The relationship between architecture and the environment while applying Jacque Derrida's idea of binary opposition

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The relationship between architecture and the environment while applying Jacque Derrida's idea of binary opposition

by

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Signatures have been redacted for privacy
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CHAPTER 1. INTRODUCTION

Is it possible to translate TEXT into ARCHITECTURE?

Can text and architecture have a one-to-one relationship?

Figure 1 – Text and Architecture Initial Question

The relationship between a building and its immediate environment is often a delicate balance between Architecture and nature. Since architecture often has a tremendous impact on its immediate environment, a new structure inevitably affect the economical, social, and political condition of an existing location. I have initially started my thesis by attempting to translate the analytical processes of the Deconstruction theory, which is a linguistic theory by
French philosopher Jacques Derrida, into architectural design processes in order to explore the relationship between Architecture and its environment.

To understand how architecture can relate to linguistic theory, a parallel between architectural design and language need to be made. Both, have structure: the structure of architecture consists of columns, slabs or walls that support buildings and the spaces they contain. The structure of language consists of nouns, verbs and adjectives, which support sentences and the meanings they contain.

During the 1980’s, architects such as Bernard Tschumi, Zaha Hadid, and Peter Eisenman attempted to apply Derrida’s Deconstruction theory to their design work. Most of their design work, however, focused on the analytical process of ‘deconstructing’ a building. In their work, Deconstruction becomes ‘interruption’, or disruption, either on the visual level or on the conceptual level. I intend to extend the application of Deconstruction theory to include the relationship between architecture and its environment while relying on Derrida’s concept of ‘binary opposition’, which I will use as a new alternative to the application of Deconstruction on architectural design.

Binary Opposition is a theoretical construct developed by Jacque Derrida’ in his book “Of Grammatology.” Through experimentation, I found that its application in architecture is useful mainly in site analysis and spatial design that blurs the distinction between building and environment, existing and designed, served and serviced…etc. and allows an integration of the different spaces. Accordingly, my design project identifies, both on the urban and architectural scale, dualities in spaces (static and fluid), views (physical and mental), and movement (pedestrian and vehicular) that are inherent in the existing historical condition. The proposed design works programatically and morphologically through these dualities to
construct a complex relationship between the existing and the proposed, the inside and the outside, the city and building. Programmatically, the design project included three different entities: a local art museum, a black box theater, and a café. These entities share a pedestrian walkway, three walkway entrances/exits, an underground parking garages, and a series of sculpture gardens. There are three different buildings and sculptural gardens proposed on different parcels of the site. The first is art museum with an underground garage. (Figure 2 and 3)

Figure 2 – Art Museum with an Underground Parking Garage
The second building, the theater, is located southeast of the art museum. On the parcel next to the theater, southeast of the theater is the café. (Figure 4) In order to access the buildings from all four directions off the highways and the streets, all three buildings have proposed paved pathways. The design attempted to weave these programs into the existing site as well as understand the impact that these insertions can create within the chosen urban environment. In short, the project activates Derrida's Binary Opposition as a way to interpret existing and designed spatial conditions in order to expose layers of complexity of architectural design, which integrates the spatial with the landscape, social historical, and economic condition.
Figure 4 – Café northwest from the Theater
CHAPTER 2. DERRIDA’S DECONSTRUCTION AND ITS APPLICATION IN ARCHITECTURE

The Deconstruction period owes its groundbreaking application of theoretical ideas from contemporary French philosopher Jacque Derrida. His theories were borrowed from Heidegger, a German philosopher, and were applied in literary criticism before they were adopted by architects in their designs.

Derrida is a Safaric Jewish French philosopher born in Algeria in 1930, and died in France on October 11, 2004. He studied philosophy in Paris with the Marx and Hegel scholar, Jean Hyppolite, at the Ecole Normale Superieure (1952-6). His work on phenomenology was quickly recognized, which granted him a scholarship to study at Harvard in 1956, and the Prix Cavailles in 1962. Moreover, he also taught philosophy at the Sorbonne (1960-4) and the Ecole Normale Syperieure (1964-84). Since 1984, he had been the Director of Studies at the Ecole des Hautes Etudes en Sciences Sociales; and since 1972, he had taught regularly at Yale and Johns Hopkins universities in the United States of America. By the early 1980’s, “Yale deconstruction” had introduced a wide readership to the name of Derrida, and he became one of the best-known names in contemporary western philosophy.¹

¹ Jeff Collins, and Bill Mayblin, Derrida, McPherson’s Printing Group, Australia, 1996, p.13
General overview of Deconstruction Theory

Derrida’s concept of deconstruction stems primarily from structuralism in linguistic theory, and post-structuralism, which was introduced in 1967-8 in, opposed to structuralism. Structuralism is analyzing linguistic and structure phenomenon. For example, when used to examine literature, a structuralist critic will examine the underlying relation of elements (the ‘structure’) in a story, rather than focusing on its content. On the other hand, “where structuralism attempted to find a level of generalizable and self-sufficient metalanguage capable of describing configurations of elements variably anthropological, literary, linguistic, historical, or psychoanalytic (collectively known as the "human sciences" in French) and analyze their relations without being mired by the identity of these elements as such, post-structuralism is said to share a general concern for identifying and challenging hierarchies in identification of binary oppositions generally characterize not only structuralism but Western metaphysics.”

In a sense, deconstruction is simply a way to read text (as broadly defined); any deconstruction has a text as its object and subject. Text can be thought of as "dead", in the sense that once the markings are made, the markings remain in suspended animation and do not change in themselves. Thus, what an author says about her text doesn't revive it, and is just another text commenting on the original, along with the commentary of others.

His theories have been called anti-foundationalism. “Derrida is not simply “against” foundations, he knows they're inescapable. However metaphysical foundations can still be shaken. He makes a movement of solicitation (French, from old Latin sollicitare, to shake as

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2 http://en.wikipedia.org/wiki/Structuralism#Structuralism_in_linguistics
3 http://en.wikipedia.org/wiki/Post-structuralism
4 http://en.wikipedia.org/wiki/Deconstruction#Text_and_deconstruction
a whole), a shaking at the core, a tremor through the entire structure.”

One typical form of deconstructive reading is the critique of binary oppositions. A central deconstructive argument holds that, in all the classic dualities of Western thought, one term is privileged or "central" over the other. The privileged, central term is the one most associated with the the *logos*. Examples include:

- speech over writing
- presence over absence
- identity over difference
- fullness over emptiness
- meaning over meaninglessness
- mastery over submission
- life over death

The binaries are the key terms against their opposites. If the question is being, then one can establish “being” against “non-being”. Derrida argues in *Of Grammatology* that, in each such case, the first term is classically conceived as original, authentic, and superior, while the second is thought of as secondary, derivative, or even "parasitic." These binary oppositions, and others of their form, he argues, must be deconstructed.

“First, Derrida suggests, the opposition must be inverted, and the second, traditionally subordinate term must be privileged. He argues that these oppositions cannot be simply transcended; given the thousands of years of philosophical history behind them...so

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5 Jeff Collins, and Bill Mayblin, Derrida, McPherson’s Printing Group, Australia, 1996, p.48
deconstruction attempts to compensate for these historical power imbalances, undertaking the difficult project of thinking through the philosophical implications of reversing them. Only after this task is undertaken, Derrida argues, can philosophy begin to conceive a conceptual terrain outside these oppositions: the next project of deconstruction would be to develop concepts which fall under neither one term of these oppositions nor the other.”

Among the pairs of binaries, Derrida focus specifically on the pair of speech/writing in some of his work. In speech, the speaker is present in front of others. The speakers’ thoughts are as close as possible to their words, so speech offers the most direct access to the speakers’ mind through his or her voice. In writing, however, the speaker can be absent. The writer’s thoughts are present through letters and characters, and are not direct with the mind. For example, a postcard contains writing does not offer a direct access to the writer’s thoughts because of his or her absence. Thus, in a pair of binary oppositions, speech takes the dominant position and the writing subordinate.

The concept of binary opposition is a key analysis in his book “Of Grammatology.” “Grammatology” is the study of writing, which is especially “the science of difference itself, involving the analysis of the play of terms within a closed semiotic system in which each term acquires value only through its opposition to the other terms.” He explored the meaning of understanding of a text while making several assumptions. Derrida distinguished among a sign, a signifier, and a signified. A signifier is “a sensory perception (a spoken word has an aspect we can hear; a written word has an aspect we can see.” For example, the

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6 http://en.wikipedia.org/wiki/Deconstruction#Phallogocentrism_and_the_critique_of_binary_oppositions
7 http://www.press.jhu.edu/books/hopkins_guide_toLiterary_theory/deconstruction.html
word “Cat” is a signifier of the animal. A signified is “a concept or meaning associate with that sensory perception.” Associated with the word “Cat”, the signified is the concept of the animal, or the cat itself. And a sign “needs both aspects, something we sense and something we think, one sensible and the other intelligible.”\(^8\) It is a combination of the word “Cat” and the concept of the animal. For Derrida, the sign is premised on binaries and as a foundational concept in Western thinking. He used Saussure as reference. “Since Saussure emphasizes the signifier and signified are related, he insists that each requires the other and they cannot exist apart. So for Derrida, he resists this pair of Western metaphysics and suppresses the signifier. The signified as the grounding term and the signifier is, to him, inessential.”\(^9\) As a result, since the signifier is suppressed, the sign, which is the combination between the signified and the signifier, produces ambiguity.

**Deconstruction in Architecture**

Peter Eisenman and Bernard Tschumi were the first architects who used Derrida’s theories in Deconstruction in their architectural design. The three eventually collaborated on the first “deconstructive architecture,” Parc de la Villet, which was the largest ‘urban park designed in Paris at the time. (Figure 5) \(^10\)

\(^8\) Jeff Collins, and Bill Mayblin, Derrida, McPherson’s Printing Group, Australia, 1996, p.63-64
\(^9\) Jeff Collins, and Bill Mayblin, Derrida, McPherson’s Printing Group, Australia, 1996, p.66
The idea of applying deconstruction theory in architecture began when Bernard Tschumi won the competition to design the park, including everything from the layout to each individual red metal ‘follies’ in the park. Later, Peter Eisenman and Jacque Derrida collaborated on the “Choral Project”, which was a small garden that was imbedded within the park. In the major park design, Bernard Tschumi used several strategies to translate the French philosopher’s ideas, and he suppressed not only the idea of design perfection, but also the idea of design itself as a technique. Moreover, he refused specific programs for the ‘follies’ and, specifically, a model of the big city park for display. Through such techniques of Deconstruction of the architectural program, Tschumi ultimately intended to challenge the ideology on which the program itself was based.\(^{11}\)

\(^{11}\) Trachtenberg, Marvin, Architecture fro prehistory to Most modernity, Prentice Hall, Inc. 2002, P.563-565
In the design scheme, he superimposed three independently conceived, highly “impersonal” conceptual layers: points, lines, and surfaces. Points are the individual, red cubical ‘follies’ that marked the locations of each point (Figure 6). Tschumi stated, “A grid is drawn over the whole site. Every 120 meter, the horizontal and the vertical lines cross.” These were “crossing points” where an individual 10 meter x 10 meter x 10 meter, 3 stories, red “follies”, or folly, is built. These follies had no programmed function and could be use as exhibition space, café, or any other public function.” These red “follies” served as different function of amenities and programs, and each varied from each other with elements such as stairs, slides, ramps, and cylinders, etc. 12 The slight variations different in their basic structural form without considering the matching of the program and the form. The unprogrammed spaces of the follies allowed the visitors to define each folly’s function. The second layers in his design scheme consist of lines. Lines are the various linear pedestrian paths that cut through the park. This layer “is superimposed on the point grid and establishes a linear line of activities.” And, “the center of this layer is formed by two axes: the North-South, and the East-West coordinates, which link up the four entrances of the park.” Aside from the straight axes that dominated the second layer, the park also contained curve, undulating lines for alternative tracks. Also enclosures formed by tree lines. Third, the layer of surfaces was the rest of the planes in the park that serve for various outdoors activities.

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12 Architecture A Critical History, Kenneth Frampton, Thames and Hudson Ltd, 1992, p.312-313
The juxtaposition of these three layers, while being superimposed on each other, resulted in the clashes of the three layers in the entire 'system'. And this was Tschumi’s intention of “deconstructing” the entire system.\textsuperscript{13} (Figure 7)

\textsuperscript{13} Trachtenberg, Marvin, Architecture fro prehistory to Most modernity, Prentice Hall, Inc. 2002, P.563-565
CHAPTER 3. BINARY OPPOSITION IN ARCHITECTURAL DESIGN

Applying Derrida’s idea of Binary Opposition in architecture design lead me to search for two conflicting/contrasting qualities of built space to represent the linguistic pair. In what follows, I will elaborate on my attempt to apply binary opposition on two spaces. The first is a site in downtown Ames and the second is in Rockford, Illinois. The latter eventually will become the site of my design intervention.

Ames, Iowa

On each side of Main Street in Downtown Ames, is a strip of commercial stores that has similar facades. To introduce a new condition into this environment, different façade styles and a non-commercial retail program can be inserted to contrast the existing condition. The contrasting relationship between the new and existing style of architecture forms a binary opposition. (Figure 8, Figure 9)

![Figure 8 - Initial Program Analysis](image1)

![Figure 9 - Initial Site Analysis](image2)
Reversal

Besides the contrast of facades and programs, the idea of Binary Opposition was further applied in the analysis of the site, using figure ground reversal to represent buildings and the streets. (Figure 10) A figure ground drawing means the buildings are the figures, and the streets and lands are the ground. However, a figure ground reversal drawing is the streets and lands are figure, and the buildings are the background. This means that a building and a street can be both a foreground and a background on a piece of drawing, and one is not the foreground or background all the time. Thus, since Derrida mentioned that a pair of binaries does not have fixed roles, the roles are constantly changing. One element does not always dominate the other, and likewise, the other element does not always have to be subordinate to the other. Therefore, a building (usually the figure) and a street (usually the ground) are a pair of binaries, and they are not in fixed roles.

Figure 10 – Figure Ground and Figure Ground Reversal
As mentioned above, I applied the idea of ‘reversal’ on a more obvious level by reversing the solids and voids on the photograph of the facade of the building that exists on Kellogg and Main Streets in downtown Ames. (Figure 11)

![Figure 11 - Building Facade Wall and Windows and its Reversal](image)

**Rockford, Illinois**

The site in Rockford, Illinois introduced a new set of challenges, which are more suitable to my goal in this research. The site is located adjacent to a river, at the southern point of the highway intersection. Not only did the site have multiple types of movement, it had also undergone drastic changes in the past fifty year. When the construction of a proposed bridge and highway began, approximately 100 old houses in an established residential neighborhood were torn down, resulting in the relocation of those residents.  

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14 Rockford Register Stars, 1965
Rockford used to be land inhabited by Native Americans. Europeans forced them out during the Black Hawk War in 1932, a war named after a chief of the Sauk Indian Tribe. On August 4\textsuperscript{th}, 1985, the first wave of Europeans immigrated to Rockford. These first settlers, who were from Sweden, were on a train on the way to Chicago. When an epidemic broke out in Chicago, the train conductor ordered the train to go on to Rockford, which was the end of the line. These settlers, who were great furniture makers, began businesses in furniture industry and as well as in millwork. The town was and still remains an industrial town.\textsuperscript{15} (Figure 12 and 13)

![Figure 12 - Swedish American Way](image1)

![Figure 13 - First Train Stop](image2)

The site is located both next to the river and the highway, where movement is present. On the west of the site, streets runs from east to west in a horizontal manner; while on the north of the site, the streets shift in a diagonal pattern from southwest to northeast. It is also located at the pivot point of the shift of the grid patterns at plan view. Located next to the river, the site is currently a series of hills, weaving with highways and streets. A major railway also passes through the city. What began as an industrial area later became a dense residential neighborhood. The social, historical and economics systems that exist at the site

\textsuperscript{15} http://www.rockfordillinois.com/chronst.htm
are reflected not only in its history but also in its present condition and the people’s perceptions of the site that generates multiple meaning of the site. (Figure 14)

Figure 14 – Pivot Point between Two Grid Systems

In an attempt to deconstruct the multiple meanings of each site element I tried to disrupt these meanings with both the architecture’s program and spatial expression. Thus, I analyzed the historical layers of the new site, the existing layers, and the impact of the proposed design on the location. Using both the history and the design of the site, allowed me to explore the various binary conditions of the site and how they overlap. (Figure 15 and 16)
Figure 15 and 16 – Analysis of Layers of the Site (Green – social economic group; Red – Streets; Yellow – Historical Residential Neighborhood)

Figure 17 – Industrial Town of Rockford, IL

As the city developed, small commercial stores began to spring up across the city.

(Figure 17)
Interviews and Historical Research

On November 23, 2004, I interviewed several local residents who lived adjacent the site. I was interested in residents who had lived in the neighborhood both before and after the construction of the highway. After much investigation, I was able to interview a young man and two elderly women. I sat down with 2 sisters, aged 100 and 96. We met in their living room at 745 N. First Street in Rockford, Illinois. We spoke of the changes they had witnessed in their community. The younger sister, Margaret Martegani Chiodini, was very outspoken. (Figure 18)

Figure 18 - The Martegani Sisters' House is over 100 Years Old

She had mentioned the many changes that had taken place in the neighborhood after the construction of the bridge. Throughout the interview, she reminisced about the environment that had existed before the changes had taken place. The neighborhood had been
an upper-middle class neighborhood with mainly immigrants of Jewish, Northern Italian, and other European descents. Neighbors knew each other. People from the various countries socialized with each other. There were Italian clubs, which she attended. The police chief, the mayor, and the fire department head were her neighbors. She mentioned it was quite a pleasant neighborhood before things began to change. The following is a record of the interviews with the sisters:

Memory of the neighborhood:

"The neighborhood used to be Northern Italian immigrants family and some Jewish people, which included the mayor, chief of police, Dennis the manufacturer, the fire chief, shoemaker, high school band, and a voice person. It used to be a very influential neighborhood because of all the people who lived there. But, after WWI, the neighborhood started going down in 1918. People left to fight in war, people died, and younger people moved out to other places. Then, the houses started going out for rent, and people started moving in temporarily. The neighborhood went down because of the renters."

"Before the Whitman Street Bridge was built, there were houses on the land as well as parks, and small business included bakery, hair salon, and factories. The neighborhood, the 700 blocks and the 800 blocks, were a group of northern Italians who were closely connected. They always have meetings for gathering. But after the bridge was built, it divided the two blocks, and the neighbors could no longer father freely and conveniently without crossing the bridge. Within these two blocks, there were the head of National Lock Company. Sadi Furniture Factory used to be at the neighborhood, and the railroad, Kenotion Division, would drop lumber at the furniture store and to Machesney Park then goes up to Wisconsin. The train still goes by, it is the switch car that drops cars off."

"No blacks at the school, all white, Irish, Jewish, Italians, etc. There used to be a streetcar or trolley, but they took out the tract a long time ago. Then, there used to be horse-drinking stop, for the houses and chariot horses to take a drink at the end of the street of the block. There was a tile company at the 800 block, and the furniture company at the 900 block."

“The neighborhood, at St Clare Street and now the Y Boulevard, used to be the rich people who live there. This neighborhood was middleclass, but it was not rich, but it is a good neighborhood. There were used to be a lot of kids outside, with the kids yelling "extra extra", for newspaper that were 3 cents. And the 100-year-old sister would save the tin cans for the kids to buy. Brown was the head of IL Railroad Company, also lived in the neighborhood.”

**Memory of the Community:**

“The parks included Beattie Park and the E side park. The Whitman Street Bridge used to go to N Second Street and to Caroline Street. The family came to the house at 1893, the parents got married. The mom is from Italy, and the dad is from South America, and they were both traveled by boat to Rockford because of an agent, then they had 13 children. The older sister whom I had interviewer is the 7th child, and then the other one is 9th children. Their father was a bricklayer, who built the addition of the bathroom, and the upstairs of the house. Mom was a homemaker. All children went to St. James School, graduated, some went to college, some got married, and 3 married military soldiers. A brother laid brick.”

“Our father used to sit at the living room chair, and yelled at people who talked about the building of the bridge, they hated it, because they voted against the bridge building, but they still build it. It disrupted the neighborhood.”

“In 1918, camp grand, 3 brothers went there. The older sister made Band-Aids during the WW1, she lived through 5 wars. She made Band-Aids in down town. The younger sister would like to see beauty parlor, grocery store, café, or bakery at the empty lot. Older sister wanted to see the houses. They are building a Jane dinosaur museum in downtown. They don’t like it, don’t think it will really attract tourist.”

**Memory of Neighbors:**

“The Italians lived in the courthouse at N Madison Street. There are still three people over 100 who they know still exist who used to live in the neighborhood, everyone moved away. One is Kate Colombia, 90 or 93, one is 103, Josephine Bardeloi, one live across the street, which is about 80 or 90. They don’t know the current neighborhoods, and they don’t like it. There used to be the A and P grocery store.”
In 1956, the government of the city proposed a new bridge, the Whitman Street Bridge, which was to span across the Rock River, dividing an existing residential neighborhood. (Figure 19) The elder resident, when asked about this bridge, spoke with annoyance. She mentioned that everything changed after the construction of the bridge. As indicated previously, more than 100 residential houses were bought and torn down by the government in order to build this new highway. Residents were forced to move out of the neighborhood. At this point, both because World War II and the changes in the area, the neighborhood began to deteriorate. What had once been a residential neighborhood with homes occupied mainly by homeowners became a rental neighborhood, with young families moving in and out of the neighborhood. As fewer and fewer residents owned their homes, the middle class neighborhood slowly became a lower middle class neighborhood.

Figure 19 – Whitman Street Bridge, Rockford Registrar Star Newspaper, 1965
Beyond the economic and social changes of the area, the building of several major highways caused the noise level in the community to increase. The interstate highway connects to several on and off ramps that are immediately adjacent to the neighborhood. (Figure 20) The rapid movements of the traffic and the slow movements of the residential neighborhood juxtapose each other. The chosen site is at the juncture of these two parts.

Figure 20 – Highways and Off-Ramps Adjacent to the Site

In addition to the highways, the site is located next to the Rock River, which provides a connection to other cities. It is also adjacent to the Union Pacific railroad, which goes
through the city. The movement from the river, the railroad and the highways all present a contrast to the slow moving pace of the residential neighborhoods.
CHAPTER 4. SPATIAL ANALYSIS AND THE PROPOSED DESIGN

Derrida believes that elements exist in pairs, such as life/death, black/white, which have a constantly changing hierarchy. Derrida mentions that in western philosophy, one of the elements in the pair of binaries is the dominant one, and the other is the subordinate. For example, in the pair of life/death, life is the dominant element, and death is the subordinate element. Life is the dominant element because it comes before death. One must have a life before a death occurs. Thus, in his theories of deconstruction, he questions the roles that each element in a pair plays. He then "deconstruct" the pair by stating the role of elements can be reversed. The dominant becomes the subordinate, and the subordinate the dominant.

The idea of Binary Opposition is applied into three categories:

1) Space - mobile and Static Space
2) Movement - Vehicular and Pedestrian Movement
3) Views - Actual and Intellectual View

**Dynamic Space and Static Space**

The movement produced by the river and the vehicular, railroad, and pedestrian traffic could be analyzed in terms of static space and dynamic space. Figure 21 and 22)
On the proposed design, the first area of static space exists in the sculptural gardens where visitors participate in slow paced movements and activities. These gardens also serve as rest areas for people walking along the pedestrian walkway. (Figure 23)
Figure 23 – Sculptural Gardens on the Site Design

The slower paced activities and movements in the parcels of land, which include the sculptural gardens and the existing residential neighborhood, create the static space. (Although static means complete stillness, for the purpose of this thesis, it is used to describe the spaces that contain no activities or a low level of activities.)

Dynamic spaces also exist as several elements of the design. The first dynamic space consists of the three parcels of land where the buildings are located. There is a higher level of activity in these parcels than in the garden and the residential housing area due to the
activities involved with these buildings. (Figure 24) In the proposed design, dynamic spaces also exist where the highways, bridges and off-ramps are located. (Figure 25) These spaces generate a higher level of activity both from vehicles as well as from visitors’ activities.

Figure 24 – Three Buildings on the Site Design
Figure 25 – Existing Highways and Proposed Off-Ramps

Example of a Car Embodying Both Spaces

In addition to the examples stated in previous analysis, dynamic and static spaces can be seen in other examples, for instance, a parked car. When one is sitting in a parked car, both the space within the car and the space outside the immediate surroundings of the car are static. Once the car starts moving, the space within the car remains static. It is still enclosed by the same shell and the driver experiences the same space within the car. However, as the driver looks out the window, the scenery outside is changing. Thus, static and dynamic
spaces are simultaneously present. In this example, the static space precedes the moving space because the driver’s immediate surroundings inside of the car remain static. Not until the driver looks out the window and sees the surrounding environment appear to “pass by” does the static space become moving space. In this manner, both the static and movement spaces constantly change and exist within a larger system.

**Application of Binary Opposition in Spatial Analysis of Site and Proposed Design**

The inter-changing of spaces as well as coexistence of the two spaces also relates to Jacque Derrida’s idea of Binary Opposition. Derrida’s pair is constantly changing. This applies to the dynamic and static spaces in the proposed design, the site analysis, and the example of a moving car. First, in terms of site design, the dynamic space and static spaces coexists within the design of the garden and the buildings. Static space and dynamic space caters both to people walking on foot and those who have parked their cars in the garage or parking lot and are then walking on the site. The “position” of the static and dynamic space is constantly changing when visitors meander along the walkway through the buildings or the gardens. This is the result of a design where the walkway becomes more than just a means of connecting one building to another. The proposed sculptural gardens are located between two buildings, an art museum and a theater, and also below the café on the ground level. (Figure26)
Static and dynamic spaces also exist in a pair. The dynamic space is the vehicular traffic and the static space is the residential neighborhood. The vehicular traffic include the highways and on ramps/off ramps. In contrast, the residential neighborhood, with majority of senior residents, has fewer activities compared to the adjacent highways.

The coexistence of the two movements can be seen when the historical Platt map of the site is superimposed over the current city map. (Figure 27) As indicated previously, 100 houses were torn down in order to build the existing highway. Thus, the dynamic space today (the highway) is overlap with the static space from the past (the houses). The highway and the houses are a pair of binaries. However, one is not dominate over the other. It is a fact that the houses were built first before the highway was built, and if we must make one element the dominant, than a house is the dominant element. However, since the site analysis occurs today, the highway is also the dominant one. Thus, it would be unfair to suggest the past takes precedence over the present or that the present should take precedence over the past. Essentially both layers of space, static and movement, coexist with no set hierarchical position of one over the other.
Figure 27 – Historical Platt Map of Rockford, IL, showing Residential Houses

**Vehicular Movement and Pedestrian Movement**

Figure 28 – Analysis of Layers of Movements on the Site
In the design, an overlap is created between the vehicular and the pedestrian movement. (Figure 28) Vehicular movements create high-speed traffic adjacent to the residential neighborhood. (Figure 29) Pedestrian movement also exists on the small streets adjacent to the site. (Figure 30) Although there a few people walking along these side streets and alleys, they remain part of the pedestrian movement system. At present, these two types of movement, both pedestrian and vehicular, are separated from each other; they are located at distinct locations where they neither overlap or nor intersect. Since the highways are located on empty lands, people cannot easily cross. This observation also supports the fact that the two systems are distinctly separate.

In my proposed design, I have tried to understand the pedestrian and vehicular systems as binary oppositions in which I disrupt there meaning by integrating them spatially to create a series of programmatically ambiguous situations. Accordingly, the pedestrian
walkway in the proposed design is inserted above both the highways and streets, as well as underground beneath the side street; to create a weave of vehicular and pedestrian circulation spaces. There will be three entrances and exits attached to the walkway. (Figure 31)

![Figure 28 - Entrance Next to the Sculptural Garden with Stairs and Elevator](image)

The first walkway is located immediately in front of the Art Museum. The second is adjacent to the sculptural garden. The third is next to the residential apartments across from the art museum and the highways. The underground portion connects from the entrance/exit of the art museum to the entrance/exit sculptural garden. The above ground portion connects from the entrance/exit of the sculptural garden to the walkway adjacent to the apartments.
The weaving above and underground of the pedestrian walkway with the highways and the streets allows the multiplicity of meaning to occur. The position of the two circulation systems is also constantly changing because the walkway is both a skywalk and an underground connection. This results in a constant change between the vehicular and pedestrian movement. The change occurs when a pedestrian’s views shift from above ground while walking on the skywalk to below ground while walking on the underground walkway. At times the pedestrian movement is above ground, on a higher level than the traffic. At other times, it is below ground, at a lower position than the traffic either on the bridge or on the street. These movements are constantly changing and the pair of "opposition" is always shifting.

**Intellectual Views**

The present language of architecture often emphasizes straightforward views rather than virtual or intellectual views. Views that are clearly defined can be seen in static spaces. Static spaces can also be called geometric spaces, where both spatial and view boundaries are clearly defined. These types of spatial designs are exemplified, most commonly, in any symmetrical architecture, or for example in the Renaissance Italian Gardens.¹⁶ (Figure 32)

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Another type of view, most commonly seen in "movement spaces," is based on one's ability to "connect the dots." These are virtual or intellectual views. Movement spaces can be defined as spaces that do not have definite boundaries. These are spaces are only experienced when one passes through a sequence of spaces. An example of these spaces can be observed in Japanese gardens or gardens, where views are often hidden because of bending paths found in both outdoor gardens and indoor spaces. These types of views are present in the corners of a corridor, in areas that interpenetrate, collide or intersect, or where interaction defines an ambiguous space, one that has no clear boundary. The interpenetrating space often belongs to more than one category. In architecture, it may be the junction of two corridors or the corner of a hallway. It is rarely a focus in a living space. These interpenetrating spaces, like "movement spaces" often have hidden views that require intellectual perception from the viewers. When one stands in a location of an interpenetrating space or a "movement space,"

17 http://www.indiaarchitectureinfo.com/gardens/chinsegrdnmain.htm
a viewer’s perception of the immediate surroundings shifts back and forth from a reality view to an intellectual view.

Moreover, intellectual perception will be examined in the interpenetrating spaces as well as the “movement spaces.” These spaces have the inherent quality of ambiguity in terms of their spatial boundaries and distinctions; this requires a viewer’s imagination to create the spatial presence that is not directly seen.

**Examples from Japanese Stroll Gardens**

Many gardens designed in Japan and in China focus on the meandering of the curvy paths. This encourages people to walk slowly along the path. In effect, time travels slower. This characteristic also allows for "new discoveries" along the path; there is never a direct line of sight indicating where the path might lead or end. (Figure 33)
These intellectual views allow visitors to take their time to imagine the rest of the garden or the path before the actual experience. They might also discover that the path or garden is not what they had imagined. As seen in the figure below, these paths can either be curving paths or have geometric angles that force a sharp turn. (Figure 34)

Figure 34 – Temple Nikko Toshogu in Japan

“Actual view,” which is defined as obvious views, can be demonstrated with the design of the buildings and the pedestrian walkway. When visitors walk along the above

18 http://www.mastergardenproducts.com/gardenerscorner/japanese_stroll_garden.htm
ground portion of the pedestrian walkway, they will be able to see the art museum, theater, and café. Since they will all be in a direct line of sight, these will be actual views. (Figure 35)

Figure 35 – Bending Pedestrian Walkway on the Design

On the other hand, the bending of the walkway, which mirrors the curves of the highway’s on and off ramps serves another purpose. Visitors cannot see from one end of the walkway to the other. The bending of walkway allows the visitors to imagine where the path may continue or where it may end, without having a direct line of site. Secondly, the underground portion of the walkway also allows for intellectual views because one cannot see directly underground from the walkway to the entrances/exits of any of the buildings. As viewers follow the path, they can imagine in their minds as to where the path might lead.
Application of Binary Opposition in Program Selection

The art museum and theater exemplify the ambiguity mentioned in the previous spatial analysis and Derrida’s theory of Binary Opposition. Two-dimensional art often requires interpretation and perception from different viewers. A theater, however, is a three-dimensional art. A play involves actors and actresses performing scripts in sequences of time, and the audiences watch the performance. A script also requires interpretation from the actors and the actresses. And when they act out the script, the audience interprets the performances. Thus, there is a high degree of ambiguity and multiple interpretations in a theater performance. This correlates Derrida’s ideas that there are multiple interpretations and no fixed role in any elements.

I am designing with four programs in mind, the theater, the café, the sculptural garden and the cultural museum. In terms of the theater and the museum, because both the hierarchy and the relationship of the binary opposition are constantly changing, the program of the architecture should be temporary. One example of this is present in the theater. Both time and program become “temporary” as a result of the changing productions in the theater. In this theater, local theater groups, residents, students, and performance groups from Rockford occupy the building at various time of the year. Thus, the theater accommodates different types of performance and performers and allow for flexible use of the space. The space becomes a place where meaning is based on the content of the various productions. Secondly, in the museum, objects may have been moved from their original context, thus becoming artifacts. The museum contains large paintings, photography, small paintings, sculptures, and small objects on the second and third floor. These art pieces come from different time period, and a viewer must glance through the room to “connect the dots” from
one object to the next, in order to connect the time that is implied between each displayed objects or element. For example, in the photography gallery, photographs from the 1800's and 1900's are display in a chronological order. Thus, between each photograph, the viewer must imagine what happens in the time between the displays of two consecutive images. In this manner, the time implied in between the displays is the “virtual” time, time that exists in history but requires our imagination and assumptions to understand its passing.
CHAPTER 5. DESIGN SCHEME

Figure 36 - Overall Site Design
While the site selection in Rockford, Illinois encompasses the juxtaposition of movement and static space, the design creates various views into both the existing space and the designed space. In this scheme I focus on layering the movements within the three structures, the pedestrian walkway, the recreational parks, and the parcels of unused land adjacent to the highway. The latter are used to connect the presently segregated neighborhood from the East to the West. First, I introduced three programs on the site in
three buildings, the art museum and underground parking garage (Appendix A), a theater (Appendix B), and a café (Appendix C)\(^{19}\), locate on the site and offer amenities to the visitors. In order to bring the neighborhood back together and instill a sense of cultural value on the site, the programs of art museum and the theater are chosen. The café is design to allow a space for social gathering for the neighborhood. All three programs attempt to reconnect the segregated parcel of lands back together through the activities in the building. Secondly, the art museum is located adjacent to the residential neighborhood with majority of elderly residence. The program allows the residence to feel a stronger sense of connection to their hometown upon seeing the artwork and photography of the city and by local artists. The design of the building uses concrete walls and steel structure, with three different sets of lighting inside. The building has three stories; the first floor contains a central meeting space, gift shop, classroom, coatroom, and rest rooms. One can go to the second floor using the central staircase or the elevators. The second floor contains four zones of art separated by movable exhibition panels: a space for large exhibition piece, a space for photography, a space for small paintings, and a sculptural garden. The third floor contains a large exhibition area for large art pieces, a small exhibition area for smaller objects, and also an exhibition area for small paintings or drawings. Moreover, the lighting of the building consists of three sets: skylights, interior track lighting for the display pieces, and permanent lightings on the ceiling. The separated exhibition spaces and sets of lighting allow for flexibility in the program of the art museum. Next, the theater is located in between the museum and the café, and allows student groups and local theater groups to hold performances. This program allows production to be held, thus turning the existing wasteland into a production zone. The

\(^{19}\) Images of museum, theater, and café floor plans, building sections, and site sections
theater contains two stories, with some of the second floor supported by pilotis. The first story contains office spaces and storage spaces, and the second story contains the 35 feet x 75 feet black box experimental theater, and a central meeting and information area. The entrance of the building is connected to the pedestrian walkway, while the entrance of the first floor connects to the outdoor sculptural garden. The roof of the theater is solid, but the meeting space adjacent to it has a mesh roof that allows natural skylight to shine through. Highway off ramps, on ramps, and parking spaces outside the building are also proposed in the design scheme. Third, the café is adjacent to the theater. Eating and socializing in the café allows locals and visitors to mingle and to interact with each other, therefore building a stronger connection between people. The café has two stories, and the entrance is also from the pedestrian walkway. The ground floor of the café contains eating area as well as service area for the delivery of food. The first floor of the café contains a larger eating area and bar, a kitchen, and storage space. There is a bridge in the center of the building on the first floor, connecting two different eating areas. The ground floor of the café also exists to a small garden. The roof of the café is glass with steel structure and allows skylight to shine through the entire building. All three buildings use same material of concrete, glass, and steel, in order to have a sense of unity in the three designs and also attempt to tie the neighborhood back together. All three programs in the buildings attempt to reconnect people and the neighborhood together. Moreover, a pedestrian walkway begins at the art museum, continues through the small and large sculptural garden, and ends at the residential neighborhood located at the opposite end of the site. (Figure 38) The walkway directly links the three buildings together thus allowing easy access for pedestrians. The weaving in and out of the vehicular and pedestrian paths coupled with the fact that the site can be
experienced from both from above and below helps to integrate the site, allowing for a more intimate experience. The entrances and exits of the walkway have an elevator and stairs enclosed by glass panels. While a person uses the elevator to go up and down the different levels, s/he can see the changing views of the different ground levels.

The design focuses on the creating of several “zones.” The architecture, the proposed parks and the sculptural garden design define these zones. The “park zone” and sculptural garden offers static space for recreational purposes; the architecture offers activity spaces where people may browse through the museum, watch a performance in the theater, or eat socially at the café. (Figure 39) The sculpture gardens allow for a temporary pause for pedestrian who desire a break on the walkway. This quietness of the sculptural garden also contrast with the busyness of the highways and instill a sense of stillness among the traffic.
Figure 38 – Direction of Movements
Figure 39 – Different Zones of the Designs
Creating Various Views

Different usages of both actual and intellectual views are adopted into the design. Because of the buildings' scale, people on the walkway can see above the four-foot handrail directly toward the buildings. However, they will not be able to see either the end or the turns in the tunnel. This allows the intellectual view to be explored. (Figure 40 and 41) This same idea can be observed in Japanese gardens. Paths and walls often curve in a way that block the end of the path from view. People must "connect the dots" along the way in an effort to visualize what might lay ahead.

Figure 40 – Bending of the Walkway - View toward the Southwest
Figure 41 – Bending of the Walkway - View toward the East
CHAPTER 6. ENVIRONMENTAL IMPACT OF DESIGN

Cultural Factors

As designed, the art museum will house small paintings, sculptures, small objects, and photography representing local artists. This will celebrate the history of the Rockford by raising the awareness of both local residents and visitors from outside the city, of the craftsmanship and artistry that have been present since it’s beginning as a furniture-manufacturing city. The construction of an experimental ‘black box’ theater will allow for performances by local students and theater groups. The café will provide a place for social gatherings by both residents and visitors.

Social Factors: Bringing Neighborhood Back Together

During the interviews, the Matigani sisters mentioned that the neighborhood used to feel safe. However, once the highway was built, the neighborhood became segregated. There came to be a clear distinction in the ethnicity of the different areas. The neighborhood near the river consisted mainly of residents of northern Italian and Jewish descent, while in the eastern area most residents were of Swedish decent. The café, which is located at the intersection of these two parcels, will hopefully connect the neighborhoods back together, allowing for social gathering among the residents of the various areas.

In addition to raising cultural awareness, bridging the site with the pedestrian walkway and the building the proposed structures will also tie the neighborhood back together. In particular, the café will allow people to gather, while the pedestrian walkway will connect the houses at the opposite end of the highway. This is an attempt to reverse the effect of the highway, which had previously divided the residential neighborhood. In
this manner, the new walkway serves to unite the once divided community, providing a closer connection and more interaction among both residents and visitors.

**Developing the City**

In order to develop a city or country's economy, new elements must be introduced both to attract outsiders and to maintain local interest. For this reason, an educational process should be included in the plan. For example, India and Hong Kong, which were very poor cities in the past, developed and prospered with the help of foreign aid and internal development. The art museum was designed with classrooms and educational facilities, which would be used, by local residents, children, and outside visitors. Classes could include the educational programs relating to both the cultural aspects and art in the city. Education would also bring awareness and hopefully cultivate more interest for people to visit. This would encourage the continued development of the art and cultural aspects of the city. With Rockford's origination as a furniture-making city, craftsmanship plays an important part in all forms of art, whether it is in the creation of museum pieces or in a performance in the theater. The proposed program only further develops what made the city unique. This will perhaps lead to an artistic distinctiveness, which will set it apart from other communities.

**Preserving and Renewing Resources**

The proposed design also takes into consideration several aspects relating to the environment. First, the larger scheme of the design focuses on using the "waste land" created by the interchanging highway. Currently, there are several parcels of land that are used solely

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20 http://www.econlib.org/library/Enc/ThirdWorldEconomicDevelopment.html
for one purpose, the highways. The proposal includes buildings, gardens, and a walkway. What was previously wasted space will become productive space. Moreover, the design of a pond in the sculptural garden serves several functions. First, it is the collection place for wastewater from the three proposed buildings. The water will be purified and treated underground before going to the pond. Once in the pond, the water will be used not only for aesthetic purposes but also for the irrigation of the surrounding plants.  

The site consists of an area including the residential neighborhood on N. Second Street to the cemetery across the highway. The proposed museum is located on the northwest corner from the highways, the theater is located at the southeast corner from the museum and the café is located southeast of the theater. The proposed design scheme also includes a sculpture garden and a pond. Both of them are located between the museum and the theater along the pedestrian path, and below the café.

http://ohioline.osu.edu/aex-fact/0768.html
CHAPTER 7. SUMMARY AND DISCUSSIONS

Applying Derrida in Architectural Design

These pairs of oppositions were applied in both the design of the architecture and the design of the site. Deconstruction, or the “unfixing” or the “on-shaking” of the foundation, as Derrida had called his theory, was demonstrated at the site by putting in walkways both above and below ground in an area that had been used only for highways. It was also applied by humanizing the area by building a theater and a café on unused land. People could then gather on what had previously been a “wasteland.” This is another example of “un-shaking” the existing condition of land usage. The pedestrian walkway also “un-fixed” the segregated neighborhoods, connecting it back together. The interpretation of deconstruction aimed to un-do what had existed. In this situation, this resulted in a more humanitarian condition at the site.

One to One Direct Translation between Text and Architecture

Ultimately, the design of the site and architecture depends on the designer’s own interpretation. Based on the studies from past architects such, as Tschumi and Eisenman, there does not seem to be a direct relationship between the “language” of language and the “language” of architecture. Although some similarities may be found, it is a difficult task to translate one subject to another. If we look at the examples from past architects, each architect translated the theories in a very different way, which is heavily relied on interpretation. That said, architectural design could always benefit from using language as a reference. It can be useful to interpret ideas and then apply them to a design. This concept is in fact the basis of this thesis. The design focused not only on its relationship with their
environment but also ideas and interpretations derived from Jacque Derrida’s linguistic theories.

Furthermore, since architecture has an intricate relationship with its environment, it is important to be sensitive to the impact the design will have on the site. This thesis began as an exploration of the relationship between the theoretical works architectural design in the hope of finding a more accurate translation from one subject to another. This task relied heavily on my own interpretation. As a result, the relationship between architecture and the environment became the focus of the design and in its analysis, while still taking into consideration some of the ideas derived from the linguistic theory of deconstruction.

**Recommendation**

The thesis began with my attempt to translate a few of Jacque Derrida’s theory of deconstruction into architectural design. However, upon examination, Derrida’s theories cover a wide range of subjects and points, and the attempt to translate the entire concept seems an impossible task. In the later phase of the thesis, specific points within the theories are chosen to have a more focus analysis. I found it is better to choose one or two specific points within the broad spectrum of concepts. In the case of the thesis, the general idea of binary opposition was chosen. Since, in language, a word can have multiple meaning, tenses, and applications; one idea in a theory can also have multiple interpretations and applications. The idea of binary opposition, for instance, may be understood and applied differently by another individual in his or her architectural design language. Thus, instead of translating Derrida’s theory of deconstruction from linguistic theory to architectural design, it is better to
focus on specific points, analyze previous works by architects who attempted similar tasks, rather than attempting to blindly translate vague one subject into another.
Art Museum First Floor Structural Plan

Art Museum First Floor Lighting Plan
Art Museum Third Floor Structural Plan

Art Museum Third Floor Lighting Plan
Theater First Floor Structural Plan

Theater First Floor Lighting Plan
Theater Ground Floor Structural Plan

Theater Ground Floor Lighting Plan
APPENDIX C

Café Structural Plan

Café Lighting Plan

Structuralism,

Post Structuralism,

Deconstruction,

Binary Opposition,

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Trachtenberg, Marvin. *Architecture from prehistory to post modernity*, Prentice Hall, Inc. 2002

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