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The Emotion in Architecture  
the evolution of process and theory  
towards a relative idea

Bachelor of Architecture Degree Program  
Thesis Design

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many thanks to my parents and colleagues for helping me accomplish this enveloping challenge at this point in my life.

dedicated to the miracle drug... caffeine

...to be continued with reference to datum, repetition, and transparency: the next trilogy.
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an introduction to an experimental thesis

As I began this thesis a year ago I was very broad in scope and concern. Through the help and suggestion of my thesis advisors I have been able to narrow my thoughts to a bit more tangible level of comprehension.

The thesis began with my personal attitudes about how we live. I believe strongly that American styles of living do not support sustainable notions about land conservation and social interdependence. Most of my awareness has evolved from my travel experiences, in western Europe and much of the eastern United States. I do not wish to attempt to import European traditions and apply them to American themes. That is part of the reason why I chose Edward Hopper to base much of my reasoning and thought analysis upon. Hopper was able to Americanize European characteristics in painting, and give them a special quality and characteristic that was truly American.

I am a strong admirer of American traditions and ideology. I am searching in this thesis for a way to ask questions about who I am as a designer, what design means to me in terms of aesthetic, integrity, and form, and what social distinctions can be enhanced through the power of architecture. I love architecture and respect the ability it has to intellectually and physically serve the people that it works to shelter.

"Architecture is no more than intention. It is a mediator between the implications of the designer and the needs of the people it serves. Without architecture, there is a vacancy in the process for progress."

- Deni Daughery
an examination on the way we live and inhabit space

the suburban lifestyle

Here in America, a land of tradition and freedom of will, we seldom fully investigate the choices that we make, which affect our way of living. As our families grow and change, our needs grow and change. But that process is becoming more evident, especially with respect to providing human shelter. It has been said that one's house is an expression of one's values, but can we honestly say that we are happy with today's housing normality? In America's long history, land has been available to almost no end and homeowners have been able to take an individual approach to housing. Denser housing forms have emerged over other less dense forms and have directly influenced a motion for revising the American way of living. This chapter addresses these issues along with explanations and interpretations on what the American Suburban ideal is and how it can be applied to new possibilities for housing.
An understanding of the reoccurring problems in our housing environments in Suburbia begins with its origin in the early nineteenth century “Villa Residence” housing developments outside of London. It concentrated primarily on a quality in scale that differed from centrally located urban scales. The new form soon caught on and expanded to geographical areas that were separated from the central districts of London. Outside interest resulted from the desire for the husband to gain relief and isolation from his working life within the incustry of the city. With this, the wife was required to agree to isolation and the inordinately tedious life that resulted from decentralization. A number of historians critics have commented that,

“Boredom was the price willingly paid for a respite from urban tensions.”

and with the increasing strenuous nature of the London metropolis, this new trend caught on quickly.

In colonial America, about a century before this London development, a housing tradition was taking form. The agricultural age of America and the United States government began encouraging new colonization in the northwestern territories by making land grants readily available. A new building type evolved; simple in form, made by hand, and constructed of regional materials. A rural identity of a single freestanding farmhouse became an idealized housing form that can still be understood today for its nature of tranquility, open space and self-sufficiency. The rural identity of early American living is epitomized in example estate homes like Mount Vernon and Monticello, and has been a strong influence on simple housing forms for the past two-hundred fifty years.
In the more populated areas of the East, a better accommodating, higher-density housing type flourished and unlike rural homes, tended to be built by a developer rather than the resident. More complex building techniques were administered and the buildings tended to be designated as “income property” for early colonial investors such as Benjamin Franklin.

Around the introduction of the nineteenth century, urban housing took a slight turn due to the effects of the new industrial period. The colonial townhouse grew upward and subdivided both vertically and horizontally. Supporters of this housing typology were ethnic immigrants, who began moving to the new urban centers of cities like Boston, Baltimore, Philadelphia, and New York. The result was a negative image of dense, overcrowded living quarters in tenement buildings which tended to influence the housing market which holds true as a major misconception even today.

But at the same time, as urban centers grew, residential subdividing began to occur outside the central city. “Production Housing”, an intervention of the industrial age, worked to accommodate the increasing demand for suburban locale and provided the rural, freestanding farmhouse image that was previously romanticized by American families. However, in the early stages of suburb developments, there was no concern with the automobile as a design issue which created major infrastructure problems of congestion. The solution came from substantial government funding for highway programs that resulted in a series of bedroom communities at the perimeter of the city limits.

After World War II and following the decentralization of our cities, American housing ideals continued to change with the introduction of the information age of today. A new economy emerged based on a powerful white-collar sector that surpassed the previous blue-collar industrial nation. Different housing typology, density, and tenure followed that was primarily aided by the FHA and the VA mortgage programs. In light of a new technology, the borrowing of money with low interest payments covering extended amounts of time, Americans found it affordable to build their private dream. In combination with a tremendous baby boom, the American family now spread over the vast rural landscape, each with their own interest and values in mind. However, much emphasis was put on Highway responsiveness to increased traffic and continued inexpensive fuel costs. But with the oil embargo of the 1970’s, a new awareness was born. Commuting became a tremendous expense and burden and some amount of relief was provided with the creation of new city subcenters. These new commercial, residential, and business districts allowed people the ability to reduce commuting expenses and time by selecting their location and life-style to better accommodate their own conditions.
Having explained the chronological evolution of our housing tradition, we can
further investigate planning and development types that exist today. Beginning at
the origin of Suburbia, during America’s post-war period, we are able to focus
on the similarities and differences between the high-density developments of
housing in Western Europe and the low-density sprawl of the United States.
Two ideal environments that represent the epitome of “Suburbia” and the density
of the city districts are Levittown, Pennsylvania and Vällingby, Sweden respectively.
This analysis can be made due to the strong similarities in both the physical and
demographic make-up of the two developments. Sweden and the United States
compare almost equally in per capita income and in the high standard of living
represented by the large amounts of private ownership and production. In addition,
both countries have had abundant lands for growth, and the per capita rate of
automobile ownership ranks among the highest in the world. Lastly, there has
recently been a strong U.S. influence on Sweden in business practices, educa-
tion, and the arts, based on similar morals and traditions of political democracy
and egalitarianism.

To compare and contrast these two living environments, one must understand
that the selection of Vällingby and Levittown was made to illustrate major envi-
nronmental characteristics in suburbs designed to house similar kinds of people.
One must also understand that the two metropolitan areas they border;
Stockholm and Philadelphia are very different in sizes, comparing at an inhabitant
ratio of nearly 1:4. But with this in mind, we can better judge the following re-

tults of the analysis made by David Rapoport between the years of 1973 to
1975.

“Though travel times are similar, the means of transportation are not.”

The difference in automobile commuters favors the Levittown worker by nearly
3:1. In addition, only 1 percent of Levittown households live without a car com-
pared to the 40 percent of Vällingby households having no car at all. Most likely
this is a direct result of Vällingby having a great deal more work places that can be
reached by public transit, bicycle, or foot.

“The size of Levittown in land area is about three times that of Vällingby, while
the number of dwelling units is roughly equal.”
This factor is due to the complete development of Levittown as single-family, detached, privately owned homes, containing just over 4 family members per unit. This contrasts to the 92 percent of Vallingby dwellings consisting of multi-family, public-owned, garden-style apartments that house 2.5 family members per unit. Interestingly enough, the number of persons per room of each unit within the separate communities varies slightly, by a margin of only .17 favoring the Levittown sprawl.

The site planning of each neighborhood differs as well. In Levittown, the plan consists of seven or eight superblocks that are each bordered by arterial roads from which many terminus branches spawn, dissecting the blocks into many separate neighborhoods. In Vallingby, six superblocks are laid out along a subway line and each block individually focuses on a central entity located at a subway stop. The major difference is the location of commerce and communal amenities. Vallingby focuses these to the block central while Levittown tends to force major shopping centers to the periphery of the development. The pedestrian environment of Levittown consists only of the individual homes, lawns, and streets, where most of the development has no provisions for sidewalks. In Vallingby, the development focuses on the center of the blocks where pedestrian circulation is located, fully removed from the arterial automobile circulation on the periphery. The walkways typically pass through large public open spaces that occupy a large percentage of the land available.

"The adults in both communities today seem well pleased with their surroundings, but there are some indication that today's Levittowners like their environment slightly less well than the original settlers, whereas the residents' opinion about Vallingby has improved slightly over the years. These opinion changes may be partly due, however, to changes in the demographic structure of each community."

The suburban ideal could not really be defined as previously mentioned, until after the war in the 1950s. It was then that the modern suburb could be understood in a place which "survives without any definition." By saying this, critics have described the suburb to be neither advantageous of urban locale nor feeling as open and free as the rural country. It is rather, a nice balance in the disadvantages of both. It is agreed that the suburb has neither the interest of a busy city, nor the charm and sanctity of the country, and gives no advantage of solitude or of society."
The town that was once displayed by its urban street definition and enclosure, served as an embodiment of close living within a tight layout; but is now a scattering of small-scale buildings and dwellings that are separated by great spaces. New development displays a strong tendency to the philosophy of the twenties, where roadways and expansive lawns work to manufacture an untrue rural identity at the expense of valuable acres of agricultural land. Blame is really not at the fault of the designers, but was more so the doing of government officials, planning officials, and local councillors who tended to foster a “garden-city” bias in house-building. The people of suburbia were trained to not demand anything different by simply not being exposed to any other options. They understood that what they are offered is what they desire and therefore accept it unknowingly of its true level of quality.

Objections to the suburban ideal can be listed in the following headings: suburbia is land wasteful; it is socially vacant; it is expensive; it serves to be both mundane and wasteful of time and energy due to commuting and conducting daily errands; suburbia is neither town nor country and a merging of these identities serves to be untrue to its actual nature; suburbia has a weakened scale and sense of spatial quality.

The first objection appears to be a product of sprawled density and the inefficient economies in the use of land. The second point is concerned with the sociology of citizens and their personal state of happiness. The third point involves the specific distribution of land-uses for industry and commercial properties in conjunction with housing contexts. The last points stated concern themselves primarily with aesthetic and personal comfort only.

Suburbia’s problems do not stop in just its physical characteristics but infect many social idealizations in people’s choice of lifestyle. As the physical problems snowball into more complex issues, a new avoidance has emerged to the issues that suburbia represents. The information generation is choosing a different lifestyle than that of their parents. Family size has reduced considerably on the census average and it is becoming more common for both members of the household to work, thus putting less of an influence on the accommodation of private shelter. New markets have grown for uniformity, affordability, and maintenance-free living found in higher-density multifamily dwellings. The new information generation is requiring a change and flexibility not offered by the single-unit suburban home. They are insisting on better convenience and location in hopes to save time and energy that commuting so strongly demands. The new convenience and preserved opportunity to enjoy leisure time is a welcomed trade-off to the private living of suburban separateness.
Other factors can be further examined, with most of their emphasis directed at the power of the American dollar. An increase in labor costs and more infrastructure responsibilities for the developer is causing more persuasion towards higher density housing. More specifically are the factors that govern land costs: new, stricter environmental regulations, increased exactions from local agencies to support individual development interest that directly influence more developer responsibility to provide infrastructure and public amenities, growth curve escalations and the conjoining demands that population increases influence on housing markets.
chapter 3

abstract
The radically stylistic architecture of the early to mid 1990's suggests a rigid and complex understanding of the world that surrounds us. This architecture that I speak of is the design creations of dramatic technocracy and assembly, with general themes of deconstruction and mechanism. This post-constructivist, post-structuralist, and post-Corbusian architecture seems to be gaining great interest within American architectural schools but does not seem to have a high level of impact on the general American post-modern aesthetic. Instead it seems to derive greatly from the European influences of the Dutch, English, Austrian, and German architects. I mean not to discredit this movement, if it may be called that at this stage in it's development. I instead aim sarcasm at its faults within the schools and the faddism and style cycles that are seemingly applied as a solution to every design problem being addressed. The "deconstructive" notion in this style seems to offer open invitation to the assembly of forms and lines with gut instinct and a complex aesthetic being the basis for decision justification. It serves as a camouflage for issue development and weakens designer credibility, while little concern is placed on the elements of tone, light, scale, and context.

Perhaps the architecture of Kahn, Saarinen, Wright, Gropius, or Mies can better explain the lessons to be learned by the student in his or her quest for spatial understanding in design.

For me, their ideas have been presented clearly in academic lessons. But the mentors own lessons seemed to derive from the social concerns of the day they represented. Issues and ideas of the decade have combined with innovations for the future. They served as the decision making basis for these designers, and it is this mentality that I wish to mimic in my thesis. We should derive our principles from the present and form our own knowledge base. We cannot represent truthfully in our design the thoughts and ideas that we have not been formally introduced to. Informal concepts and realities play an important role in the justification process for design rationality. By saying this I mean that personal interpretations on our surroundings and of our personalities can play as important a role in design as the as the factual logic that is accumulated from thorough research. Neither can provide all the necessary resources for interpreting the design situations alone, however, neither can be fully excluded from the process of problem solving. There must be a certain balance between these two resource bases; that balance being under the discretion of the designer.
chapter 4
thesis statement
this thesis explores the inner relationships between a theory, a program, and the architectonics of space and form. It is a rational approach to understanding how architectural theory might relate to "practical architecture" with specific consideration for how the conscious and unconscious perception of architecture might be enhanced within the user.
chapter 5

the thesis organization: the triad formula
The organization of this thesis derives from a series of considerations that I have developed with respect to my personal philosophy towards architecture and my ability as a designer to create architecture that is real.

This thesis is based upon three branches of architectural consideration: a theory, a program, and architectural tectonics. These branches are organized abstractly in a triangular geometry with each individual branch marking one of the three vertices separately. The abstract space that is then enclosed by connecting the vertices becomes the territory for this thesis investigation. There is no specific linear process to the approach for the thesis thought and development patterns, but instead the ideas are investigated and discovered within this abstract realm. There is a possibility that no specific answer will evolve to the questions being posed within the thesis. The study is to be considered as no more than a study. It is an investigation of a series of ideas and interests, and if specific resolutions arise, then so be it.

The thesis considerations outlined in this study overlap and converse with one another. The study looks to identify with any unexpected complexities that are raised in the process of developing the more detailed concerns of the thesis. The study's intention is to educate the designer about the three thesis components previously mentioned, without any specific bias to one or another, and then to balance the different aspects of architectural design and philosophy into a beneficial study that leads the designer to attend to the considerations that he may find valid throughout the process.
The three branches that were previously mentioned will be explained further here by defining the terminology, with respect to the thesis statement. Other chapters in this report are referred to for elaboration of the terminology as it implies towards the thesis design.

The first branch deals with **theory**.

In relation to this thesis, theory can be renamed as **substance**. Substance is the abstract matter from which rationalization derives and conflicts may be resolved. Theory may be considered to be a generative component that the ideas emerge from, but throughout the design process continues to serve as a consistent basis for new ideas and contradiction. It may be referred back to for suggestion and direction when complications arise or decisions are to be made. The theory is a common ground for thought and judgment, it is the conscious ideas and guidelines set by the designer that can be used to develop and enhance the unconscious thinking throughout the development process. It is not intended to be fully understood or devised, but instead it might become a flexible component that evolves with the design and philosophy, changing and improving as new knowledge and intellectual depth is discovered.

[for a more detailed description - see chapters 6 thru 8]
The second branch is **program**

This is a nonspecific term that represents the architectural vehicle for thought and ideas to be administered to. It is a device that the theory and philosophy may be investigated through and will serve as a medium for discovery and interpretation. The vehicle may formulate as a building or as an attitude. It may evolve into an aesthetic or a principle. The thesis will be a balance of these separate entities or devices, and will strive to incorporate as many rational, functionally programmatic, and elemental notions as necessary to provide a coherent and applicable proposal to the thesis questions at hand.

[for a more detailed description - see chapters 9 and 10]
The third branch is **tectonics**.

We are a product of our surroundings and our education is a compilation of our experiences and exposures to this present date. Our attitudes are biased and limited only to what we know. Innovation derives from a knowledge base but invention spawns from the unknown. Whether it be trial and error, research, practice, development, or accident, invention derives from sometimes uncontrollable forces. This thesis seeks to understand the past, understand history, make hypotheses, and address the problem equipped with as many tools and strategies as possible. Education becomes the most important tool and the amount of that education becomes the database for interpretation and prediction. Invention is unpredictable, especially at the immature stages of a young, architectural student. The validity of this thesis is based on the present education of the designer, the designer’s outlook towards architecture, and the designer’s ability to incorporate architectural tectonics into a workable approach and possible solution to rational problem-solving.

[for a more detailed description - see chapters 11 and 12]
chapter 6
urban tone
the nonspecific relationships and conveniences of urban America

Urban tone is a concept that has been reinterpreted with every generation since the beginning of American history. It has derived from social ordering systems and the development of urban symbols and stereotypes ranging from corner drug stores to package stores and from sidewalk markets to suburban convenience stores. As Americans, we have derived our social order from the eclectic nature of our heritage. We tend to search for environments that serve as niches for inclusion based usually on class, race, culture, or status. In many metropolitan cities, such as New York or Los Angeles, these types of niches vary dramatically and provide different opportunities and securities for the people who use them. But identities evolve, people grow, and cities change. But one thing remains constant and that is the need people have to identify with their environment.

Architecture is meant to be a tool for understanding the way we live. Architecture can provide new opportunities for different social groups. It can enhance the way that those groups relate to their context and can improve the way that they live. Architecture can offer alternatives for people to explore and develop and can provide a means to discover new ways to address social relationships and ideologies.

Architecture, however, is not meant to be applied. Architecture should reach out beyond what we know and should look to improve and reinterpret the way we see and do things in everyday life. Architecture can become an opportunity for discovery, providing and sharing new opportunities for the people it facilitates.

Emotion and sensitivity are two important elements that architecture must address in the provision for social identity. Relationships must be established within the architecture and between the architecture and its inhabitants. Emotion can be broken into two key elements, those being tone and mood. The thesis termed as "Emotion as architecture" has no recipe for success or application, therefore a source for understanding and providing credibility must be established. Edward Hopper is to be used as that source.
Edward Hopper: the application of emotion
Edward Hopper's (1882-1967) impression on urban life evolved through his many years spent living in the metropolis of New York City. There he painted and interpreted what he saw and gave much attention to how people live in anonymity and isolation. His visions were strictly interpretation rather than documentation. The emotion came from within himself, and it was characterized in his painting through dramatic uses of color, light, and tone. Hopper gave careful attention to the relationships between people and their environment. His paintings often focused more on the urban atmosphere than on the human subjects being presented. This allows the mood to become strikingly isolated from the physical identity of the subject. For example, his careful consideration in the representation of fluorescent as opposed to incandescent light, creates a cool atmosphere, in an effort to enhance the feeling of a somber, secluded, and alienated presence. The human figure merely acts as a reinforcing element to this idea of mood. In his works, Hopper captures the stillness, anonymity, and perplexity of urban life in the postwar, cold-war era and is able to present it in a context that is both symbolic and expressive of certain personal vantages and perceptions. An additional example is his careful assembly of line and form that creates the compositional clarity, in an attempt to strengthen the identity of his architecture as subject. His interest in representing the solitude of urban life is not the primary idea being sought by this study. Rather, his manipulation of this idea through medium composition and expression of his paintings. It is a study in the way that Edward Hopper assembles the composition, and the way that the composition is tonally represented, manipulated, and subjected to evoke an incredible amount of emotion and feeling.
His words state,

"I believe that the great painters, with their intellect as master, have attempted to force this unwilling medium of paint and canvas into a record of their emotions. I find any digression from this large aim leads me to boredom...

No one can correctly forecast the direction that painting will take in the next few years, but to me at least there seems to be a revulsion against the invention of arbitrary and stylized design. There will be, I think, an attempt to grasp again the surprise and accidents of nature, and a more intimate and sympathetic study of its moods, together with a renewed wonder and humility on the part of such as are still capable of these basic reactions...

To me, form, color and design are merely a means to an end, the tools I work with, and they do not interest me greatly for their own sake. I am interested primarily in the vast field of experience and sensation which neither literature nor a purely plastic art deals with. One must say guardedly: human experience, for fear of having it confounded with superficial anecdote. I am always repelled by painting that deals narrowly with harmonies or dissonances of color and design...

So much of every art is an expression of the subconscious, that it seems to me most all of the important qualities are put there unconsciously, and little of importance by the conscious intellect..."

-Edward Hopper
chapter 8

Hopper:

by today's standards
the synthesis of Hopper into architectural formulations

Much of today's architectural world does not concern itself with an overwhelming and encompassing tonal theme. Today's architecture is a product of technicity and science, with a strong concern for form and detail rather than the medium and/or method of application. Today, Americans are leaning towards working in a short-term gain approach to architecture. Little attention is put towards context, if at all, and as days to years accumulate, it seems as though fewer and fewer inner urban relocations and investments are being made (except at a large metropolitan scale where large corporate enterprise occurs).

What exactly is a product of technicity and science? In short, this is an emerging architectural identity based on continued economic success, scientific innovation in materials and products, and the dedication of some architects towards reinterpreting the formal and customary techniques of the past. It is an architecture where substance is based on the dollar, and form is based on direct application of that dollar. What is left behind many times are the social considerations about context and urban niche. The effects of an architecture on its context is very often forgotten or ignored and as a result, there is very little concern about social and physical environmental impacts beyond the boundaries of a site's property line.

One way to approach these considerations is through theory. Whether it works or not is left to be tested. Edward Hopper is very much a revivalist idea in theory. By terming him as a revivalist, it is meant to define him in historical retrospect. Consideration and basis for his principles lie within the people he studied. They are present in the paintings he paints and words that he writes. But perhaps, that type of revivalist basis is what is lacking coherence towards the increasing eclectic nature of modern urban development. Little emphasis is placed by the owners and architects beyond the property lines of their development areas. As architects, or students of architecture, it is proper to concern ourselves with the impact of our creation on the environment and its context. It should attempt to identify with it's surroundings, with it's users, and with it's public by defining who or what they are and what needs there are to be met. As land values rise and land availability shrinks, there should be a new entrustment in our inner urban areas, reinvesting and reidentifying with what was once the cultural centers of our past. This is a revivalist identity in architecture, one that has been lost to Americans, and one that continues to be sought after for rediscovery.
Edward Hopper once commented on his impression and analysis of his fellow contemporary Charles Burchfield. It is believed that this interpretation is truly not of Burchfield alone, but primarily of Hopper himself.

Hopper stated, "By sympathy with the particular, he [Charles Burchfield] has made it an epic and universal. No mood has been so mean as to seem unworthy of interpretation; the look of an asphalt road as it lies in the broiling sun at noon, cars and locomotives lying in the God-forsaken railway yards, the steaming summer rain that can fill us with such hopeless boredom... all the sweltering, tawdry life of the American small town, and behind all, the sad desolation of our suburban landscape."

Edward Hopper's philosophies, theories, and idealizations have been thoroughly analyzed and written about by many individuals including himself. Through a variety of these writings a certain theme seems to become prevalent and that is the idea that tone and mood are abstract suggestions for interpretation of the real. They do not exist except in the essence of their existence. Tone and mood remain as terminology to define the abstract subject within the painting. It is through artistic expression that these tones and moods can be investigated and interpreted to fulfill the participants desire to interact with the emotion that is physically present in the image. The composition as a result evokes sincere emotional response in the participant, and the participant in turn, depersonifies the art for themselves by becoming more perceptive towards how the mood and tone is interpreted intellectually. In a sense, Hopper is using a conscious effort to come in contact with the unconscious qualities of perception, or is attempting a study in just the opposite. It is not quite clear whether Hopper intended it to be in one direction or the other, but simply he worked to provide a conversation between these two realms.
The logistics of this theory can be broken down to systematic components. Hopper compositions run thick with emotional identity and personality. These personalities are derived through a family of mood and tonal suggestions that together, work to formulate this abstract emotion, thereby promoting a certain physical response. Mood and tone may be understood as very synonymous terms. Here they are meant to explain similar notions about identity but mood should be regarded as a more comprehensive term than tone. Mood suggests the theme of certain characteristics that are formulated by compositional components such as place, time, location, and subject.

In his painting, *Early Sunday Morning* (1930), these components are quite definite. Much of the mood is set by the angle of the sun, suggesting the time of day and the quietness that comes with that scenario. The subject plays another important role that the participant may relate to the “normal” implications of the scene, and when placed in the context of the painting, he or she is disjointed from that normality and attention is drawn to the present situation being displayed.

These are non-medium compositional elements that work on a general level towards personifying the composition by speaking of a “story” or “situation” that the human conscience may relate to and contend with rationally. There is an emphasis on relating to the conscious discovery of this mood. It is the ability of the painting to relate to the participant on a variety of levels intellectually, which gives heightened dimension to the ability of the painting to relate to individual emotions.
The idea of tone is then a support system to these notions of mood. Tone might be considered as being the composition of medium elements such as color, light, form, texture, and space. These elements are much more abstract in their relative nature and they formulate the bridge between the rational understanding and the abstraction of artistic expression. In his painting, Ryder’s House (1933), these elements are clear in their application. The texture of the paint on the canvas compliment the light quality and material texture that is being exhibited. Layering and application is explained by the dark and light overlapping of color as in the grass and the sky, thereby emphasizing the depth of the image, allowing the participant to move into the image and unconsciously ‘leap’ into the context. The juxtaposition of shadow and surface continue this building of depth while form and scale fulfill the compositional needs of providing balance, harmony, and clarity to the subject in an effort to keep the eye in motion.

It is this breakdown of a Hopper image to the elements that helps us understand the processes of abstraction and the perspective that should be created to allow users and people to relate at whatever level may be appropriate to their individual needs: this idea being a very architectural idea in its most raw form.
To organize this as a process, you could start with a Hopper image as an emotion. The emotion might come across as an identity or a personality that is exhibited within the painting rather than pure conscious emotion. This emotion (or identity) is comprised of a mood. The mood is made of abstract, non-medium elements that when combined and arranged as a composition, begin to explain the emotion that is intended. The mood is defined by tone, and the collection of elements that make up the tone. The elements are the basis for the emotion. Metaphorically, they are the gene pool for the certain emotion being implied by the painting. The strategy that is to be applied to this thesis study is to find the appropriate architectural variables to begin with as element substitutions. These may consist of (but are not limited to) light, form, color, space, scale, material, texture, and rhythm. These elements may be reassembled, contextually, to provide tonal composition with reference to mood and other relevant architectural considerations. The result will be a composition based in mood with a primary goal to evoke conscious and unconscious emotional response and conversation without much concern for which is which. It suggests interpretation within the principles of its components. It's qualities will be based within the considerations of the theory and not just the shallow considerations of simple pragmatics.
chapter 9
the architectural vehicle
building one: the auditorium

The first building in study is the auditorium. The auditorium is a facility that provides services for a range of individuals and organizations. It is a multifunctional space that provides the following opportunities:

- A three hundred fifty person theater/concert hall, with an orchestra pit, stage, backstage, dressing rooms, scenery room, storage, balcony, projection/sound room, and crying room.

In addition the facility provides two conference rooms in the lower level, with restrooms and lobby adjoining.

Support services include a coat room, ticket office, administrative office, lobby, elevator, janitor's closet, and vestibules.

Atop the roof is an open patio for outdoor exhibitions or passive activities.
The auditorium is meant to serve its community as a valuable civic resource. The site resides in Bloomington, Indiana at the termination of Kirkwood Avenue within the downtown/University campus region. The building is placed on an existing parking lot at the Northwest corner of the streets most easterly intersection. The building orients north/south to take advantage of passive solar energy and indirect north light. The main entrances at the south end of the building orient from the street and the north parking lot. As people enter they are greeted by a large open lobby that directs motion downstairs to the conference/restroom level or upstairs to the balcony level. There is an abundance of lobby space to provide facilitation to hold temporary exhibits, civic interests, or large receptions.

In both plan and section, the building speaks of in-between space. When a participant is outside the building, attention is brought to the many layers that define the space and the rhythm that is exhibited in the presentation of those layers. The outer layer is structure. It is presented as a delicate free system which all other building components are suspended from. It acts as a net for the elements that it surrounds. The next layer are the louvers and overhang cover. The louvers simulate a cornice that envelopes the perimeter of the building's interior. It, in conjunction with the roof, acts as a canopy or umbrella to shelter the interior space freely, so as to suggest a large, pure, and uninterrupted volume within. The layer of glass that closely follows in set below and slightly behind the plane of the louvers. This allows the glass to reside in the shadows of the louvers in the hours of the day where direct sunlight can cause strain on the environmental conditions inside. The glass is also suspended vertically off the inside edge of the structural columns. By offsetting the glass behind the louvers, an opportunity is created for ventilation gap, thereby reducing need for artificial cooling on days with mid temperatures.
When the participant enters the building, they engage all of these layers at different scales. Once inside, they are confronted by a large separate volume at the center of the building. This volume is consciously removed from all enveloping planes so the participant will find himself or herself 'in-between' the exterior and the interior of the facility. The upper level only touches the inner form at its entrances. The elevator is also removed from any contact, as is the roof overhead. The reason for this type of organization is to encourage the participant to unconsciously question where the boundary of the form is. Is it the space that lies within the space, or is it only the boundary that surrounds them?

At night these separate layers and forms are emphasized. Interior light filters through the glass, through the louvers, and backlights the structure. The structure becomes a negative image in the foreground and then recedes to background. It should be thought of as not casting shadow, but "interrupting" the light, allowing the light that spills from within to become the ultimate foreground.

Layering is the main emphasis of this design, with considerations about how it can interpret a form and the effects of that form on spatial experience. The palette of materials is limited to glass, steel and masonry. It is a structured approach to how the spatial experience can be directly and consciously affected.
building two; the gallery

The second building in study is the gallery. The gallery is a facility that will serve the public as a common building for a diverse range of exhibition type needs.

The gallery will consist of three open spaces for exhibition that are all joined by corridors. It includes a loading and preparation room and a rooftop terrace for more overflow exhibition needs.

The lower level contains a large workshop with storage for the many articles used temporarily or permanently in the gallery.
The gallery will be a facility that provides a community space to be used for private or public exhibitions, concerts, receptions, or workshops. The building is placed on the southwest corner of Kirkwood Avenue's most easterly intersection. It takes the place of a low-scale commercial development that has no long-time historical significance. It sits opposite the auditorium building and with a similar setback from the street.

In both plan and section the building carries out a strong grid organization. The building is made of four cubes, three of which are identical. The fourth cube that houses the loading and preparation space has a lowered roof since a mezzanine interior scale is not needed there. In the other spaces, the ceiling lifts above to give the larger scale that is expected of museum type facilities. This adds to the civic scale of the building and offers a more pronounced impression on the exhibitor and the participant. The design of the gallery is also based on layering principles. The outer layer is once again steel structure, giving the building a stronger sense of lightness and transparency. The second layer is glass that is suspended from the structure to give the appearance of being detached from the ground by offsetting it outward from the masonry base. This umbrella effect creates a ‘bubble’ for the participants to engage the exhibitions within. The plan is compartmentalized, reinforcing the idea of a ‘bubble’ so that spaces are more intimate and separate, allowing for three exhibitions to occur simultaneously, or for one large exhibition to occur throughout.
During the day, the bubble opens out. Indirect sunlight is gathered through the adjustable shades that are hung on the exterior. The surfaces are primarily white to capture the abundance of shadow play that the layers of structure and mullion create. At night, a ring of incandescent lights are hung in suspension at the center of each cube. This brings the ceiling down much closer to the participant, and thereby lowers the scale of the room, warms the space with soft lighting, and increases the level of intimacy within the space. The structure is then backlit with fluorescent light to cool the surfaces and glass in an effort to abstractly enclose the smaller, warm, incandescent 'bubble' that it surrounds.

The emphasis that should be placed on the gallery study is that the form is derived through the influences of light. The light is the conscious or rational element that stimulates unconscious response within the participant. It is intended to humble the experience, while at the same time create a formal sense of grandeur and presence in the architecture.
building three: the townhouse

The last building type is the townhouse. This is a nonspecific term to define the residential application of the thesis motives. The townhouse is a residence for both individuals or families. The facilitation it provides is:

In a single unit there is one studio style bedroom/living room, one bathroom, a kitchen/eating room, storage, a terrace, a plaza/platform and patio combined, and a carport.

In a duplex unit there are three bedrooms, two bathrooms, an open living room, a kitchen/eating room, storage, two terraces, two plazas, and two carports. The duplex is created by adjoining two single units and slightly altering the spatial arrangements within.
The townhouse design is based on the ideas and information presented in the research report (chapter 2) and in the nontraditional program (chapter 10) of this study. It is developed within the parameters that are outlined in those sections with consideration for how the individual relates to their surroundings.

The townhouse design pays abstract historical reference to the icons of Philadelphia rowhouses and the townhouses of San Francisco. It is equally concerned with how the aesthetic appears as a community as with how the housing unit works as an individual component. The siting of the units are not specific to any certain location. They are however meant to be located in a town whose city scale and size is similar to the Bloomington, Indiana site that this study places them in. In addition, it is understood that the units would be arrange as a cluster of forms. The placing of each single unit or duplex unit will reinforce the aesthetic of urban density and scale already present in the site's context. There is a concern for the "in-between" spaces that surround the units. They remain as open public spaces but a certain amount of enclosure from the separate unit base columns suggests that they are intended as private spaces, even though no physical fence boundaries are constructed.

The plan of the unit is an open plan. There is very little partitioning of the interior spaces other than the exterior walls that enclose the space. These walls are consistently solid with glass and window openings grouped on the street elevation. This promotes an element of privacy and separateness between units by not allowing the inhabitant to peer into neighboring units. But the openings that do exist are plentiful to the street, to constantly remind the inhabitant of the city context and the urban surroundings that do exist.
The section and elevation can be divided into layers. Each layer is stacked like a layer cake with each level zoned differently for different residential functions. The first level is the ground level which is comprised of a collection of columns. These structural columns are void of wall to allow pedestrian traffic to meander through the "urban trees" at the paved plaza level. The columns are organized, however, in a strict grid pattern, for both structural continuity and to serve as a suggestion for enclosure. This covered space then appears to be reserved as a carport for the residential inhabitant of that particular unit. The second level is a reinterpretation of the historically defined porch. Termed as a "plato" (platform and patio combined), this space provides for certain personal and private activities that require shade or shelter such as grilling or porch swinging. It also revives the original porch intentions of where people could neighborly correspond and communicate with one another and with individuals in passing on the street. The third level is the active level where cooking, conversing, studying, or working can take place. It is the entry level to the interior, and the mediating level between the outside and the private passive level above on the fourth level. This fourth level is where the sleeping and relaxing will occur. It is physically separated vertically from the busier and noisier functions below to enhance and support the differences in an individual's or family's life-style with relation to privacy and the need for one to escape from each other.

The design decisions and aesthetics of this building type are based on creating an efficient and functional environment for the inhabitant. The theory behind the building is to provide a certain amount of subtlety in design, so the personality of the individual may rise to the forefront. It is an effort to create an architecture that promotes a new urban contextual atmosphere, with clear motives and ideas drawn from more suburban implications. It is not trying to relocate suburbia, but instead will provide a certain amount of root morals that may unconsciously exist within the architecture and within the inhabitant. It is intending to promote an urban atmosphere that might enhance a certain bias towards an inhabitant's lifestyle and the definition of that lifestyle exhibited in the use of the building.
chapter 10

the non-traditional program
The American urban living tradition has in recent years been in decline due mostly to a rejection of urban contexts and their inability to provide the proper amenities for urban development needs. It is believed, in theory, that today's Americans lack the opportunities to choose an urban lifestyle over the more suburban lifestyle that has been supported by past generations. Today's social, economical, and personal needs differ from those a half century ago. But it seems that there is an ongoing process of regenerating the same historic concepts for living that are then being forced to adapt to the current needs of the American public. Parallel to this, suburban prosperity continues to dictate our living environments.

The things that surround us, mold us. We are products of our environment and we must live with ourselves as often as we must live with each other. This study is an opportunity to explain who we are as Americans with reference to developing new options for how we live. The bits and bytes of information that we come in contact with daily can never be fully organized on an individually detailed response and perception. We must search to find an order; one that explains the whole as a system of methods or expressions.
The American soul derives from the individual, individual freedoms, individual dreams, individual expression. How are we to group these customs into a community of ideals? Should we even attempt to do so? Is it appropriate to say that we should find a rationality to all these differences communicate, in synch with reexamined architectonic forces? Should the product be an expression of our belief and our desire, not vice-versa?

Addressing this situation is one of the primary concerns in this study. It is believed that a part of the problem lies in the lack for an alternative social and architectural order. This order is to be derived in the value system of the suburbs, but then reoriented in the context of an urban town center. Primary responsibility in the design is concerned with addressing residential living necessities including a certain level of privacy, the ability to identify with the environmental context, a strong sense of community, and many other factors that provide an improved sense of home. In addition, the design must develop a setting that encourages increased urban vitality. For instance, establish an urban scale, density, and architectural aesthetic that reinforces and coexists with the current ones present at the site, provide an improved commercial community that will prosper and possibly lead to future redevelopments, and a variety of other tradition or nontraditional means for creating urban communications with human needs and desires.
chapter 11
"archi-tectonics"
To define the term "archi-tectonics" in relation to this thesis I will first say that the term is quite comprehensive. When speaking of tectonics, my first reaction is to explain my enveloping opinion towards design and the meaning and reason placed on certain elements that create design. Perhaps if the pieces of this study where read in relation to each other, one could gain an understanding of these opinions I speak of. In this chapter I will itemize specific elements that I find to be important in design and the elements that I have spent my education developing within myself. The projects that are used as examples are not necessarily a part of this thesis in their design intentions but the meanings behind each of them are related.
Color in design is measured by hue, intensity, and tonal value of a form's surfaces. It is a very distinguishing attribute that sets form away from the environment or blends it into context. When void of color, the design looks to form and shape for definition and color becomes less significant other than light and dark variations.

The layering, blending, contrast, and separating of color can enhance scale, proportion, visual weight, and/or transparency. When transparency is used, color becomes visually absent and any distinction in color variation can not be detected.

This example shows how color defines and organizes the form. Color is meant to evoke emotion in some spaces while in others it is meant to absorb light and shadow to draw attention away from our through. The color narrows the perception of the form and acts as a "play book" for perception, looking for balance and explanation in the other elements present.

"Architecture is the masterly, correct and magnificent play of masses brought together in light. Our eyes are made to see forms in light; light and shade reveal these forms..."

- Le Corbusier

Light is an element that defines form and gives depth to the design. Light provides a way to experience the inner spaces. It gives reason to color and texture and shows the designer opportunities for emphasis. It is an alternative to enclosure by way of direct or indirect transparency.

This example shows how light can become form. There is a consideration for how an object does not just cast shadow but how it interrupts light. There is an emphasis on where light will fall on form; how absolute black is void of all light, and how pure white can measure the existence of light and define it with abstract language and line.
form

Form is one of the most influential elements in design. Form gives shape, scale, dimension, figure, and identity. It is a qualifier and derivative in the designer's mind and gives those ideas reason and intention with relation to a certain context. Form provides a common ground for the visual exchange of method and meaning between the designer and the participant of the design. A form has a large amount of influence and impact on a context. If the scale is wrong, the shape is bent, or if the identity is nameless, there is a difficulty in overcoming any effects other than "bahi".

The example shown here shows how forms might overlap. The forms sit in juxtaposition with one another. They reside on different planes horizontally and vertically. They give scale and proportion and use line, plane, and void to provide depth and layering within the design scheme. It is a form that provide immediate context within the architecture, while at the same time gives suggestion and response to the context that surrounds the architecture.

texture

Texture in design can give variation to surface, plane, or form. When color and light are not as influential in the interpretation of form, texture can provide that influence and justify the form's intentions.

Texture however can be abstracted. It does not necessarily mean that a surface has rough, smooth, hot, or cold feel to the hand. It could mean that there is a blending of color, a combination of form, a definition of order and the representation of that order. Texture might be defined as the presentation of the design. It might include patterning, layering, repetition, association, or stacking.

The example used here are images from a video. The video image itself has a certain visual texture. But the subject of the image carries a different texture that is representative. For example, a shopping cart, Wal-mart, and a hot-dog start to develop a composite idea, and that idea becomes texture when humanized and abstracted through the medium. Here the subject is captured by a camera. It is then processed through electricity, microchips, and film, and is then sent as output through another device (namely a television) that stimulates emotional and physical response. The medium is unconsciously reacted to and interpreted by the human's mind. It is this play between subject, medium, and interpretation that define texture.
space

Space is an element that is closely tied to form. Form’s impact on space is direct and space as a result becomes the zones that lie inside, outside, and around the form. There are interiors. There are exteriors. There are also the “in-betweeners”. The level of enhancement in these spaces provide the quality of experience to be observed and engaged by the participant.

Space is the created environment by the design. It is where function is to take place and where participant are to relate to the intentions by both the theory and the aesthetic. Space can be two-dimensional as well as three-dimensional. Graphics, surfaces, and voids can define a space without enclosing them. Space can be broken and can be overlapped.

The example here looks to provide space in variety. The site is an open sea, devoid of context other than the horizontal plane of sea level. The spaces are defined by line, plane, form, and material. The variations exist within these artificial contexts and therefore the space becomes abstracted, overlapped, and coexistent with form.

rhythm

Rhythm is an element that can be based on a number of things. It can be involved most obviously with repetition. But rhythm can also be found in simple recurrence. An idea can be referenced throughout the design. The design can be homogenous at its most abstract sense. But also, the design can be redundant. To avoid redundancy, we devise systems. Symmetry, regularity, and layering are examples of systems in architecture.

The example here emphasizes rhythm. Repetition is the basis of the rhythm. But different level of reference occur in material, dimension, color, line, orientation, shape, scale, and form. Rhythm is comprehensive. It describes reason and order. But most importantly, rhythm creates aesthetic.
chapter 12

the applications of architectural decisions
an explanation to how decisions are made, both conscious and unconscious

The design process has been a key part in the development of this thesis. This chapter's intention is to explain that process, as it was developed and used to fulfill the responsibilities outlined in the design ideas.

It began with defining the principles in theory. Through research and study of possible sources for basis, a collection of ideas were developed. Not all of these ideas influenced the design directly, but many pieces of each of these sources can be found integrated throughout the design. Many themes evolved from these sources: technicity, sympathy, rigidity, complexity, anonymity, position, stationary architecture, activity in motion, intercommunication, revival, not of style, serene motion, quiet rhythm, coherence, adaptability, suggestive, detail, simplicity.

From this point there was a development towards application. The original intention was to develop three separate strands of type: one commercial, one civic, and one residential. Instead of developing type the intentions were applied to substance which included: one study in form, one in light, and one in space. All were considered for their interrelation to one another and the influences they might have on immediate context and scale.
To develop each study I began with function and familiarity. I developed sketches and words to provide myself with an angle for further development. This angle provided the first step towards design. Some context ideas came from this step in the process as well as relationships between items and diagrams for theory development.

The next step was to develop the unconscious response. With a suggestive word, I applied a broad meaning to each study. This word was quickly translated into a picture, with attention to color and line juxtapositions, along with balance and texture. There was no concern for form or scale at this stage. However, the stage that followed would try and apply two-dimensional form to the images and terms. Scale and space were not introduced here again, waiting for a future stage when they could be incorporated.
After recognizing form in the abstract and unconscious, there was an effort to develop the images into a third dimension. Through plan, section, elevation, and model, a new conversation within the triad formula began to develop. All three study's developed in unison, letting discoveries in one lead to discoveries in another. The results were enhanced in a final model, section, and plan. It is here that the theory was realized, analyzed, and justified.
a moral description of the thesis in rational and non-rational terms

In review of the thesis outlined in this study, I look at the final manifestation and am somewhat immune to whether the original motives have been fulfilled. I believe that in each case, form and order have synthesized wholistically and congruent to contextual implications and design strategy. The design has not been fully worked out in detail. It was not intended to be. The design is instead a physical embodiment of social and programmatic considerations and pays tribute to urban themes present in our past and present American heritage.

It is full of new ideas and experiments grouped together to reinforce their intentions. These ideas and experiments are original to the designer and do not use historical references and forms directly. The design reinterprets our environment, looking for innovative ways to deal with our context and our built world. It holds much concern for the human, the human scale, and human needs. It does not try to force architecture on the participant, but instead attempts to engage the participant into discovering the architecture for themselves.

In review, form, order, and reason only lie within the critic. The designer is not present at the street corner to explain his or her design. It is up to the architecture to speak for itself, whether it be through allusion, emotion, or reference. The architecture must be complete and wholistic itself, or rather it may become a dusty pile of backfill.
design conclusions

view of model from southeast
personal conclusions and interpretations on the
thesis motives

Upon completing this study I have learned a number of things. But probably the most important discovery that I made was developing an awareness to process. It is in the process that knowledge is absorbed, developed, and applied to finding a solution. A solution is not always at the end of the search, but with a comprehensive and thorough process, a designer has a great deal of validity in his or her findings.

For myself I never feel completely fulfilled after completing a project. Perhaps this is due to the many unanswered questions that came about as I searched to find the answers to the ones I posed at the beginning. I am wiser in my ways now, however. I have developed a keener sense towards the impact of a theory motive. I believe that theory should develop within a designer at a parallel rate to technical and practical ability.

I have many new questions to the future. I have discovered new items for investigation. What is datum and how can it be effectively integrated to cultural tendencies of American ideologies? I wish to explore the concept of layers: layers of transparency, layers of motion, and layers of light. How might repetition become dimensional and reinforcing of layer?

The answers once again do not know to the question I pose. But at least I have the rest of my life to find them out.
View of model from east.


THESIS
'STUDY OF NEIGHBORING RELATIONSHIPS'

ARCHITECTURE
- MOOD
- TONE
- ELEMENT
  ASSOCIATION

VEHICLE
- DEVICE
- BLDG.
- IDENTITY

THEORY - MARRIAGE OF:
- EMOTION AS ARCHITECTURE
  - SUBURBAN TO URBAN
- 'AMERICAN' ORDER BY DISORDER
  - COMMERCIALISM
  - ELLIPTIC IMAGE

OUR PROJECT