutual interest in what could be shared without using the spoken voice. Le Corbusier used these ideas in his architectural photography to express the ideals he wanted his work to express. (Img. 16)

14 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media.. Pg. 8
15 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media.. Pg. 64
16 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media.. Pg. 64
17 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as

portrayal; as a means to express his intentions. Photography therefore did not exist in his eyes as a means to inform in a realistic manner. It was a tool that could hide context and create ideal situations. This use of photography allowed Le Corbusier to control the messages spread through images of his own work. However, this also allowed him to control, through media culture and assumption, the lifestyles of his space's occupants to a certain degree. He did not necessarily devote himself to dictation of lifestyles – it was simply an outcome of his photographic cognizance. In other words, Le Corbusier was able to strip privacy from the users of his spaces by manipulating visual depictions of their lifestyles and belongings. It can be inferred from images that Le Corbusier's occupants' behavior patterns must be in line with his architectural and social dogma. Once again, we see manipulation. Buildings should be able to retain their viewers without artificial help.

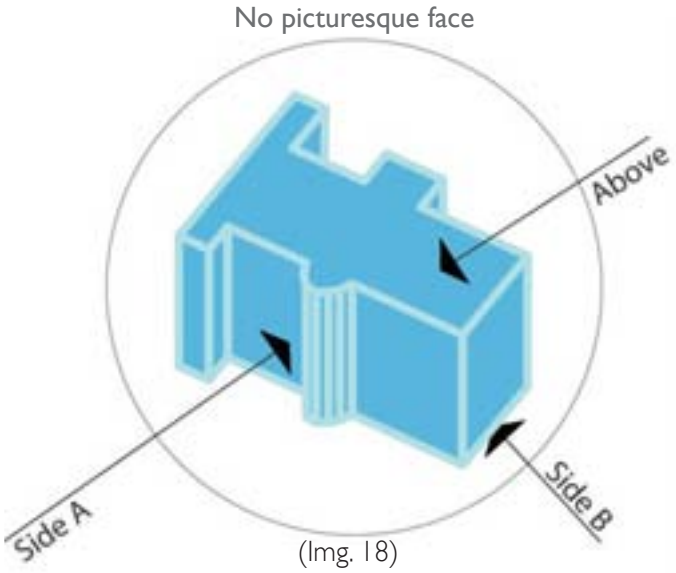
Photography also helped spur the picturesque in architecture. It enabled designers to design with a flat image in mind. Photography can only capture so much of a space. Buildings with a flat face are rendered well in this heavily used medium.[18] Buildings that are static and not dynamic can be rendered quite well in photography. Architecture should be more than a flat face; it should have more than an interior face and exterior face. If a building can successfully remove itself from the arena of perceived two-dimensions, it can create a space that is

Multiple Images

Buildings that are static and not dynamic can be rendered quite well in photography. However, buildings that are complex are difficult to display in flat photography. (Img. 17)

Mass Media.. Pg. 67

18 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media. Pg. 165

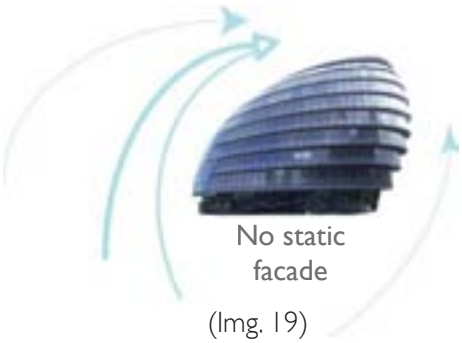


(Img. 18)

both occupiable and memorable.

This leads to a brief discussion of place. The key issues here will be tackled with support from the text Place and Placelessness by Edward Relph; a book which defines what places are and what makes place.[19] Relph is a geographer by title, but the implications of his studies and writing have had a significant impact on the fields of urban planning, architecture, and philosophy; as well as geography.

According to Relph, the factors that create a "place" out of space tend to revolve around a conscious attachment to a space by the user. For example, returning to and from a space reinforces it as a place. Also, residing in a space for extended periods of time creates stronger feelings of place. Possibly one of the strongest attachments to a place can be achieved through time and energy devoted to personalizing the space. This personalization does not have to imply physical alteration



(Img. 19)

19 Relph, Edward. 1976. Place and Placelessness. London: Pion Limited.

though. It can simply mean finding one's own moments within the building and understanding the hierarchies of space relative to these individual moments. Occupants have no ability to own their place if the architect has control or if image-based assumption has too much power. If moments are withheld from occupants they lose some ability to define their own space. However, when an occupant of a building is allowed to create moments on a per visit basis, the depth of place created will be substantially deeper than if that occupant were only allowed to create one moment. This is an idea of which image is concerned.

Viewers of built work through architectural photography are typically presented with the minimum number of images possible, and in those that are shown most are from wide, sweeping vantage points. Objects photographed become singular entities that stand apart from neighboring buildings - they become 'picturesque.' Design thus loses its sense of pattern, its sense of contextual meaning, and its sense of place. Kenneth Frampton relates picturesque, two-dimensional images of architecture to "passing images seen from a car traveling at sixty miles an hour."[20] The effect implied is one of information gathering on a level wholly different than experience. Through the reading of flat imagery, readers gather only as much information as they deem necessary and intentionally (or perhaps on a subconscious level) leave comprehension gaps in the presented materials to be filled later by assumption. This is

Sights while moving at high speeds differ from those seen at slow speeds. (Img. 20)

20 Frampton, Kenneth. "A Note on Photography and Its Influence on Architecture." Perpsecta vol.22 (1986), 38-41. Pg. 41

supported by the writing of Kurt Forster in his article "Seeing and Believing."

> "Long discredited as merely evidentiary documents, photographs convey more about the intuitive assumptions of their makers and viewers than the factual nature of their subjects. Not simply determined by the impersonal agency of chemical processes, photographic images proffer templates of perception at a particular moment in time: The power of these templates is all the greater for being largely beyond calculation."[21]

In order to avoid a flat face, or face in general, buildings need not be amorphous. This is a simple tool to accomplish face avoiding, but it is not the only tool. As will be discussed later, a refocusing of the building to something other than the building itself may indeed be a better answer.

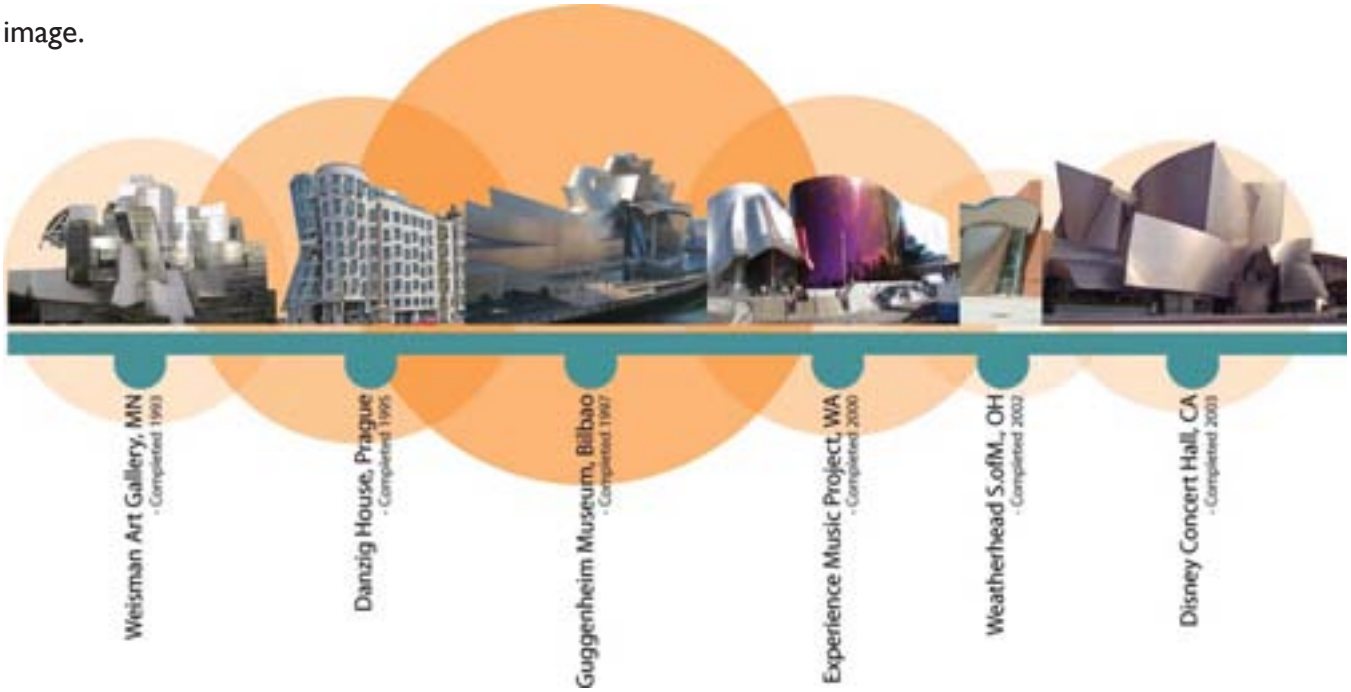
Moving on, another form of image making that exists is the creation of signs. Repeatedly communities request landmark or iconographic buildings to bring prestige to their town and associate themselves with something new. This is an architectural competition practice that is not going to go away. Thus, it cannot simply be ignored.[22] Communities desire buildings that will come to represent their towns. The buildings will help define their values and their stated place in society and promote these to anyone who cares to view them. This is sign as image.

An example of a sign. The Seattle Public Library by Rem Koolhaas promotes the city's economy and its technological heritage. (Img. 21)

21 Forster, Kurt. "Seeing and Believing." Architecture 90.3 (2001), 60-64.

22 Van Berkel, Ben and Caroline Bos. "After Image" Pg. 2

Once again, it expedites the process of image making by defining what should be read in a particular building. Here image is a utility just as it is a function. Signs are also created when architecture is related to marketing.[23] Whether as a backdrop or as the product itself, the building can come to stand for one thing, or be associated with one thing; once again shortening the image.



The above image descibes work impacted by time. The impact of a building, especially in terms of style, is not constant through time. Once it becomes a known commodity of known style, the building loses impact. Frank Gehry's work can be seen as an example of this. His style (or lack thereof) is now a known entity, therefore the impact of each successive design lessens over time.

One of the last shortfalls in image has to do with the

23 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media. Pg. 12

newness of the building itself. New buildings can be associated with progress, with viability, with wealth, etc… But this is true, at least partially, with all building types. New buildings can represent new signs for cities and owners, but the newness will eventually fade. It is inevitable that newer buildings will be constructed and that the sign that once existed will slowly degrade. In order to counteract the inevitable aging process of a building, the building's architecture must have a focus that is renewable. The face of a building is not renewable, but perhaps the users are. If their actions and behaviors are captured as the focus of the architecture then maybe the aging process of the building can be halted, or at least slowed.

As noted earlier, perhaps the best way to counteract the negative effects of image is to place a building's focus somewhere other than on the building itself. Architecture can be seen, as described by Walter Benjamin (a sociological and cultural critic), as an "endless live scene."[24] In other words, if people and their interactions with each other and the building are the focus of the design, a constantly changing image can be created. If the image of a building is its occupants and their activities, the building can then contain a moving and ever-changing set of images by which to be defined; a performance. Colomina writes that: "architecture is not simply a platform that accommodates the viewing subject. It is a mechanism that produces the subject. It precedes and frames its occupant."[25] Therefore, activities should be on display; should be visible. If a building can produce subject/object relationships between people and other people, and between people and the building, the building should never exactly repeat its image. The impact of an initial visit will, of course, be slightly greater than each successive visit but there can always remain a sense of the unknown and a sense of participant ownership. Architecture as a stage for an "endless live scene" promotes image extension not possible to inanimate objects. As will be discussed later, there are several techniques for creating scenes within a building that can help promote the idea of image extension.

People activating a building - in this case a banal structure is given character by its occupants. (Img. 22)

24 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 234
25 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media.. Pg. 250

Furthering the idea of unique readings or changing images, buildings should live past our initial visit. One should not be able to fully comprehend a building in his or her first trip to the building. Again, once a building's image is comprehended or established by a user, each successive trip to the building has a prescribed meaning.[26] If one has created meaning, and there is no mechanism for the meaning to change, then the power of the building as architecture (more than simply a destination) fades. To encourage a building's architecture to live past a user's initial viewing, design with simple or holistic meanings should be avoided. Also, if there exists only one singular prevalent use type, image will be challenging to extend. While it is not always possible to mix use types, it can be a very useful mechanism for creating subject/object relationships.

Buildings can be designed in such a manner as to not to be able to be fully described in typical architectural imagery. As previously stated, flat faces on buildings distract the viewer and force him or her to focus on specified portions of a building, rather than the architecture as a whole.[27] Flat faces hurry and strengthen the negative aspects of image. If image is to be prolonged, a building must be experiential in nature – must be more than skin deep. Designs should not contain falsities; they must be complete in nature. There is a prevalence to design with picturesque views in mind, but this is detrimental as it allows for portions of the building deemed secondary to receive neglect

The Danzig House in Prague by Frank Gehry is an example of a building that is difficult to fully capture in architectural imagery. It is experiential. (Img. 22)

26 Van Berkel, Ben and Caroline Bos. "After Image" Pg. 4
27 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media. Pg. ??

and non-individualistic, generic design treatment. A building is something that should be shared and experienced by users together. It must be interpreted through interaction with other participants and time. Finally, buildings should employ some means to conceal and some means to reveal. In this manner a building never fully explains its participant's actions and leaves an air of mystery to create drama in the scene of a building.

Privacy and publicity are ideas explored by many: Le Corbusier, Colomina, and Loos to name a few. Le Corbusier expressly writes of his exploration of image based architecture. Concerning his Villa Savoye at Poissy, he writes about the influence of Arab architecture. "It is appreciated by walking, on foot; it is by walking, by moving, that one sees the order of the architecture developing."[28] His aim was to never allow a fixed point of view in the design. This was accomplished by not allowing a visitor to inhabit a space that is "inside or outside, public nor private."[29] Space in the Villa Savoye is not made of typical walls, but of images; images as walls. Le Corbusier describes these images as "'walls of light.'… the walls that define the space are no longer solid walls punctuated by small windows but have been dematerialized, thinned down with new building technologies and replaced by extended windows, lines of glass whose views now define the space."[30] However, this creates a

Floor plans of the Villa Savoye. Le Corbusier used parapet walls and screening mechanisms to hide, conceal, and reveal. (Img. 23)

28 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 6

29 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 6

30 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media.. Pg. 8

disconnect from privacy. By showcasing the user in a series of images, moving or still, publicity becomes dominant. Barthes writes "the age of photography corresponds precisely to the irruption of the private into the public, or rather, to the creation of a new social value, which is the publicity of the private."[31] Contemporary architecture is creating a loss of place. If one can create a sense of mystery, as accomplished by Le Corbusier, one can begin to extend image.

Subject/object relationship with no focal point (assuming the subject shown here can switch roles with the objects shown here). (Img. 24)

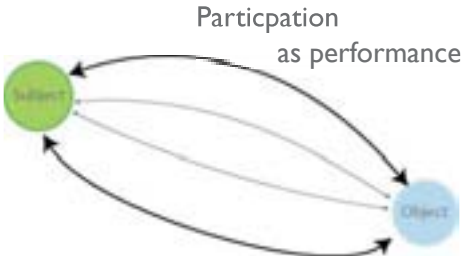
Finally, in the attempt to describe how image extension may be possible, it must be acknowledged that one should not attempt to create iconographic design. Icons cannot be designed. They are created through associations.[32] It is the events that happen at a place, the people that use the place, and/or the context surrounding the place that creates iconography. One can attempt to design a building that could potentially be iconographic, but it cannot be simply created without strong associations attached to it. Further, iconographic design is dangerous to the designer. Iconographic design makes the hand too visible. There is no manner of designing an icon that is not daring, assumptive or presumptive. This lesson, as Van Berkel states, is one that is only too clear in the work of Albert Speer.[33] The "spectre" of Speer should be a warning against attempts to design with iconographic intent.

31 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media.. Pg. 9
32 Van Berkel, Ben and Caroline Bos. "After Image" Pg. 8
33 Van Berkel, Ben and Caroline Bos. "After Image" Pg. 10

THESIS ESSAY: CONCLUDING REMARKS

The pursuit of image extension is justified. If image is a concept that is not possible to eliminate, why should it be so commonly avoided?[34] It is a powerful mechanism that participants in architecture create. It is created or composed of differing realities and associations by differing people; by differing perceptions. According to Yona Friedman, humans perceive a "whole of distinct and individual things."[35] In other words, humans extract individual elements out of the general context that they are occupying. Comparatively, Friedman compares how humans perceive with how dogs perceive. He states that dogs see only individual objects with the rest as a sort of ever-changing background.[36] We have the ability to see and determine truths – to create image from many multiple inputs.

Image is too complex for full textual description. Because it is a function of how we perceive and what we are doing while perceiving, it will always be a changing function. The term image is complex – it can be a positive though, and a designer would be remiss to ignore it. However, image in architecture can detract from the ongoing significance of a building. The image propels our knowledge of a building and at the same time focuses us on a building's shortcomings. This takes away from the experience of a building and reduces it to flat information. Overall, image is overly complex and can have a negative affect on architecture if ignored. It can, however, be a strong positive when used to activate space by refocusing



Shown here is the relationship between subject and object at one particular moment. There is an inherent relationship between the two with power relations stemming from the subject and submissive qualities stemming from the object. The space between the two and surrounding the object is the scene. This is the place where image extension could take place. (Img. 25)

34 Van Berkel, Ben and Caroline Bos. "After Image" Pg. ??
35 Friedman, Yona. "On Interpretation." Pro Domo. Pg. 119
36 Friedman, Yona. "On Interpretation." Pro Domo. Pg. 118

the desired intent of the building off of traditional subjects (the building) and onto non-traditional subjects (subject/viewer/object/scene).

What can be seen is that placing the participant at the center of the design, and not the function is a positive. If the participant is at the center of the design, static image will be challenged. This creates architectural interest as well by employing stage and revealing/concealing techniques to focus the participants' actions against the backdrop of a building.[37] An active building then slows its inherent nature of becoming outdated due to time and newer constructions. It maintains interest in the building by making each event unique.

How can a refocusing get us to "see in new ways?" One uses a building typically in a similar manner each time he or she enters that building. Activities are usually fairly repetitive on a person by person basis. However, this is not the case when others' repetitive activities are on display and necessarily mix with the typical building user. The building reads differently when viewing others participating in activities similar to the one a user is engaged in at a given time. This is also true for viewing others participating in activities dissimilar to the one a user is engaged in at a given time.

In this manner, architecture is about something more that just a building or destination. While these are not unworthy goals, if a building strives to be only one of these, its image is

37 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. ?

easily discernable. Once an image is established and remains relatively and generically accurate, the presence of the building in one's mind will begin to fade. However, if architecture is viewed as an endless live design it becomes rather difficult to quickly define. The image can therefore be described as extended and the significance of the architectural design cannot be so easily lost. Image extension is a powerful tool and may help buildings with their vitality and interest carrying abilities.

DESIGN: EXPLANATION OF

Certain aspects of image, as presented in this thesis, relate directly to design possibilities. The discourse presented herein presents a methodology that is not closed, but instead is open to additional design ideas that may serve to add to the hoped for depth in any image-extension project. As described in detail in the Project/Building Type and Site Analysis sections of this thesis, the project proposed for expression of the ideas presented will be a multi-modal transit hub on the northeast corner of the Minneapolis metro area. Working with image-extension in mind, the transit hub is designed in a manner that creates connections to the urban areas immediately surrounding the site and acknowledges the complex and successful history of the city of Minneapolis.

First, the site proposed at the corner of the city was analyzed. A site analysis method similar to that used in Asymptote Architecture's Steel Cloud was used (see Site Analysis: Precedent Review). This strategy employs certain momentums found in the city as generators of boundaries, limits, solids, and voids. It is these limitations on site expression and design that create a logical framework for image-extension. Without limits, especially in the case of a multi-modal transit hub, a project has no means of determining what are proper bounds or what are improper restraints. Further, "city life is a battle for limits rather than a life within limits."[38] Architecture, due to its physical nature cannot simply become a limit though.

Downtown Minneapolis at night. (Img. 26)

Downtown Minneapolis map. The orange areas represent the center of town and the darkest color representing the densest area of town. (Img. 27)

38 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 21

For, as Colomina writes, "the wall is a limit, but not simply the limit of a place."[39] A transit hub would necessarily then need to find meaning for its boundaries within the large urban arena of Minneapolis. If the limits of a place are born from that place, not created of it, a place can potentially become resolved.

However, this thesis does not promote only place making. Instead, it values multiple meanings and valid conversations (momentums creating limits) that are rooted in conditions that existed prior to design. Place would imply fewer meanings than that of a wholly ambiguous arena. Therefore, programs of the type that might resist a (one) place have been employed in this design. A multimodal transit hub affects its participants in a strong manner. "Trains (and all transit modalities) remove place from their stations."[40] "They know only of arrival and departure."[41] By forcing visitors to quickly traverse the space, the modalities housed in a transit hub do not fully allow one to create a sense of belonging or a sense of ownership.[42] In this sense, this project necessarily forces the designer to place emphasis away from the building; away from the shell of a potential place.

Continuing with design, the next step after creating momentums and legitimate limits is to analyze the site's context.

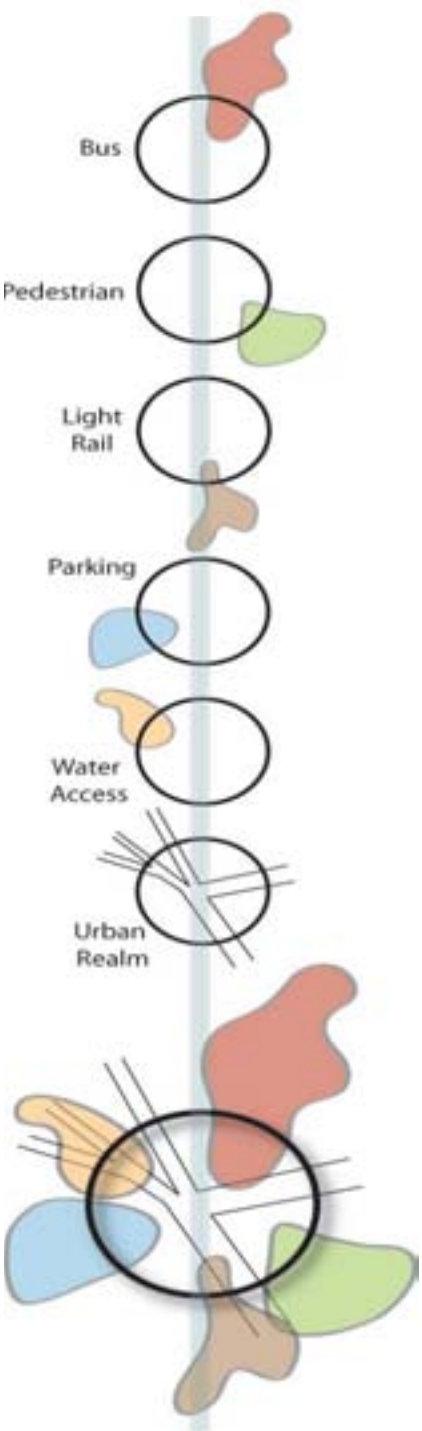


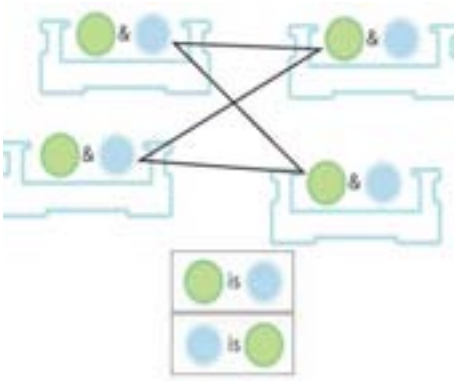
Illustration of programs combining to create meaning and interaction in a building. (Img. 28)

39 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 27
40 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 50
41 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 51
42 Relph, Edward. 1976. Place and Placelessness. London: Pion Limited.

The northeast corner of the city is home to a fairly dense area of 2-4 story walk-ups that house a range of tenants and uses - these range from commercial uses to mixed uses to residential uses. Aside from the federal building to the east of the site, the mix or use types here serves to legitimize a mixing of programs within the transit hub. Therefore, the hub will include: office space, shops, housing units, a new station hall, a multi-tiered railway platform, a car drop off area, bicycle storage and a large parking garage.

Next, the project addresses topography. The site of the hub traverses three main elevation levels along its longitudinal axis. The three levels create natural platforms that inform the placement of the hub's programmatic elements. The light rail line platform will follow the uppermost platform; the dedicated rail line will follow the middle platform; and car traffic will follow the lowest platform. The set of provided platforms allow freedom to move design between the platforms and create interest. The bus line does just that. It is placed on both the upper platform and the middle platform. This leads to the mechanism of returned views. For instance, the paths that follow the bus line, at times, push the participants off of the line's axis and onto another that forces them to view the axis from where they just came. This is a method of forced comprehension by occupation and inhabitation combined with realization. It is also a tool employed by Adolf Loos in the designs of some of his residences. Colomina writes that "upon entering a Loos interior one's body is continuously

Each of the strands here represents a unique program. It is possible for artistic expression to be found in something as mundane as programmatic combination. (Img. 29)



Platforms create unique visual experiences that allow building participants to observe each other while being observed. (Img. 30)

An apartment building in Boston utilizing platforms in its circulation system. (Img. 31)

turned around to face the space one has just moved through, rather than the upcoming space or the space outside."[43] "With each turn, each return look, the body is arrested."[44] Further, "it is intended that these spaces be comprehended by occupation,… by inhabiting."[45]

Next, in perhaps the final contextual analysis of the site, the history of the site is graphically represented to project its discontinuity. The build up of the surrounding area with debris and soil has a history that involves mostly attempts to conceal the rail lines. The concealing attempted is now at odds with a city that is as intent on expanding its infrastructure as Minneapolis is. Also, the city is full of historical projects and contemporary projects that can be used as design inspiration. It is acknowledged here that the use of history in the transit hub's design is simply a design tool related to this specific site - it is not a tool employed specifically with image extension in mind.

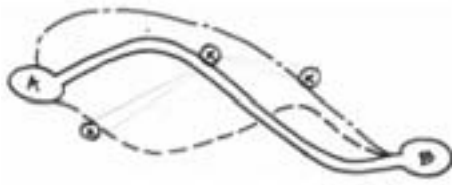
More. To. Come.

Three shots of the area (history) near the site and the site itself (the bottom picture). (Img. 32)

43 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 234
44 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 234
45 Colomina, Beatriz. Privacy and Publicitiy: Modern Architecture as Mass Media. Pg. 236

LITERATURE REVIEW

Perceptions of architecture are based on quantitative and qualitative levels of understanding. It is possible to learn of or experience a building in many ways. Thus, it is possible for different people to understand, or perceive, in different manners. Buildings, due to their large and obvious impact in our landscape, can focus peoples' attentions and drive their understandings of their surroundings. However, the basis for understanding varies from viewer to viewer. Perception is based in the manner/ actions undertaken while created.[46] In this way, perception is grounded not only in our reactions and knowledge (that which is had prior to the action of perceiving), but also in the manner upon which we view a thing. For instance, a person who views a building on a regular basis in a manner which is removed from the building (while driving or walking) will understand the building to be something different than a person who uses the building on a daily basis; and that person will understand the building differently than the person who only views the building from afar (via imagery and the media). The texts used in the research for this thesis explore perceptions of architecture and their implications for design.



Movement types and paths as well as personal insights create perceptions. (Img. 33)

Additionally, contrasting and contradicting views of similar topics have led to the generation of this thesis. By informing research with other research presenting dissenting views, one can begin to fully understand the place of the discourse presented herein within contemporary theory and architectural

46 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media. Pg. 165

exploration. Three main sources have established the body of this text and have been supported by a number of supplemental writings and studies. Of note, the three main sources are: Privacy and Publicity by Beatriz Colomina; "After Image" by Ben Van Berkel and Caroline Bos; and Zoomscape: Architecture in Motion and Media by Mitchell Schwarzer. Colomina and Schwarzer establish contrasting arguments that place architecture within personal perceptions; Van Berkel and Bos add depth and clarity to the conclusions drawn from the other two main readings.

Colomina argues that architecture can only become contemporary if it strategically interfaces with mass media. In short, her argument states that media is the location in which architecture is born. Interestingly, she states that the contemporary condition of architecture is that it is of media, and at the same time, functions as media does. While her argument does not dismiss the architectural object, it postulates that architecture is a representational means as are all types of media. In a sense, Colomina claims that architecture is most successful when creating a prescribed or intentionally projected image.

Mitchell Schwarzer approaches meaning in architecture in a different manner. His subject is "the impact of mechanized transportation and camera reproduction on the perception of architecture."[47] Instead of writing about how built spaces are represented in media and therefore affect how people judge these spaces, "Schwarzer's interest [lies] in how both the

The mode of viewing and the spaces viewed combine to create perception, which leads to image. (Img. 33)

47 Schwarzer, Mitchell. Zoom Scape: Architecture in Motion and Media. Pg. 12

mode of viewing and the spaces viewed have been shaped by machines."[48] He does not enter the discussion of how space is media or a portrayal device - this is what Colomina does. Instead, he argues that it may not be; but it is instead a thing that has been affected by media, and more importantly, by what the viewer of the thing is doing at the moment of viewing. In short, Schwarzer deals with perception while Colomina deals with projection.

A common point that both have is one discussed by Ben Van Berkel and Caroline Bos in "After Image." The result of projection as media and the result of modal and mechanical perception is image. "After Image" discusses issues inherent with the architectural image. It discusses practical issues of image (competitions, marketing) and issues of image that are more abstract ("newness," monumentality). The two authors postulate that image is complex, but is necessary to work with in any architectural project. Several aspects of image are presented and discussed, showing how these aspects can detract from a project.

Explored herein are ideas initially presented by Colomina and by Schwarzer. These two authors give rise to issues of perception and reading and how we interpret space, eventually leading to the idea of image. Van Berkel and Bos then run with the idea of image as an aspect of design. Finally, in this thesis' research process, Colomina and Schwarzer are again introduced

Van Berkel and Bos locate aspects of image that are manipulable and could lead to an image that has more depth than is at first noticed - such as the hidden movement in this pattern. (Img. 33)

48 Samson, M. David. "Zoomscape: Architecture in Motion and Media (Review)."
Technology and Culture 46.4 (2005) 862-864. Pg. 865

- this time as generators for design solutions regarding image. Discussions of activating dull facades and perceptions by Schwarzer are combined with ideas of performance and stage by Colomina to create possible design strategies that could extend image.

PROJECT/BUILDING TYPE

The arguments presented above tend to require a project/building type of hybrid programmatic typologies. This would allow for performance and an architecture of its participants. A building that satisfies the proposals put forth in this thesis's argument would necessarily need to force visual interaction between participants and other participants as well as participants and the building. It would also need to force interaction between different programs and the building. If, for instance, programs are mapped onto the site in such a manner as to create overlap or cohabitation or opposition, as is the case in the project 'Steel Cloud', one could then begin to see how a program might react to a building in a manner different from how another program might react to that same building. Finally, a building which meets the demands of this thesis's arguments must allow for massing that is not formally simple or stagnate. If massing is easily understood by the building's participants using simple, common techniques, the concept of the building in plan becomes overpowering and the building's image begins to shift from an ever-changing three-dimensional moving object to a projected still frame.

Trains docking at a railway station in northern Europe. (Img. 34)

In conclusion of the aforementioned necessities of a building/project type to satisfy image projection, it is proposed that a transit hub be designed. To satisfy the requirement of multiple programs, the hub is to include: office space, shops, housing units, a new station hall, a multi-tiered railway platform, a car drop off area, bicycle storage and a large parking

garage. The transit hub would also need to be very expansive to accommodate such amounts of program and capacity. Advantages of a large urban infrastructural building in regards to this thesis are many. For example, the permeance and mobilities of such a building enable that building to resist a static image and to let the actions of the participants in contrast to the built environment resonate. With most activity centered on arrival and departure and the hustle to move from one designated spot to another, it seems rather logical that a series of stages for performance could be developed. Issues of vulnerability and display are also large portions of this document as described in the essay portion of this text. They have to do with movement and idleness and the relationship between the two. These last several points are the strongest arguments for the design that accompanies this text to be of a transit hub.

Finally, in regards to the design of a transit hub, it can be argued that it would house the ideas of subject/object relationships, stages and glimpses well. First (subject/object relationship), it is a tool a designer seeking to extend image uses to create intrigue from one building participant to the next. When one is positioned in a waiting area for one of the commuter services all others not in that same area are on visible, moving display. The performance that is the drama of others arriving and leaving drives the interest in a transit hub. However, when it is also considered that this subject viewing mode may be utilized and reversed due to deliberate design,

performance moves from simply a stationary experience to one of stationary involvement. This is where intrigue and drama become apparent in the performance of a transit hub or other typology. When one is keenly aware that his surroundings are also aware of himself, he becomes part of the architecture and it heightens his capacity to receive information about the design of those surroundings. Second, setting these subject/object dramas apart physically makes them more mysterious. If one cannot fully meet their object, one cannot begin to understand what the object thinks of them. Stages, as proffered by Loos, are tools to help design reach levels of interaction with its users. They heighten awareness of the built environment by over-scaling distance and relationships. Stages are a powerful tool for the creation of drama and continued intrigue. Finally, by creating stages separated by some distance, as in the platforms of a transit hub, subject/object relationships and stages are made more cohesive and stronger. A transit hub exploits issues of program, space, stages, and sight-lines to create a not-so-static image.

PROJECT/BUILDING TYPE: PROGRAM

The program for a large transit hub such as the one proposed herein is relatively simple. The complexity and joy of a hub are born in the mixing of programmatical elements – not in the elements themselves. Therefore, for brevity, the program will be discussed only briefly. Note the major modal systems present in the hub's program. The transit hub shall contain:

- Station hall (ticketing, signage, platforms, seating, rest rooms, etc.)
- Railway platforms (for both light rail and dedicated rail)
- Bus platforms
- Kiss and ride
- Large parking garage
- Office space (for the employees of the hub and for other commercial companies)
- Retail shops
- Concessions
- Housing units

"In addition to the aforementioned required areas of such a transit hub, it must be noted that other elements should be planned out. There are inevitably a large number of important elements of continuity common to all stations. They provide functional, operational, safety, security, and accessibility requirements such as:

- Length and width of platforms.

- Platform edge details.
- Furniture.
- Waste receptacles.
- Lighting levels and fixtures.
- Advertising layouts.
- Directional and informational graphics and signage.
- Hardware.
- Acoustical treatment.
- Speaker systems.
- Elevators/stairs/escalators.
- Transparent elevator shafts.
- Emergency telephones.
- Non-slip paving.
- Kiosks.
- Smoke exhaust systems.
- Fare collection devices.
- Emergency exiting.
- Repetitive building materials."[49]

49 A Primer For Station Design. Pg. 1

Gare D'Avignon

Completed in 2001

Jean-Marie Duthilleul and François Bonnefille

SNCF (Agence des Gares)

AREP (Aménagement Recherche Pôles d'échanges)

Avignon, France

Recently completed, the rail station in Avignon is a great example of stages (platforms), passageways, and sightlines that creates a place for viewing others, successfully accomplishing one's tasks, and invigorating architecture. The station is a mix of practicality (sun screens and proper orientation) and design. The principal designer of the project, Jean-Marie Duthilleul, privileged more than just a station stop and departure point for the project. Duthilleul wanted to express comfort and "insertion in the environment" [place] for the station in Avignon.[50] He was able to accomplish this in several different ways. First, before an exploration of how he did this, an explanation of the design in general must be given.

The western shell of the Gare D'Avignon during the daytime. (Img. 35)

The station is sited on a large sweeping curve in the rail line on the outskirts of Avignon - a very popular tourist destination in the Provence region of France. It is a portion of the track that accommodates train traffic in two directions

50 Agence Des Gares SNCF/AREP, Paris. Agence Des Gares AREP: Parcours 1988-1998. Agence Des Gares. 1998.

as well as local and pass-through service in both directions.[51] Therefore, it is a very busy hub along a well traveled route and needed to be large, easily navigable, calming, and efficient. Conveniently, the station runs north and south; this allowed the design team to use sun position as a design tool to help drive the scheme for the station. In plan, the station is simple. It has two main waiting areas for trains and their associated platforms (an east and a west waiting area). The two areas, or halves, are divided by the tracks on the uppermost level and are connected underneath by a series of walkways and a car park. In section, the each waiting area is an elongated shell, traversing the length of the station. The shell is opaque on the western face and glazed on the eastern face.[52] This allows for non-intrusive light to flood the space and create zones of light intensity that highlight both the curved shape of the shell and articulate the usage zones within the space. Overall the space is light, airy, and legible.

The western shell of the Gare D'Avignon. (Img. 36)

It is in plan and section within each shell that this project matches so well the ideas presented in this thesis. Duthilleul no doubt was not designing with image extension in mind, but his design for the Gare D'Avignon nonetheless employs several strategies that could leave a lasting and ever-changing impression on a visitor. Examining the west shell, the areas in plan line up in this manner (from west to east): opaque shell; flat movement corridor; area of inclined movement (both escalators and

51 Agence Des Gares SNCF/AREP, Paris. Agence Des Gares AREP: Parcours 1988-1998. Agence Des Gares. 1998.
52 Agence Des Gares SNCF/AREP, Paris. Agence Des Gares AREP: Parcours 1988-1998. Agence Des Gares. 1998.

stairs) mixed with small concessions; an upper flat movement corridor; an indoor seating area; glazed shell; platform seating; platform movement and boarding area. The section is lively and follows the building's participant from the lowest entry levels of the building to the upper level of the building where he/she boards and exits trains. What is interesting here are the multiple movement lanes, the different platforms, and the areas of mixed participant activity. By raising one level above another and forcing views back across the first level, people become just as much a part of the architecture as the building. Some ideas previously discussed as staging by Adolf Loos can be found in this design. Here, depending on one's activity, a participant can be a subject in the building's live action performance or a viewer. However, this building, due to its program, forces one to be both subject and viewer on any given trip. Movement systems and spatial hierarchy are creating the power systems here. It is entirely possible to observe very sedentary activity and lively activity at the same time here. It is in the chevron shape of the section that one visitor is related to another visitor in a manner that creates viewership and performance. Further, the modalities present in the building and its tracks add to the ever-changing nature of the building. The Gare D'Avignon is an image-rich project that also upholds traditional values of architecture (structure, sunlight, atmosphere, efficiency and legibility).

Gare D'Nîmes

AREP Renovation

Original Building in 1892

Nîmes, France

The railway station in Nîmes, France is an ideal research precedent for this project. It is not a project that fits the ideals of this thesis and works with image extension; it is a project that is notable for its programmatic layout and legibility. The Nîmes station serves a large national line as well as a smaller, more regional line. The two systems meet in Nîmes in a station that has been around for some time and has only recently been given a face-lift. It has been a successful destination for over 100 years and its legibility is very high.

The station, in plan, is very straight forward. The upper level revolves around the vertical circulation units employed in the project (stairs, escalators, and elevators). These units are stacked parallel to the track and traverse a set of atrium spaces. Slightly offset from this core of vertical circulation is the platform and waiting area - in this project they are one in the same. Finally, one level offset from the platform and waiting area are the tracks. Since Nîmes has a distant pass-by line (unlike Avignon, which runs through the middle of the station) it is able to employ a central platform and split track configuration.[53] Descending from the upper level one arrives at a large interior

The ticket area at the Gare D'Nimes in southern France. (Img. 37)

53 Agence Des Gares SNCF/AREP, Paris. Agence Des Gares AREP: Parcours 1988-1998. Agence Des Gares. 1998.

space that is ringed by concessions and employs circulation (entrances/exits, and internal) in the form of a roman cross. This simple plan is one that a visitor can somewhat implicitly understand. The legibility of the roman cross and the visibility created by the atrium spaces that lead eyes towards the platforms create a project of simple success.

Of note, in the Nîmes station is the idea of insertion. It is a place for transit and daily business inserted into the urban fabric of the city of Nîmes. The building has successfully become part of the community; it is not simply a pass-through point for arrival and departure. On any given business day one can observe locals shopping and tourists resting as well as both performing the typical, prescribed programmatic activities of a train station. This is achieved through extreme simplicity of plan and through transparencies in both plan and elevation that invite visitors to come to the station and stay. The charm in the station is its mix of temporary visitors and sedentary visitors.

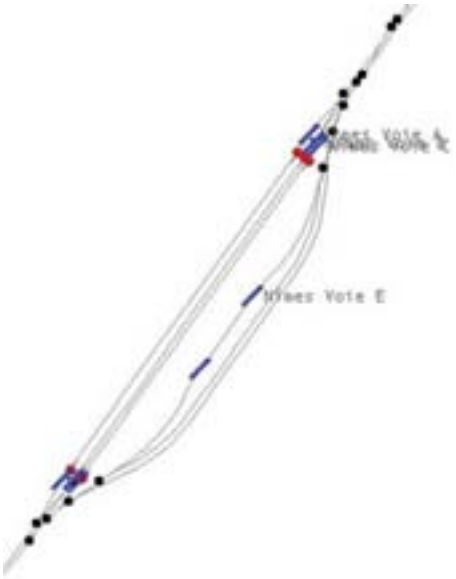


Diagram of the paths of the trains at the Gare D'Nimes. The large station bypass is clearly visible in this image. (Img. 38)

Rail Stops in Minneapolis and St. Paul

By the Metro Transit division of the Metropolitan Center

Hiawatha (the only) Line completed in June 2004

Minneapolis and St. Paul, Minnesota

The new transit line in Minneapolis and St. Paul follows traditions established in preceeding transit projects in the area. The Twin Cities support a surprisingly diverse population and that has always been evident in the work of any municipal project (this is evidenced by a mandate stating that all signage along the light rail line be written in four languages: English, Spanish, Somali, and Hmong).[54] It is a quickly growing light rail project and several more lines have been proposed due to the great success of its Hiawatha Line (the first line in the Twin Cities and the only one currently operating). Ridership has been great and has far outpaced predicted levels of use - it has more than doubled the predictions.[55]

Each stop along the railway is different. There is no requirement for consistency of form or material along the Hiawatha Line and there will be no requirements for future lines. Each station was simply asked to be designed in a manner that fits its immediate surroundings. The range of station design is vast but limited by scale and continuation (of the line). For instance, the station at the V.A. Hospital is a simple platform with

A light rail train in downtown Minneapolis on a snowy day. (Img. 39)

54 Metro Transit. "Metro Transit: Hop On!" http://www.metrotransit.org. 2008.

55 Metro Transit. "Metro Transit: Hop On!" http://www.metrotransit.org. 2008.

canopy flanked by rail lines while the station at Nicollet Mall is a long undulating canopy of metal and glass that articulates the movement of the skyline of downtown Minneapolis.

The most relevant ideas contained in these precedents for use in this design are: freedom of materiality and form; and the requirement for contextual relationships. Therefore, it can be claimed that a large transit hub in an area surrounded by multiple typologies and user groups must find an identity common to all that reside (either permanently or occasionally) nearby. Station designs along the line relate to airplanes, historic fortifications, hospitals, local landmarks, and large urban areas. A hub might be able to relate to all since users from each location would undoubtedly pass through its spaces. In total, the hub must relate to the energy of a diverse area and be a place of relation between disparate station designs. A new aesthetic language is necessary to be all-inclusive and to be able to be scaled in such a manner as to house many programmatic elements as this thesis' project requires.

SITE/CONTEXT AND ANALYSIS

Image extension is an idea that can be applied to multiple locations and most typologies. However, to really make the idea strong, a site that matches the strategies for design that are associated with extension is required. In short, these are: multiple modalities; multiple layers and levels; and an energetic and progressive design sensibility in the area that houses the project that is open to intricate circulation systems and atypical formal gestures. These requirements add up to necessitate a large urban area of density and varied topographic features that also is busy transforming the community with a large-scale commitment to growth.

Traditional communities that employ successful and established rail lines are the first and apparently most applicable possible site locations. These communities have grown around public urban infrastructure and a project like the one proposed herein could be somewhat readily accepted. Examples of cities large enough and infrastructure-intensive would be Chicago, Boston, New York, San Francisco, and Washington D.C.. However, the problem with these locations is that, since the infrastructure is already as developed as it is, it is hard to find a need based location in their existing systems large enough for a building with enough programmatic intensity to best suit this project. For this reason a city without thoroughly developed transit systems would fit image-extension better. If a site was able to accommodate large, realistic growth while at the same time accommodating density and intensity of activity, it would be

A Boston subway line. (Img. 40)

able to be a strong candidate for design.

Finally, the list of requirements for a site for this project was narrowed to a site with interesting topography that created natural platforms (stages) and also had multiple access points for many people, all using differing movement modalities. Two of the main ideas/solutions proffered by this thesis revolve around the ideas of performance and movement activities - movement activities that are related and reflect upon each other. The goal of these two ideas is to create architecture that places the building's participant at the center of the design.

A site was selected using these criteria. First, a city with a rapidly growing urban infrastructure was found - in this case two cities: Minneapolis and St. Paul. Second, a site within the cities was located that satisfied ideas of topography, access, and types of access. The Twin Cities have recently grown considerably in the areas of large-scale, high profile work and in transit renewal. The cities had debated for some time about whether or not to build a light rail line, and one was finally completed in June of 2004. The line, named the Hiawatha Line (it follows Hiawatha St.), connects downtown Minneapolis with the Mall of America and the Minneapolis/St. Paul International Airport to the east. It was designed for a ridership of 2.4 million passengers per year but has far exceeded its hoped for usage (by 65 percent).[56] The line has been so successful it has helped the state legislature of Minnesota pass a state "constitutional

Overall map of the Minneapolis Lite rail line - the Hiawatha Line. (Img. 41)

56 Metro Transit. "Metro Transit: Hop On!" http://www.metrotransit.org. 2008.

amendment" "that required sales and use taxes on motor vehicles to fund transportation, with at least 40% dedicated to public transit."[57] The state legislature also began planning for expansion of the successful light rail service in the Twin Cities metropolitan area (an area that is home to roughly 60 percent of the state's population). Two currently proposed additions would increase ridership significantly and link the Minneapolis downtown area with suburban areas to the south of the city and to downtown St. Paul via the University of Minnesota (construction on the second line is underway). For the purposes of this thesis, a third proposal has been created that would link the fast-growing suburbs to the north with downtown Minneapolis and connect to the Hiawatha Line creating a large loop and main transition between the two lines. This generates a real need for a large project as the city's two largest rail lines by rider volume would be connected and form a local and regional departure point.

The obvious position for the point of departure from local travel to regional (Twin Cities metropolitan area) travel is on one of the prime transportation corners of the downtown Minneapolis area. Three major public transportation modes serve the core downtown area - bus, taxi, and light rail (the Hiawatha Line). The bus system in the Twin Cities area is interesting in its parallels to the needs for a local and regional light rail transit system. The city has established a zone around

Map of Minneapolis. The area bounded by the blue box is the proposed site under analysis. Just to the southeast from the site is the NW corner of the metro bus system. (Img. 42)

57 Metro Transit. "Metro Transit: Hop On!" http://www.metrotransit.org. 2008.

the metro area that is highly focused and serves all local stops and transfer points for the concentrated core of the city only. At established points on the edge of this zone riders can transfer to regional bus service that extends into the downtown's surrounding areas. Because of the similar need for differing levels of service and ridership, the bus line establishes several points of access and therefore possible locations for the proposed transit hub in Minneapolis.

One dedicated rail line passes through/nearby the downtown area. It lies slightly to the north and west of the area and is frequently used by BNSF trains. The line currently is used for the transportation and shipping of coal, ore and other large non-consumer goods. The line opens a large swath of real estate to the north and west of town that potentially could connect to the Hiawatha Line. It sits at a level elevated above the Mississippi river but below the level of the city streets to that side of town. The site of the line creates an intriguing possibility to also be the site of the new transportation hub to be designed in this thesis. It maneuvers several topographic levels, skirts several areas of town (commercial, mixed use, and residential) and meets one of the major corners of the city's bus transit system that is a transfer point from regional to local service. It is therefore proposed that the transit hub be sited at the meeting point of the bus line corner and the existing dedicated rail corridor (at the northwest corner of the Minneapolis downtown).

An interesting note about the dedicated rail line is that

This is the site's main expanse - it is on the mid-elevation platform of the site. The visible rail tracks are the existing BNSF tracks. (Img. 43)

Site from across the river (on Nicollet Island) to the northeast. (Img. 44)

the city has built itself around the line in a manner that hides and attempts to ignore its presence. It has done so by ramping up the northwest portion of the city to bypass the line via bridges that are one level above that of the line, but because of the ramping, at the same level as the city streets. This creates elevation changes longitudinally along the site that move across three major level changes and occupies two of the level changes for significant lengths of the line before the proposed connection to the Hiawatha Line of the light rail system. These elevation changes match the requirements for a site listed earlier and could potentially lead to the creation of stages and performance 'venues.'

Finally, after the strong position at the connection of the dedicated rail corridor and the metro transit zone was located, a site was proposed that navigated all three levels and tied directly into each. Beginning at the dedicated rail line's bridge over the Mississippi River and continuing for two blocks to the southwest of the bridge along the rail corridor is the site. It passes through a commercial zone, borders a large federal building, passes through a mixed use zone, and passes through a residential area composed of flats, apartments, and PUDs (Planned Unit Developments). The strengths of the site are: its actual relevance to any growth in the transit system of Minneapolis; its traversing of multiple elevation levels; its acceptability of different modal access types; its multiple access points; its relevance to the large metropolitan city of Minneapolis; and finally its position in

The surface parking lot currently on the middle platform of the site. (Img. 45)

relation to existing transit systems.

In addition to the above strengths of the site, Minneapolis is an attractive location for a project that, at some level, includes a significant portion of contemporary thought and therefore contemporary form and planning. The city has welcomed several significant architectural projects in the past five years and is a very progressive, design oriented area. An architectural focal point has been created in the city that creates an interesting dialogue between an older urban fabric and project designs that can stand on their own. While this project must straddle the line between independence and copy, it can learn and relate to some of the significant work completed recently in the area. Specifically, six major projects have been completed in the city by noteworthy architects. Predock, Nouvel, Pelli, Herzog and De Meuron, Gehry and the large Minneapolis firm Meyer, Scherer & Rockcastle have completed work in the area.

Herzog and De Meuron's Walker Art Center. (Img. 46)

Predock's work is a large alumni center on the campus of the University of Minnesota. It is a project of layering and memory that creates a unique place for potential donors to feel welcome and special. The building is composed of a large opaque shell that is penetrated by strip windows opposed against a heavy, undulating surface that houses the building's private spaces. The resulting space between the two large gestures creates a dramatic lobby of oppositions and juxtapositions. It is here that this design has its moment, its grand space. The design is successful in its brashness and it has taken some time for locals

Antoine Predock's University of Minnesota McNamara Alumni Center. (Img. 47)

to warm to the project. But they have, and it now is one of the centerpieces of the university's downtown campus.

Jean Nouvel's work in the city was completed in 2006 and is a deep project filled with drama and movement. It houses the city's premier performance company and is named the Guthrie Theater. Nouvel created a procession from the ticket counter and lobby space to the two main performance spaces and divided the massing of the project to reflect these nodes and the route. One follows a long, slowly elevating path from the ground level that climbs escalators and ramps to eventually end at performance spaces. He created an architecture about path and revealing that serves to intensify one's theater experience by elevating the stage and seating to a status above the rest of the project. Nouvel's project is justified and home in this city due to its creative massing and form that is in a scale similar to the low buildings in the area. Nouvel's design is largely considered the most significant of the recently completed major projects in the city.

Jean Nouvel's Guthrie Theater. (Img. 48)

Caesar Pelli designed the city's new central public library. This is the project closest to the proposed site and therefore could be named the most relevant to the transit hub. It sits in a neighborhood of similar residents as the station and approaches the mix as a positive issue. Pelli divided the library into two masses, one public and one private. The triangular (in plan) lobby space placed between the two masses opens to the city and passes through the building to the northern edge where

Caesar Pelli's Minneapolis Public Library. (Img. 49)

a smaller opening welcomes the residents to the north. The strategy is simple and allows for the most effort to be given to the larger numbers of people that will access the building from the more heavily occupied portions of the city to the south and east. This is a strategy that can be directly translated to the transit hub. Finally, Pelli's project employs levels of access and also of viewership that create vantage points of power and subjugation. This project may be the most important of the new significant works for the sake of the transit hub.

The final three projects do not have much relevance to the transit hub proposed in this document. They do, however, justify an exploration of contemporary design in the city. If the city is open to designs by Gehry and Herzog and De Meuron, it should be also open to a train station that rejects typical formal devices and places people at the focus of the architecture.

Continuing with the topic of additional bonuses of the city of Minneapolis, a brief explanation of the growth and evolution of the transit system in the area is necessary. Minneapolis has always been a city where transportation has driven the economy. The city grew around power generated from the river (via dams) that enabled it to become the area's processing location. Flour and other farmed goods passed through the city out of necessity and thus Minneapolis area was forced to become the major transportation and shipping center for the area as well. The city was the major center on the Great Northern Railroad and quickly grew its own local rail

Caesar Pelli's Minneapolis Public Library. (Img. 50)

Minneapolis has a strong history due to power generated from the river. (Img. 51)

system of trolleys.[58] 1954 saw the trolley system removed and replaced with busses - which remain very active today.[59] The city has a very efficient bus transportation system with many perks that its riders utilize - it is a city concerned with successful infrastructure.

Recently the city has begun to augment its transportation systems to meet growing demand as the metro area continues to expand and as the city becomes more aware of the benefits of green technology. For instance, Minneapolis has introduced several clean busses that consume ethanol instead of gasoline. Over the years, the city and its neighboring cities have expressed interest in a local rail line linking strategic areas of the metro. Recently, a local rail line service (the Hiawatha Line) has been established connecting the Minneapolis downtown area with the Mall of America and the Minneapolis/St. Paul International Airport to the southeast. It is the first in a series of planned lines that will link the Minneapolis metro area with not only St. Paul, but also with cities all around the area.

The project proposed in this thesis is one of the rail expansions in the area. It will serve as the second expansion and extend the existing line (the Hiawatha Line) to one of the critical junctures of the metro area's transportation system and then beyond to the north and the subsequent suburbs.

Returning to discussion of the site, a connecting building

58 Metro Transit. "Metro Transit: Hop On!" http://www.metrotransit.org. 2008.

59 Metro Transit. "Metro Transit: Hop On!" http://www.metrotransit.org. 2008.

will be required for the extension of the line and the transition from local to local-regional rail transportation. This is the design project proposed by this thesis. It must traverse a long section of the city passing through commercial, residential and mixed-use zones. It must traverse multiple levels as well and span the Mississippi River. To the north of the site is Nicollet Island. The island is home to one of the larger private high schools in the area (La Salle High School) and one of the city's landmarks (the Nicollet Island Inn). It is a small stop on one of the major vehicular routes to the north. The existing rail line on site (a BNSF line) crosses the island and the bridge that connects the metro bank to the island must be redesigned for the sake of this project.

The site itself is situated on the northwest corner of the Minneapolis downtown area. It currently is a narrow, long corridor that forms one of the edges of the downtown proper. The site is the long term home of a dedicated rail line operated by BNSF Rail Lines (15 trains per day, each moving at 40 miles per hour)[60] and the city has carefully grown around it. Several blocks removed from the line (in a parallel manner) the city begins to ramp using old fill and material so that the base level of the city is a full level above the rail line at the site itself. The mounding of the site creates opportunities for a designer to exploit an unnatural level change.

Topographic changes have a large affect upon this site.

The site from the middle platform. Notice the short urban buildings surrounding the site and the clear view of the skyline. (Img. 52)

60 Metro Transit. "Metro Transit: Hop On!" http://www.metrotransit.org. 2008.

SITE/CONTEXT AND ANALYSIS

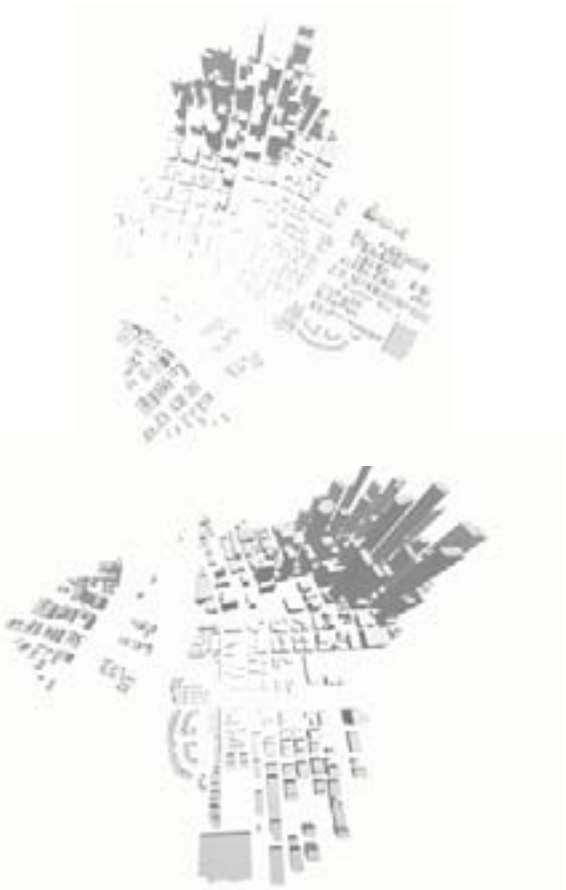
The site crosses the Mississippi river at its northeast edge and therefore must interact with the ground at a level even with the river's floodplain. Next, in the progression from northeast to southwest, the site rises roughly fourteen feet to a large plateau that is home to the BNSF line and some surrounding buildings (most notably the federal building to the south). This is the main level of the site. It is here that the majority of the project will be housed. Currently, the large, flat area of the site is home to a surface parking lot and the rail line. Continuing with the topographic features of the site, the level of the city ground plain is one level above the flat plateau just described. Overall, the site is one of three main topographic regions, each with its own reason for existence and each with its own design possibilities.

One of the strong aspects of this site is its connection to the main paths of movement in the city - specifically its connection to paths using different modalities. As shown, the site, as mapped along the proposed rail line, intersects major paths of travel of different types: walking, bus, car, and combinations of the three. It becomes clear that, in order for a transit hub to serve the city it must accept visitors at multiple entrance locations. These entrance locations will serve as an outline for the basic layout of the programmatic functions of the hub.

Finally, the last aspect of the site that lends itself to the design of a transit hub is the mix of space-use in the area. It is a fairly dense area of three to five story buildings of an older

vintage that house commercial ventures, housing, and mixed use programming. With the current mix of uses in the area, a transit hub that incorporates housing, office space, concessions spaces, and transit functions has precedent and therefore legitimacy. In this sense the site is a strong site for a project that is very focused on combining multiple programs.

Overall, the site is diverse and open to multiple design methodologies. It seems to be particularly suited for a project such as this that attempts to exploit several independent ideas - it has no overpowering historical precedence; it is in a city that with a very liberal approach to design; it is a site that has large elevation changes that are all occupiable. The large scale of the site is a positive as well; it allows a project with such large programs to be possible and interesting. Finally, there are additional aspects of the site that can be exploited if so desired that are not necessarily required by the design methodology presented in this thesis.



Renderings of the site as seen on the scale of the entire Minneapolis downtown area. Note the relatively small scale of the buildings in the vicinity of the site. (Img. 53)

Steel Cloud

Asymptote Architects

Submission for "West Coast Gateway" Competition

1988

Los Angeles, California

Asymptote works heavily in the realm of 3-D computing. It is hear that the firm finds logic and reason and mystery in their design explorations. (Img. 54)

A diagrammatic design intent model for Asymptote Architecture's Steel Cloud project proposed for Los Angeles. (Img. 55)

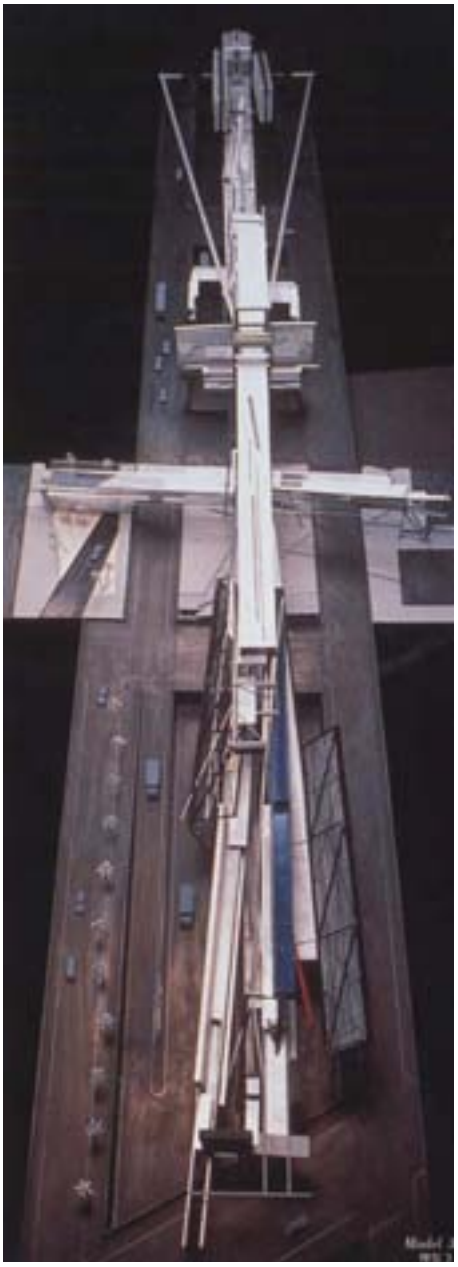
Beatriz Colomina and Mitchell Schwarzer have written extensively on the effects of the modern conception of media on architecture. They have both positioned themselves in different places on this topic though. Colomina determined that media is that which makes architecture (or, without interaction with and projection similar to media, architecture is not contemporary). Schwarzer determined that media, along with other modes of viewing, create perceptions of architecture that drive understandings of that architecture. The project "Steel Cloud" by the firm Asymptote Architects is one project that navigates the complex paths of media and technology's relationship to architecture. The firm is known for their heavy reliance on sophisticated three-dimensional computer software. They use it both for aesthetic choices and processes as well as for counterpoints for their design preconceptions. On the conditions of the physical world and the digital world, the firm positions themselves as such:

"When speaking of architecture for the next millennium, one must consider two conditions: that the physical space of architecture as we have always known it…will without a doubt

persevere; and that it will exist alongside the virtual architecture surface in the digital domain of the internet (and media). This new architecture of liquidity, flux, and mutability is predicated on technological advances fueled by the basic human desire to probe the unknown…"[61]

The firm continues with this sentiment to create rules for an architecture that they deem fits their coming future reality for architecture. They claim "Architecture for such fluid, dimensionless territories can only be an utterance, without language; a new architecture that is anticipatory, imperfect, and precisely misaligned."[62] This interest in architecture and the evolution of digital technologies propelled the firm to the design forefront in this area of theoretical design expertise. It was early in their evolution as a firm that they designed Steel Cloud. In one sense the design is one of their earlier attempts to create in the digital sphere and it was a successful one - definitely if the measure of success is receiving first place in the design contest in Los Angeles in which the project was entered.

The city of Los Angeles opened a competition in 1988 for a new symbolic project that would resemble a gateway of the west, and more specifically, a statement of the city itself. Los Angeles was after a project that embodied the "diverse cultural heritage" of the area and that was not a "conventionally



Overall model of the firm's Steel Cloud submission for L.A. A hanging, suspended gateway above the freeway of the city. (Img. 56)

61 Waters, John K. Blobitecture: Waveform Architecture and Digital Design. Rockport Publishers, 2003. Pg. 197

62 Waters, John K. Blobitecture: Waveform Architecture and Digital Design. Rockport Publishers, 2003. Pg. 198

static monument."[63] Over 150 firms entered the contest, but Asymptote Architecture's design was deemed the best. The design straddled a freeway in the city and offered a "physical interpretation of the 24-hours-a-day, 7-days-a-week pulse of the city and the technological heart that drives it."[64] Inspiration for the design was found in surveillance systems and in the proliferation of information. This is the place where the Steel Cloud project intersects with this thesis.

The firm located meaning in the pattern of the city and used this meaning to create restraints and opportunities for their design. (Img. 57)

Asymptote Architecture realized, that with the ever-expanding fields of technological research and optics (amongst others), there was only one common neutrality factor that could be utilized in this design - people. People were to be employed as the monument itself, for it is in the participants' activities and eyes that the architecture and its supposed significance has life. As Barthes would write, each finds their own punctum, their own meaning.[65] By traversing the spaces captured in the Steel Cloud, one creates waves of meaning and ripples information that spread from their activities and individual connections with and within the built space. One is intended to understand the space on their own, however there were some design intentions clearly displayed in the design of the project. Steel Clouds clearly attempts to place ethereal programmatic objects (library, art

63 Waters, John K. Blobitecture: Waveform Architecture and Digital Design. Rockport Publishers, 2003. Pg. 197

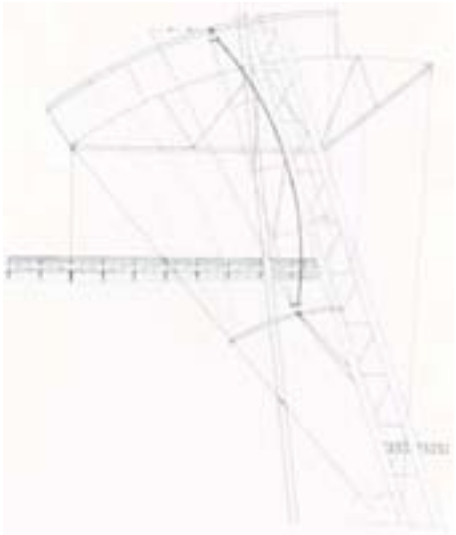
64 Waters, John K. Blobitecture: Waveform Architecture and Digital Design. Rockport Publishers, 2003. Pg. 199

65 Rabate, Jean-Michel. Writing the Image after Roland Barthes. University of Pennsylvania Press. Philadelphia, Pennsylvania. 1997. Pg. 132

museum, etc.) in locations that contrast with the expected placement of information. The spaces soar above the ground and interstate, connected by steel girders and steel walkways in a way that expresses the growing (at the time and still) freedom and speed of information. These spaces have no physical ties to reality when suspended; these spaces have no singular access point; and finally, these spaces have no containment.

Overall, the project was a twelve story high, four block long expanse of steel and glass. It was a fabric of structure and volumes that were interconnected with meandering pathways designed with randomneity at heart. Asymptote Architects proposed a program that would fit their design strategies (classic information centers and idealistic spaces with no normalizing context to extend their conversation concerning architecture and technology); it held, among others: a library, an aquarium, and an art museum. The design placed programmatic volumes at 'episodic' centers and collisions where the city's urban fabric and the site's momentums met.[66] It was an attempt to misplace the architecture and force the building's participants to create meaning as well as be the centers of meaning themselves.

Finally, the project fits with the proposed project of this thesis by stitching itself into its immediate urban context; like a transit hub in Minneapolis would have to do. Asymptote Architects employed a strong method of urban analysis in which city momentums (growth, cit context and geographies, travel



Detail of the suspension system that held the pathways and randomneity. (Img. 57)

Model showing the connections to the city and the meandering pathways that criss-cross the project. (Img. 58)

66 Waters, John K. Blobitecture: Waveform Architecture and Digital Design. Rockport Publishers, 2003. Pg. 198

patterns, density, etc…) were located and pointed in a way that allowed these points to overlap the proposed site for the Steel Cloud project. These analyses were combined with the proposed program to locate voids and solids and to create architecture "devoid of perspective, depth, frames, or enclosure."

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