

SENSE SPACE
an architectural analysis

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THANK YOU

To all the critics, classmates, and family who helped direct the process of this thesis. To work, for being supportive. A special thanks to any family members who endured high stress levels. And, last but not least, professor Wladyslaw Fuchs!

ABSTRACT

This thesis is an effort to bring attention to how people perceive architecture. By refocusing an individual's attention to their perception, the attention can be shifted so they are more aware of the spaces they inhabit. With awareness, architecture can be utilized as a means to which one can enhance them self, becoming aware of the surroundings from which they thrive. Spaces create a certain atmosphere and through a person's sensory experience, have an emotional response. Understanding how human response can affect the design of architecture is complex, but beneficial for designers. For architects, there are limited ways to assess space and the sensory experience humans have on architecture. As an attempt to graphically analyze space, representations of particles were used to show a density of senses and objects. Thinking about space as an accumulation of density, a design concludes the thesis, meant to create space from which individual's can perceive.

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INTRODUCTION

“When we look at objects or buildings that seem to be at peace within themselves, our perception becomes calm and dulled,” (Thinking Architecture 17). To achieve this, to be able to see the building as the wholeness it is and comprehend all of its parts, allowing our perceptive faculties to grow quiet, is something architect Peter Zumthor thinks about when he designs (Thinking Architecture 17). His attempt through design is to create quality. “He considers the creation of a specific atmosphere in his buildings as a key component of quality architecture, (Vedeninia).” Peter Zumthor’s book titled Atmospheres outlines the nine values he believes buildings have when people are discussing architectural quality. This book was used to inspire design, and will be mentioned again further in the paper, where the nine parameters will be discussed in detail. Zumthor also made a point to mention that without interaction with people, atmosphere would not exist (atmospheres). A human’s sensory experience and emotions towards space determine the outcome of interaction people will have. “Emotion [and senses] is a central quality of human existence, and most of our behavior, motivation, and thought is enriched with and influence by emotions [and senses],” (Desmet). When architectural quality exists with positive emotions or reactions, a model has been created. A design that provides subtle awareness, by designing architectural quality the users reaction to their sensory and emotional experience should be diminished. These too paradigms, the quality of space and human interaction, generate inspiration. The human is able to experience architecture while the architecture provides experience for the user.



Vals

An example of Peter Zumthor's work is shown on the previous page. Observing the image, a critic can simultaneously address all the senses of the spaces, wanting the stillness of the photo to be nothing more: The stone material appears cold to the skin and one can almost hear the stillness of valley or the sound of their own feet against the floor, while the mist in the air brings moisture to the nose and hinders saltiness on the lips. Zumthor believed in the experience of a design rather than a theory.

PART 1: RESEARCH

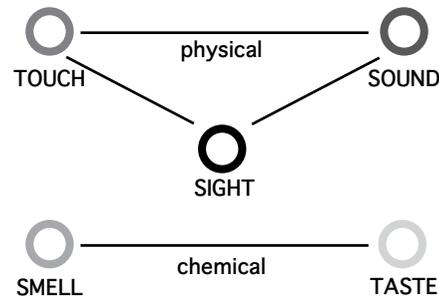
ARCHITECTURE

Defining a Framework

“Architecture has become in today’s society too dependent on the visual experience,” (ABIBOO). It is frequently argued by many scholars that media and the accessibility to imagery are to blame. ABIBOO even points out, it is not just the excess quantity of images, but also the minimal amount of influence they ultimately have in such a fast paced world. Humans cannot get past seeing the visual because after one design is released, there is a new grandeur one on the next page. With the world becoming so fast paced, professionals also often look at the greatest technological advancements for our buildings. This leaves most designers either focused on processes of instrumentalization or aestheticization (ABIBOO). “On one hand, our secular, materialist and quasi-rational culture is turning buildings into mere instrumental structures devoid of mental meaning, for the purposes of utility and economy. On the other hand, in order to draw attention and facilitate instant seduction, architecture is increasingly turning into the fabrication of seductively aestheticized images,” (ABIBOO). People either look for buildings that speak to the public image, about advanced technology, or provide cost savings. Because architecture has become more available through social media, it is easier for the laymen to see the difference between the instrumental and aesthetic buildings, thus allowing, what is thought to be, a well-observed critique. However, Paul Goldberger, a champion of craft according to Vanessa Quirk, argues these face evaluations are robbing architecture from its deeper meaning. Quirk’s argument is for encouraging designers that it is part professional duty to help the public assess architecture for its usefulness (Quirk). It is the designer’s

job to inform the public on how spaces humans inhabit may effect lives: that the new home depot is a building to critique (Architectural Criticism), that understanding how the workspace affects work is worth commentary and how choosing a place to live could be more of a physical benefit than realized. Understanding that, through the senses, the environments people utilize stimulate and become part of the human experience.

It is common knowledge humans have the ability to sense things. According to The Free Dictionary, the definition of sense is, "A perception or feeling produced by a stimulus. Any of the faculties by which stimuli from outside or inside the body are received and felt, as the faculties of sound, sight, smell, touch, and taste." Stimuli are received through the body either physically or chemically, by processing changes in matter or energy from the environment into data the brain can perceive (The Senses).



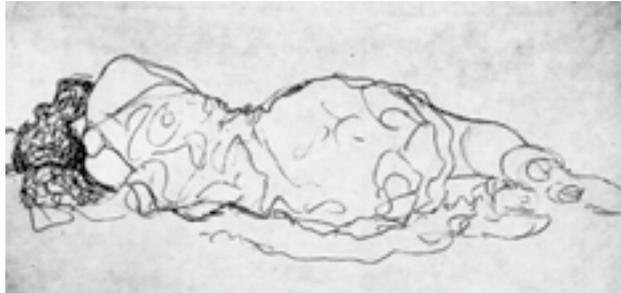
There is direct connection with the human and the environment, thus all the senses work together to create experience. Studying the senses in connection with the surroundings is a relatively new discussion, despite the common theory of perception, which psychologists have been talking about for years. David Howes, Professor of Anthropology at Concordia University, Montreal, and the Director of the Concordia Sensoria Research Team, co-

founded a Centre for Sensory Studies in 2011. The Centre provides a resource to examine the senses through a combination of disciplines, all except psychology. Howes explains that perception by psychologists has been studied for years, but they have yet to bring the surroundings into any sort of equation; they study too much about what goes on inside the head rather than what is happening in the environment. Through research, Howes learned, "you can't just think in terms of sight and hearing, that there really are fives senses, or perhaps even 17, and they are all evolving and revolving. The way a culture practices the sense or use their senses to make sense of the world is what creates ambience," (Howes). The question should be not how the sense organ responds to the environment, but what goes on between the sense organ and the environment (Howes). Many of the members of this committee like to use the word ambience to talk about this phenomenon. Ambience is defined as the character and atmosphere of a place, an emotional experience, environmental sensibility, and/or spatial quality.

To experience ambience, the human must have the ability to make sense of things as a whole. Known as the Gestalt theory, people use this idea, that the sum of the whole is greater than its parts, to explain how humans can comprehend and predict spaces or situations (Gestalt). A core insight solidifying Gestalt is known as a predictive coding framework (Van de Cruys 327). A predictive coding framework is when a human predicates data physiologically, cognitively, or behaviorally. When there is unpredictability or impinging disturbances, people use this framework to keep them in equilibrium with the environment. "According to the predictive coding approach the brain actively predicts upcoming sensory input rather than passively registering it, (Van de Cruys 325)." This means our brains are able to predict the outcome of a situation based on a previous stimulus. There is no validity the prediction will be accurate, so the results may have a positive or negative result on the predictor.

The visual system seems to be the primary predicting agent. A building's exterior is usually the first clue to this predictive framework. For example, in the event of someone looking to purchase a new home, explore a new coffee shop to study,

or maybe even a search for a new wardrobe, the architecture of the building determines whether or not the person will advance into it. Depending on the situation, visual cues may still be the dominant deciding factor on whether or not the human appreciates the space, but more often than not, other things factor into the equation: is there adequate lighting, what is the temperature of the space, how are the acoustics, is there ample space to keep other belongings, is the artificial light distracting, does the space smell rotten or stuffy? Even if the user unconsciously realizes it, the answers to all of these questions come into play when someone is choosing a place to be. Through predictability the user explores, through experience they critique. If prediction is reinforced, the brain registers a positive feeling, whereas if emotions are negative,



Gustav Klimt, Reclining Woman (Van de Cruys)
Pablo Picasso, Weeping Woman (Van de Cruys)

Van de Cruys used these two illustrations of woman to show the difference between what is pleasing versus not based on the predicting framework. Picasso's work had more criticism than Klimt's did because Klimt's woman is much more familiar.

an interruption or discrepancy with the expectation and actual situation coincided (Van de Cruys 330). Predictability and its connection to emotion is one of two ways to looking at design. For example, if the designer's goal is to create an aesthetic experience, creating an unpredictable scene could be an accurate approach. When something is unpredictable, the user's response is initially negative. Negative because it didn't meet their expectations. However, if the response ends up exceeding their expectation the response becomes positive which results in an aesthetic experience (Van de Cruys 332). Using the latter as a sole design method could lead to discrepancy, however in combination with a simple design based on familiarity and predictable data, a simple architectural experience could be created.



San Gimignano, Italy (Camp)

This is an example of how the predicting framework can be used in the Architecture. The first photo shows a typical European town, however in the piazza is the building shown in the bottom photo, and the use of windows is not a typical design method.

HUMAN

An Emotional Response-

Surroundings and architecture are part of the familiar. Architecture experienced through everyday tasks becomes part of a world which one simply knows. Cookie cutter houses, franchised coffee shops such as Starbucks* and Tim Hortons, and ordinary shopping and grocery centers, like Target or Meijer, are some obvious examples. However, it is not just the corporate architecture that is of concern, it is the generic work place, the home, the local café and local bar; places which people choose to attend or visit upon a certain routine.



Photo of new Starbucks on a train located in Switzerland (Retail Design).

*Since the Great Recession, Starbucks rebranded their franchise development with a pledge to design their stores in ways that are unique to the local community the coffeehouse expects to serve. By reflecting a neighborhood's character, Starbucks hopes to create an inviting and familiar place for people to connect (Store Design).

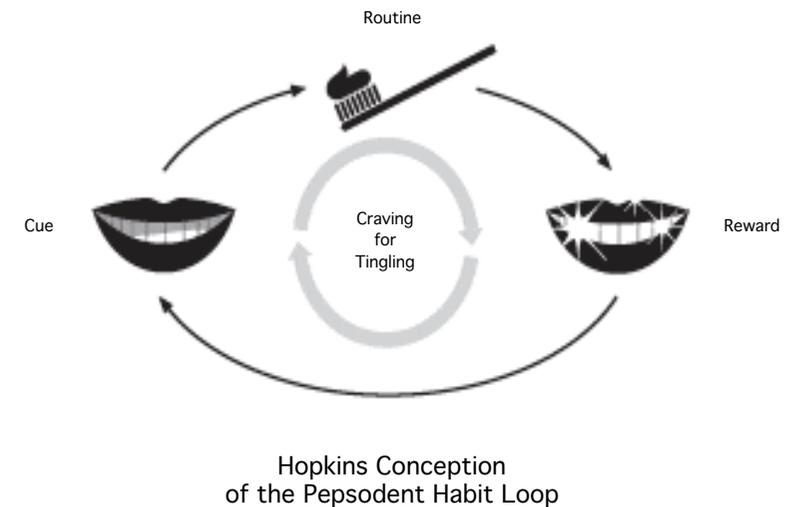
Knowledge accumulated through practice or experience of everyday tasks or expert skills is an embodied know-how relationship with the context of the environment (Teal 280). The spaces in which people exercise these tasks or skills are part of the knowledge accumulated. These relationships and the ability to retain knowledge are assisted by the human ability to have emotional responses to space.

Understanding the dynamics of emotions helps to create correlations between humans and the evaluation of their surroundings. Biologically, the neuron network explains the science behind why humans fall into emotional cycles, how the brain builds itself over time depending on the repetition of certain thoughts and emotions. A documentary, by the name of *What the Bleep do We Know*, is based off of the principle that the human brain does not always know the difference between what it sees and what it remembers, explaining this is how human neurons react to the environment. The documentary explains how the neuron network works and uses emotions to create a language for human thought. Through experience and emotional response, we create building models of how we see the world, connecting thoughts to specific emotions (What the Bleep?). People form images of thoughts in their mind, creating lasting relationships with certain things. Nerve cells that fire together, wire together and once an emotion is reoccurring they will seem to become permanent.

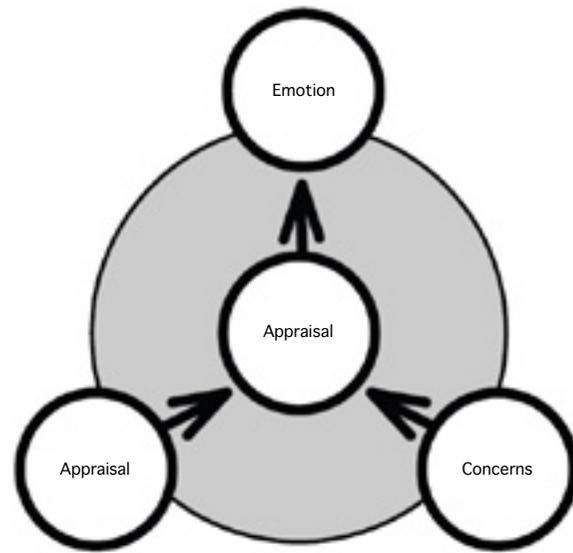


Photo of the Neuron Network (What the Bleep?)

However, once the emotion is interrupted, the relationship begins to break apart. It is through routine which humans concur whether an emotion which will be appraised as harmful or beneficial (Droog & Vries).



In the book, *The Power of Habit*, Charles Duhigg uses Claude Hopkins concept of a Habit Loop as a model to explain his thoughts. Hopkins was a prominent American executive known for rules explaining how to create new habits among consumers (Duhigg). These coined rules were fundamental for creating routines, like Pepsodent for instance (Duhigg). Hopkins made toothpaste sales jump from 7 to 65% in nearly a decade. The signature tactic was to find simple triggers to convince consumers to use his products everyday. After looking through dental textbooks, Hopkins read about a cloudy film that is produced on teeth. He used this by telling consumers, it resulted in an off-color look and that if they used Pepsodent, the film would go away. The cue was suddenly easy to trigger and people were sold on wanting cleaner teeth. They got into the routine of brushing their teeth for the fresh tingly sensation toothpaste leaves behind.



Pieter Desmet
Basic Model of Emotions

Pieter Desmet is a professor of Design for Experience at Delft University of Technology. He developed this model for his research, Designing Emotions. Appraisal, concern, and stimulus are the key variables identified. Appraisal is the automatic evaluation that produces an individual emotion. With every emotion there is a linked concern determining our feelings towards a particular stimulus, or experience. “Stimuli that match our concerns are appraised as beneficial, and those that mismatch our concerns as harmful,” (Droog & Vries). Thinking about how an architectural space can be considered a stimulus and then realizing an individual will have a positive or negative emotion and concern linked to that space, may be helpful for design.

Architects Simon Droog and Paul de Vries wrote a blog entry on How to design atmospheres attuned to the concerns of the user? To design to a users concern one must understand what emotions are and how they are elicited (Droog & Vries). “ [Although] people differ in their emotional responses towards a given building. Nevertheless, in spite of these interpersonal differences, the process of emotion, i.e. the way in which emotions are elicited, is universal, (Droog & Vries).” Droog & Vries use Pieter Desmet’s basic model of emotions to show how emotions are elicited.

For an example of how architecture can relate to emotion, Droog & Vries use the ‘Can Feliz’ house, designed by Jorn Utzon, to show how space can translate to a human concern for refuge. Grant Hildebrand originally referenced the example by translating the space as, “Here, on the right, an interior refuge has been developed by opaque walls, a lesser floor-to-ceiling dimension, and a low light level. Continuously on the left, a complementary zone of interior prospect has been created by a somewhat greater floor-to-ceiling dimension, walls with extensive transparent surfaces, and a much higher light level, (Hildebrand).” By using dimensioning and transparency, Utzon was able to stimulate a universal concern of refuge. The darkness of the interior combined with was the lightness of the exterior creates emotional contrast providing interest. This architectural interest in a space, the sense of belonging that comes from accurate stimulation, is the networking which provides emotional experience, or the ‘ambiance.’



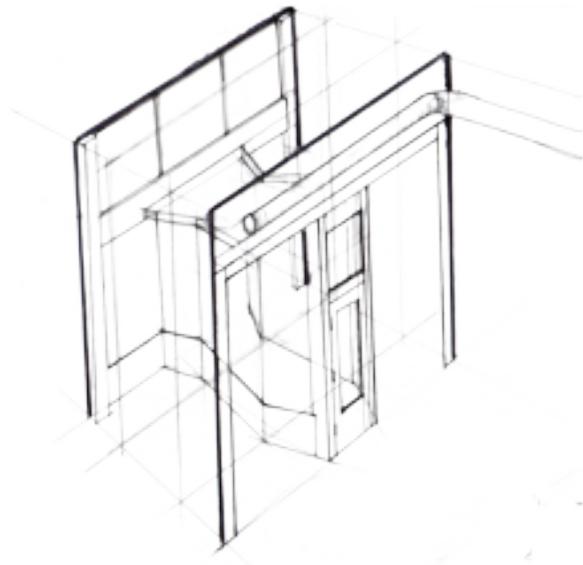
Can Feliz House (Droog, Simon & Vries, Paul de)

PART 2: ANALYSIS

SPACE

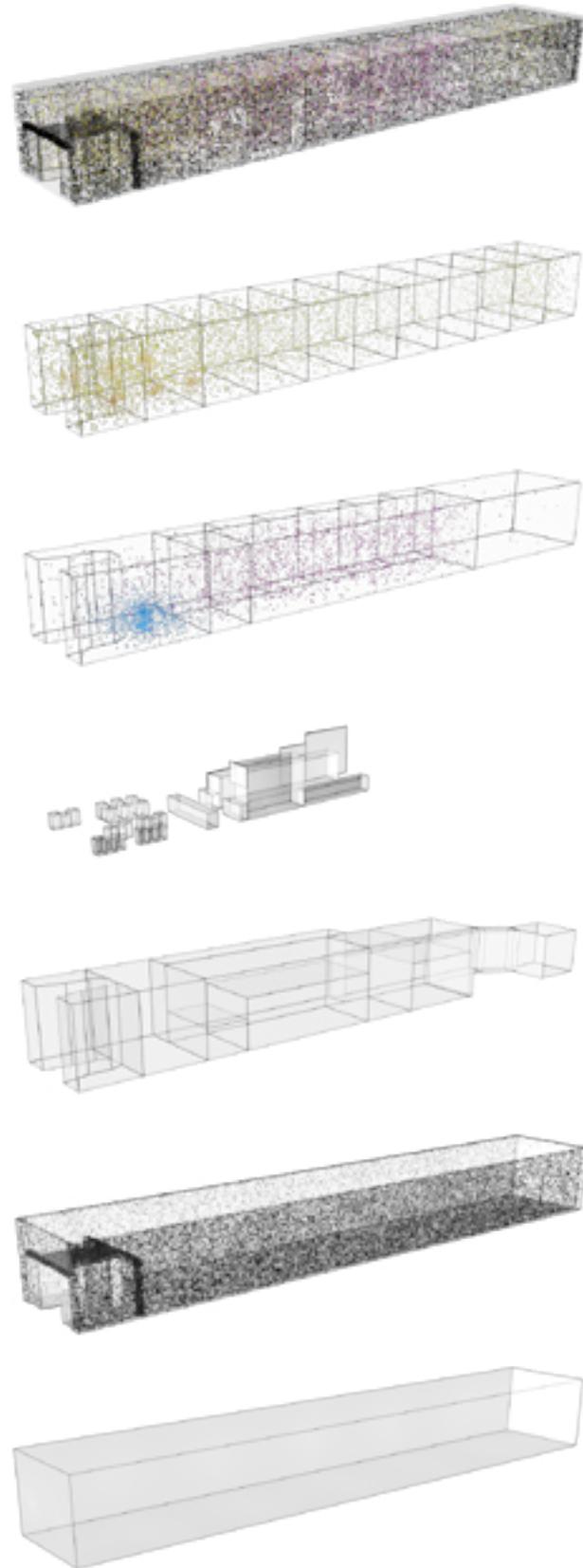
A Graphical Representation

An original graphical representation was used to assess two building types that a number of people react with: a café and a home. Similar interactions with space occur in these buildings types but are in different contexts, creating different atmospheres and different relationships or attitudes. To assess how a users interaction might be effected by the space, an analysis of one building of each type was drawn. To look at the spaces in a sense that didn't conform to a traditional visual graphics, densities of particles were used to illustrate the ambiance of spaces, objects, or experiences that exist in either building. The different degrees of density are meant to react to a critic in different ways, different feelings, meant to provide a certain sense of the space.

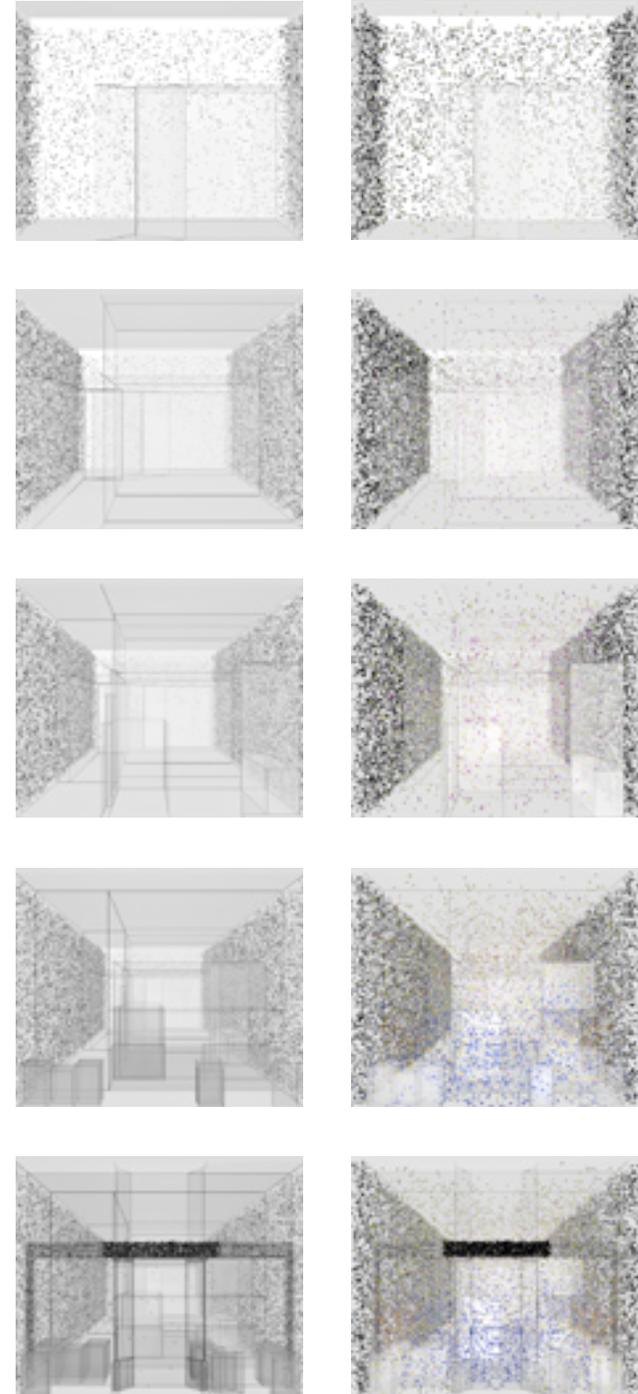
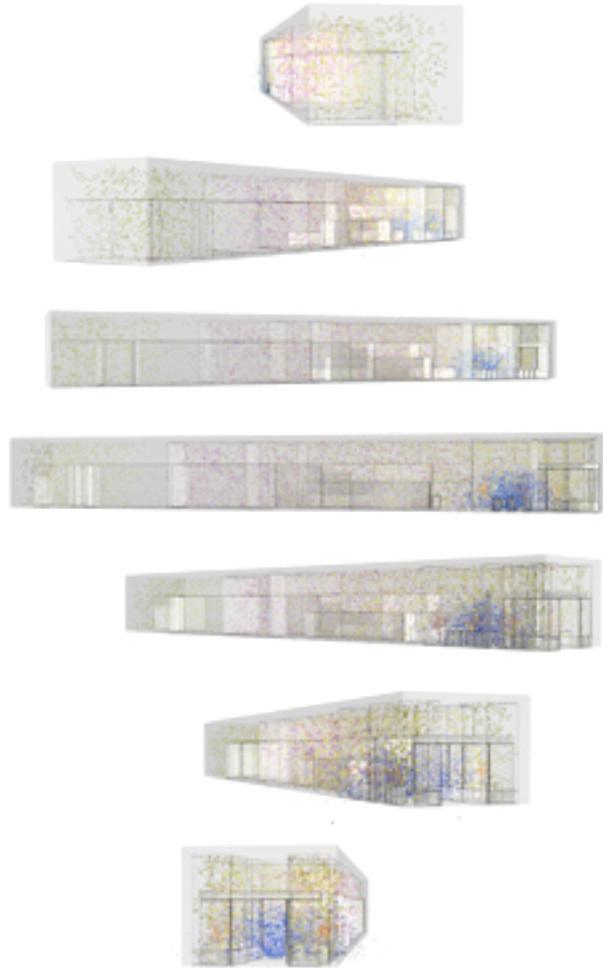


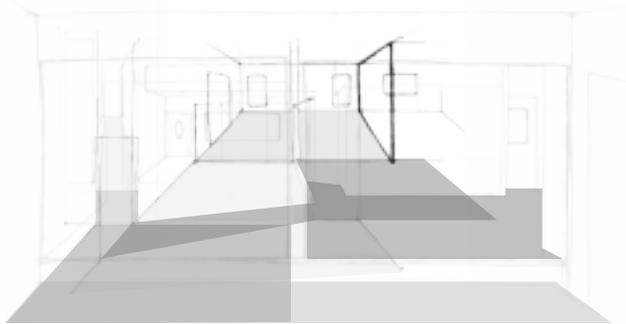
Analysis 1: Pinwheel Bakery, Ferndale, MI

The Pinwheel Bakery and Red Hook Coffee Shop, located in Ferndale, MI is a well-known business for the way it has been structured. The owners serve local coffee and delicious, original, in-house baked goods. Space is small, located in a typical rectangle shaped building, however a unique threshold serves as the entrance into the cafe providing a unique light and pleasant atmosphere. The threshold pulls exterior space into building allowing the user to interact with it inside and out. It also push's the interior space together, providing intimacy and almost deciding where the interior objects will be located. Because of its size, the smells and sounds circulate the entire building. If one enters through the back, with low sense of smell, the enthusiasm heard in people voices, hinting to the tastes of the cafes goodies, is enough to move people towards the front.



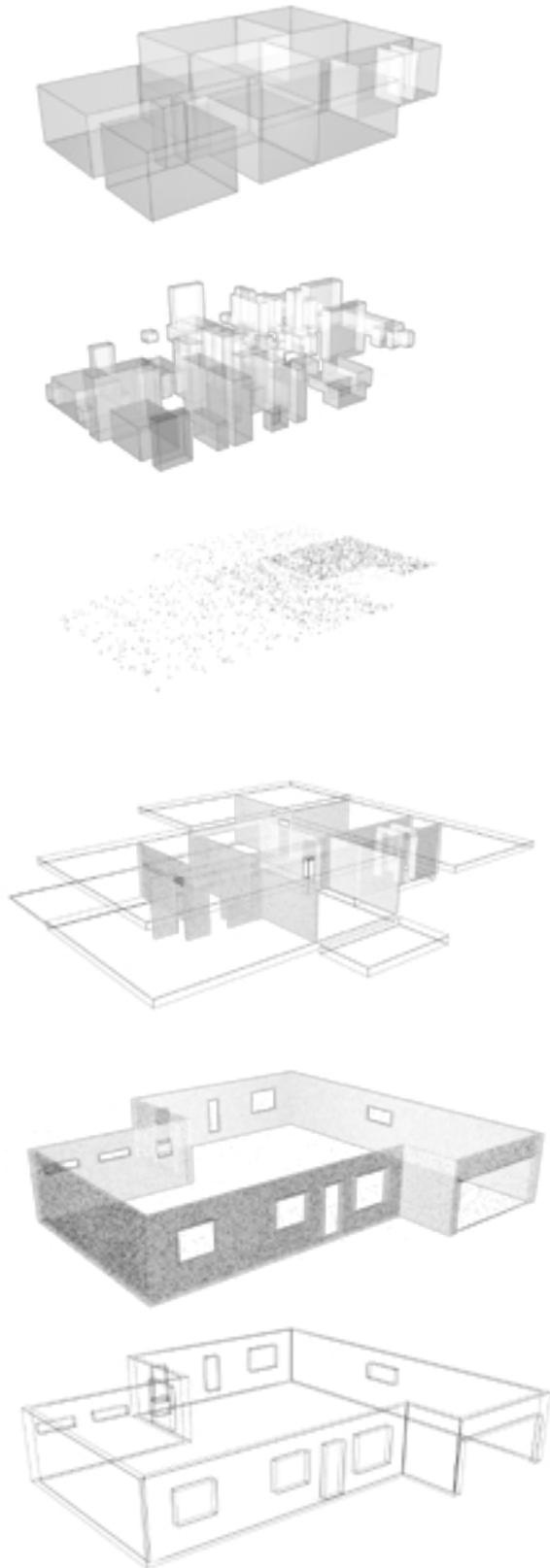
The illustration on the left breaks down the building into its different spatial segments, showing the frame, body, spatial volumes, and objects. The common senses are shown using colored particles. The yellow volume responds to light, indirect and direct, and the other colored volumes respond to sound, blue symbolizing a single source and purple referring to general noise. The illustration on the following page shows the transition through the spaces.





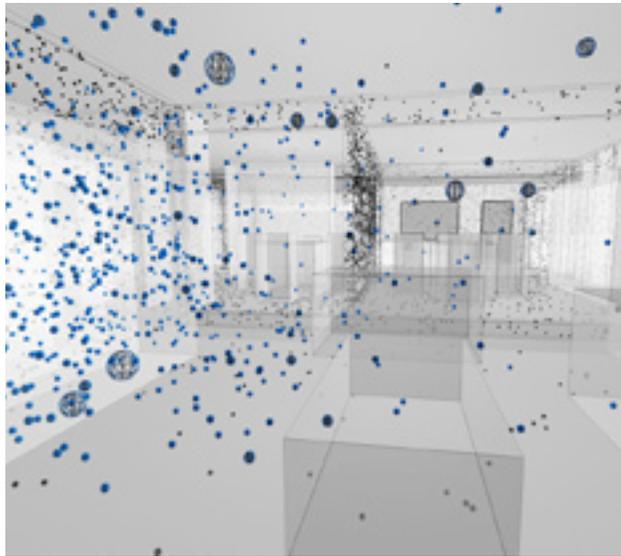
Analysis 2: 2735 Coral Drive, Troy, MI

Compared to a café, a house is something which is much more familiar to a user and usually exists at a larger scale, making the analysis more difficult. However, different functions still exist in different spaces creating different atmospheres for different tasks. The analysis was drawn based on the idea more than one user may be present at the same time, possibly acting within different routines, generating a mix of emotions and differing spatial responses. With this in mind, the sensory analysis was done on the core of the house and the rooms adjacent to it.

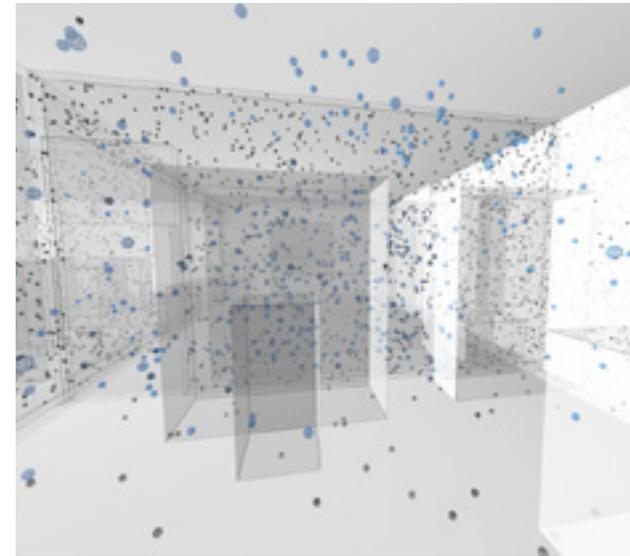


Again, like the café, the illustration on the left breaks down the building into its different spatial segments, showing the frame, body, spatial volumes, and objects. The sensory analysis is shown on the next page in the individual rooms that respond to the central core of the house. It is worth noticing all the objects drawn in the space. Showing them by volume makes the space feel much more cluttered than it may in real life, however it also shows how many objects American households contain.

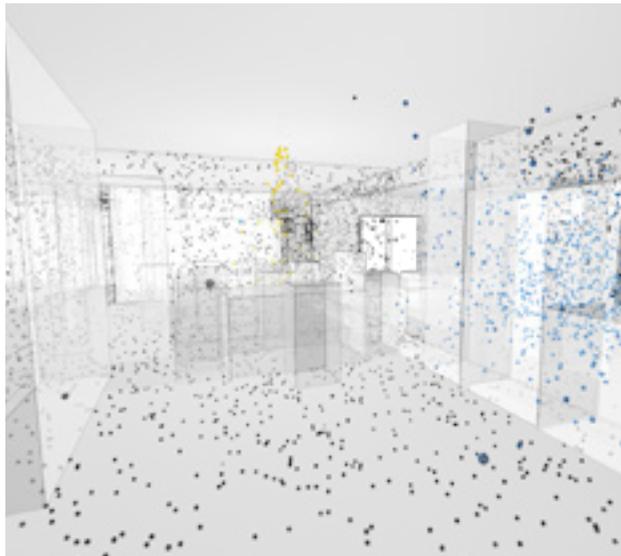




Family Room: Most commonly used space.



Adjacent Bedroom



Kitchen



Dining/Living Room

DESIGN

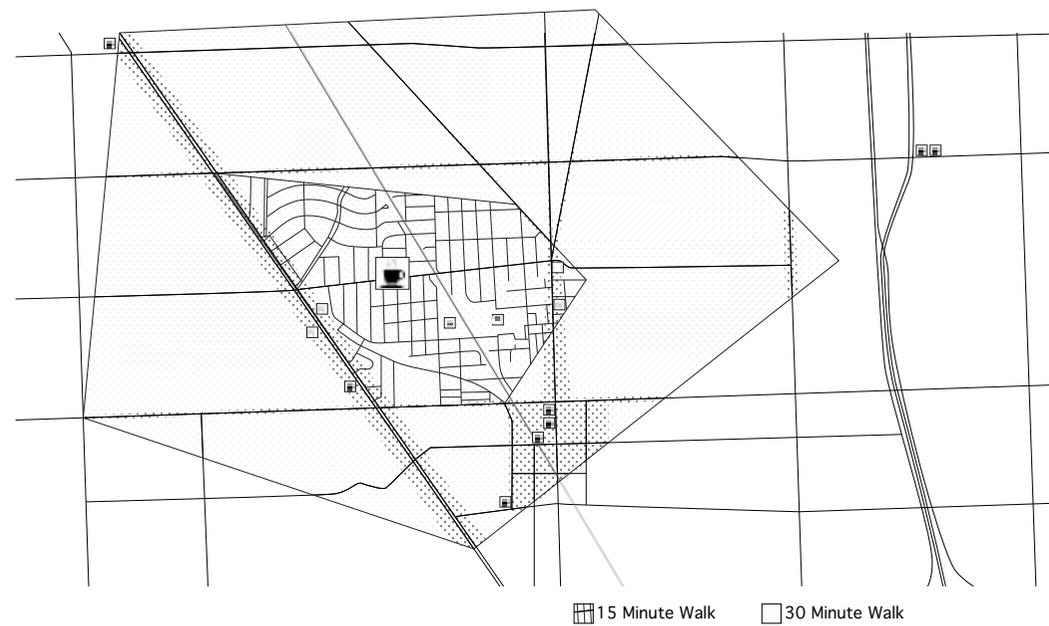
An Application of Thought

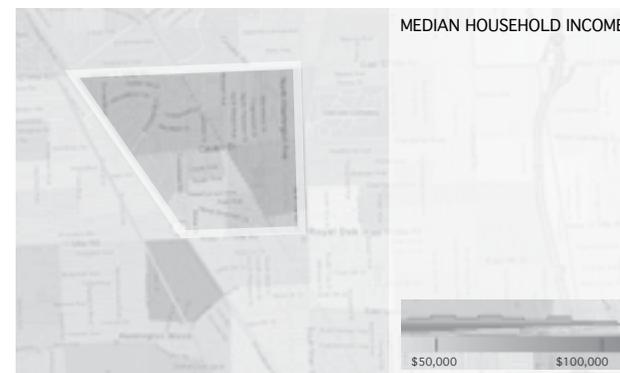
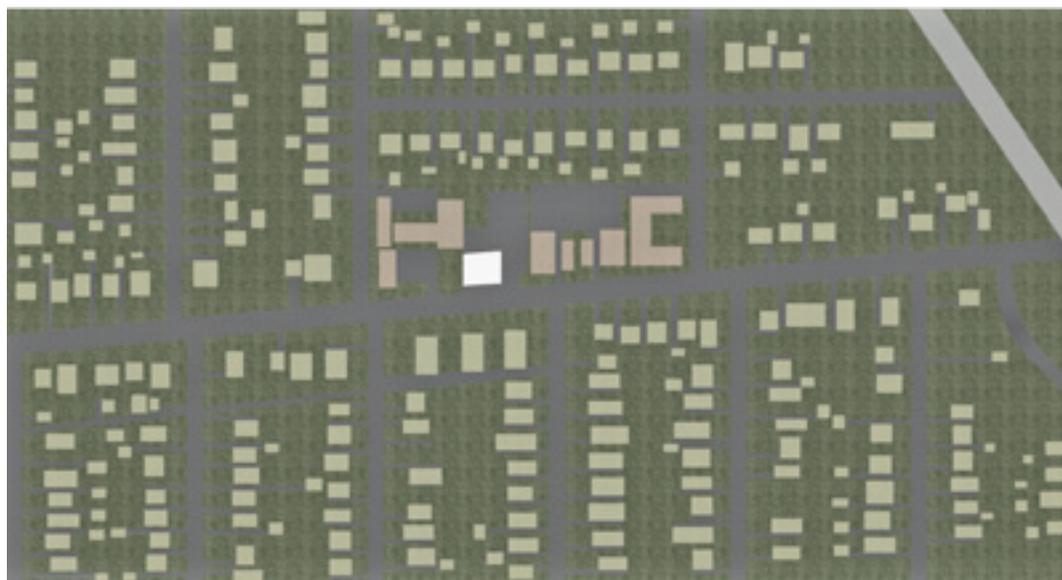
There are three activities humans participate in on a daily basis: work, converse, and lounge. Architecture plays a role in how people choose to perform these habits or rituals. Maybe they take place in the home, but humans do not just live in solitude, they have a social need that wants to be met. The café is a place people can go to meet all or any one of the needs listed, it is a place anyone is welcome. The café is for the workman who needs a quick shot of espresso on the way to a job, the coffee enthusiast stopping in for fresh roasted beans and conversation with a local neighbor, or the student who needs a place to study and loves to snack on a baked good. It is a place to go to switch things up, a change of environment. “Designing a coffee shop isn’t just about getting the right look, or serving the best coffee. It’s about creating an experience,” (Barnett & Burles). Cafes offer a sensory experience, different from one a home offers. Smells, sounds, touch, and tastes all simultaneously form at this one location, present for the human to react to. The memory of a coffee shop is one many people can relate to. The photo available is a precedent of a coffee shop. By putting oneself into the space, and imagining what sensory experience might entail, one can imagine the smell of warm coffee dripped from fresh ground beans, that was almost deafening because for a brief second it was the only thing heard. And then, after the coffee has been ordered, feeling the warmth of the cup on your hands and steam against the lips when that first sip is attempted; it is a joy when the taste of the coffee is exceptional. All these characteristics help create the atmosphere of a café, coupled with a good quality building design, the space can be a joy to experience and participate in.

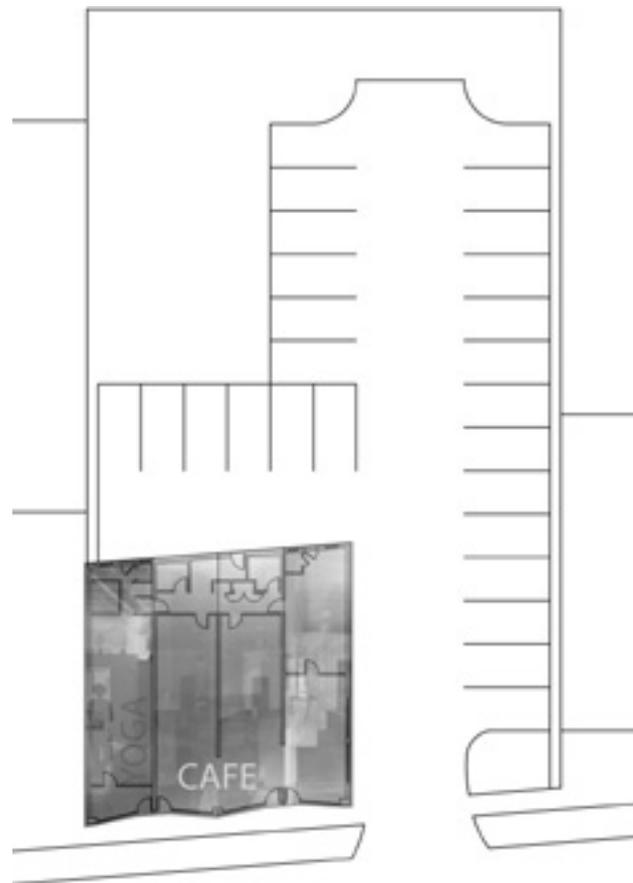


Site: 1210 Catalpa Drive, Royal Oak, MI

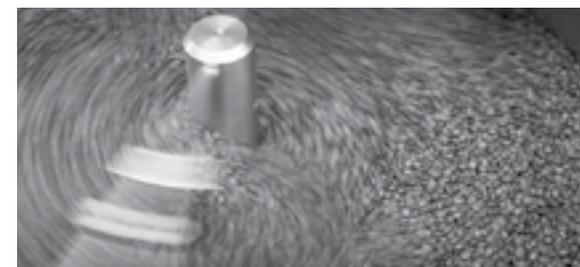
The location of a café needs to be a place that is close to where residents live; a place people can easily go to, a place available to those who wish to visit before or after work. The site for this project, 1210 Catalpa Drive, located in Royal Oak, MI, is a perfect location for this reason. A small commercial strip of eight buildings, located in a suburb of residential houses, perfectly nestled on a semi-private road connecting to main roads, giving access to major downtown areas. At this location, part of a recently developed building was up for lease during the time of this project (winter 2014). Using CityData.com, for Royal Oak, the population density, median household income, and median resident age was looked at to prove this notion prove there are enough residents in the location which would support the business of a café. The building is four times the size of the Pinwheel café; exactly four rectangle shapes connected using CMU construction. A yoga studio, the furthest rectangle to the West, is the only section that is not vacant. This strengthened the design to become a café broken up into three spaces, relating a different activity to an individual space.







Astro Coffee



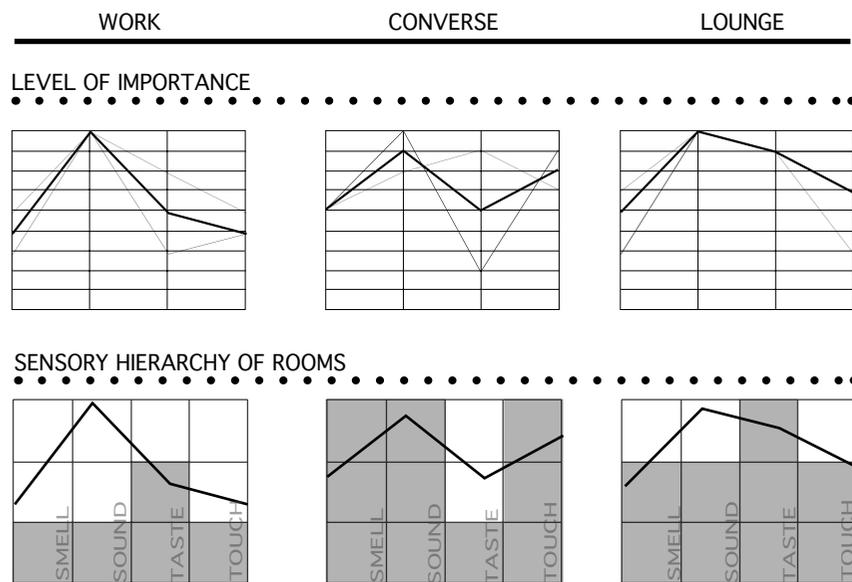
Monmouth



Astro Coffee



Truth Coffee Shop



Space Grading

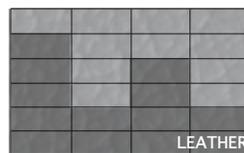
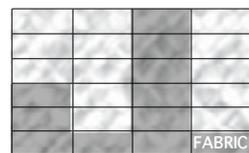
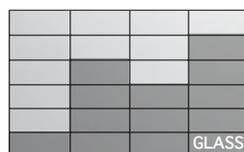
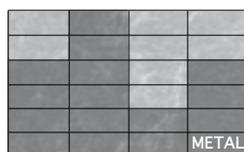
To determine the sensory experience desired in each space, a study was conducted using a Jinsop Lee's approach to grading activities based on the five senses. Jinsop Lee, an industrial designer, created "5 senses graphs" and presented them to a Ted Talk lecture meant to answer why sex is so good (Lee). The graphs graded objects on how well they play to each sense on a scale of 1 to 10, (May). His argument for the Talk was that sex is so good because all the senses are graded with a 10. I used this approach by grading the importance of the senses desired in each activity, work, converse, and lounge. The results all put sound at the highest ranking. This makes sense, but to actually design a café for the level of sound, workspace versus a conversation space,, it is assumed to be almost opposite. Because of this, another grading method was used; one based on a level or hierarchy of each sense. To elaborate, the distinctness of a smell, the sharpness of sound, the warmth of touch, and the cleanliness of taste were used to give hierarchy to all the senses within the design.

WORK

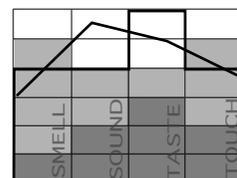
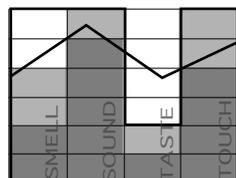
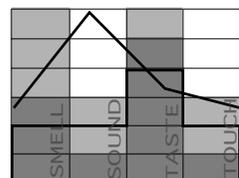
CONVERSE

LOUNGE

SENSORY HIERARCHY OF MATERIALS



COMPARISON OF SENSORY HIERARCHY



Placement and creation of the spaces led to material design, because of the effect materials have on all the senses. Sound has a dominant affect on space based on a materials absorption or reflection qualities. Also, materials are objects that transfer heat. Some objects transfer heat at a small level, like fabric, which will provide warmth for the human to become intimate with, and some are good at transferring heat, like marble, and will add contrast in a space meant to be designed for thermal equilibrium. Certain materials give off a smell or don't and when using materials for taste, lets say to drink a cup of coffee for example, either affects the flavor or doesn't. Because the sensory qualities of materials directly impact the relationship people have on spaces they are in, certain materials were all evaluated based on the hierarchy grading method. The objective for the hierarchy scale was an attempt to assess how well the design matched the sensory experience desired per activity; a comparison of all the graphs, were shown to see results. The level of importance and original hierarchy do seem to follow a similar path.

WORK



CONVERSE

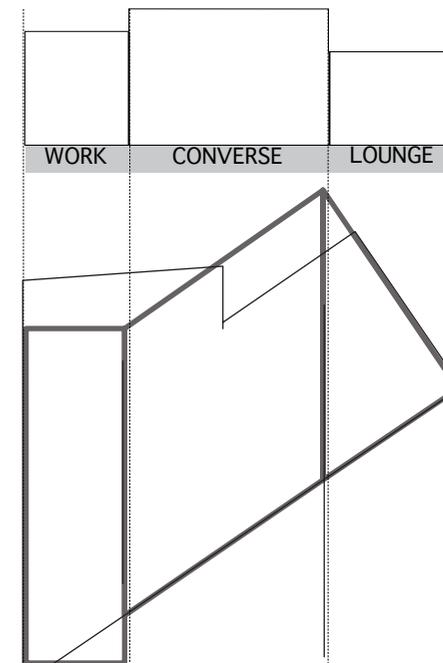


LOUNGE



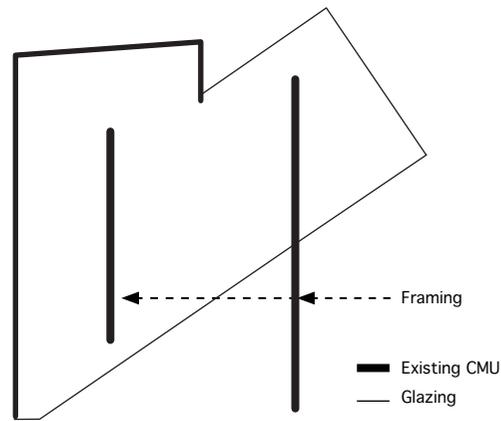
Design Quality

As mentioned previously, this design used Peter Zumthor's nine criteria on how to design quality architecture. The parameters defined by Zumthor, and how each one relates to the design of the café, are described in the following pages. Below is a diagram of the new building plan, showing the location of each space.



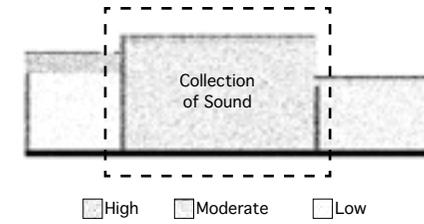
Body [Frame]

For Zumthor, the “Body of Architecture” stands for the material presence of things, the mass of a building in contrast to a human’s body (Atmospheres). The existing building is in good shape and has a good scale; keeping some of the walls was important for the design. However, except for the existing storefront, the existing body of the building was made of CMU giving it a solid presence. To add some lightness, walls were partly demolished to open spaces up towards available exterior site. Most of the buildings original interior CMU walls were kept to frame the three interior spaces.



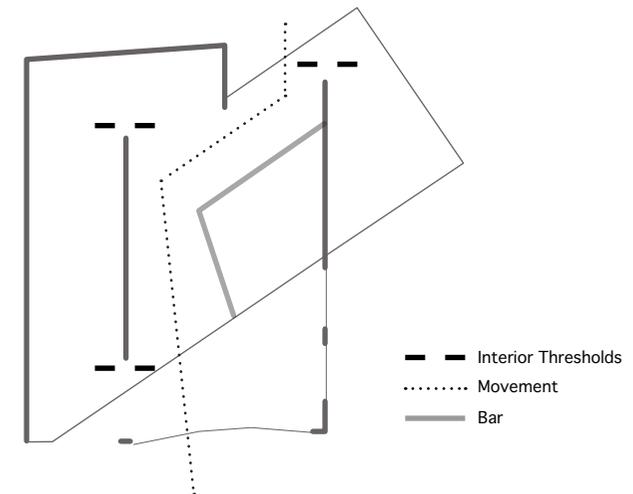
Sound of Space

“Interiors are like large instruments, collecting sound, amplifying it, & transmitting,” (Atmospheres). Where there is much sound, there is activity, and people are attracted to activity. Humans are social beings and use noise to stimulate. It is worth noting that lack of sound is also a great attraction, depending on the circumstance. Desirable in the converse space, the ceiling height was increased to collect sound. Metal structure became exposed and marble was applied to the counter tops to amplify it. This would be the space to enter, the space to have the coffee bar, and the place to meet and greet or buy and run.



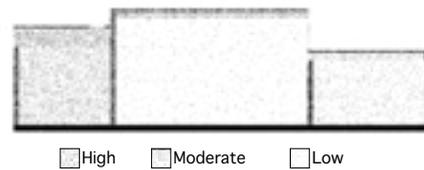
Composure and Seduction

It seemed seductive to have the room meant to produce the most sound in between the other two spaces. Designing movement across the building at an angle forces the eye to wonder. Making the user move around the bar keeps the space from feeling large because it interrupts the straight line. According to Zumthor, how people move is a spatial and temporal art (Atmospheres). Designers have the opportunity to use architecture in a way that speaks of letting go or granting freedom, a certain level of seduction for the user (Atmospheres).



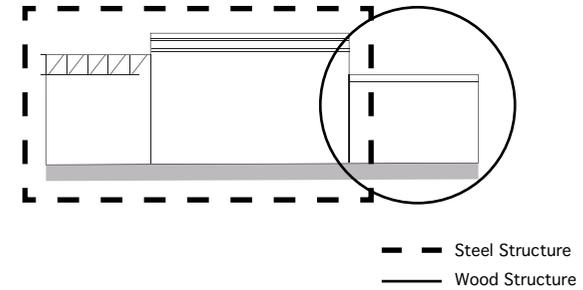
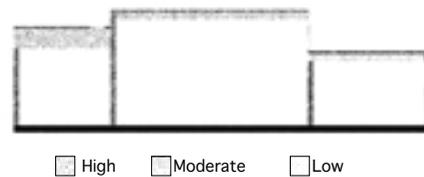
Temperature of Space

“It’s in what I see, what I feel, and what I touch, even with my feet,” (Atmospheres). Because the use of glazing was used to change the form of the building, the new level of direct sunlight available had to be appreciated. This forced attention towards which space would want to feel the warmth versus not. The lounge space seemed the perfect room to let some light in. It also allowed design for a gradual decrease of temperature as the user moved through the building. The temperature of a space fully enclosed with glass would be a noticeably different temperature than a space almost completely enclosed in CMU, and then compared to one with an eight-foot increased ceiling height. Because temperature is physical and psychological (Atmospheres), the materials chosen for the rooms needed to match the physical temperature desired so the eye would mentally match the feeling on the skin.



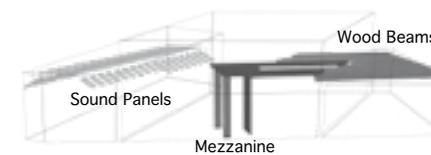
Material Compatibility

The proximity of materials creates human reaction and interaction. (Atmospheres).



Level of Intimacy

After increasing the ceiling height in the space for conversation, it was important to lower it back down in the spaces dedicated to work and lounge. For spaces with less movement, where people would desire to sit and be comfortable, the scale of the rooms needed to be at a level that would provide an intimate ambience. In addition to the lowered ceiling height, wood beams were used instead of metal in the lounge room to provide character. In the space to work, a pattern of sound barrier panels was added to lower the space a bit more and to help enclose the sound. To provide intimacy for the workers in converse space, a mezzanine was added above the bar. Also, further providing a distinction between which space is for the user to move and which is meant for the workers, the making of coffee and baking of goodies.

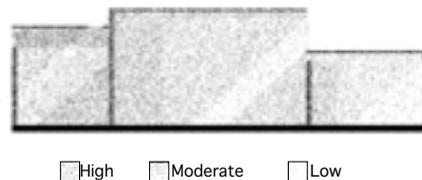


Surrounding Objects

The mezzanine also provided a place to house coffee plants. Royal Oak is a Metro Detroit city, and creating in-house products is part of Detroit's character. It is important for businesses to purchase or use local products as much as possible. This provides health and awareness to a society moving, putting the design on a level of sustainability. However, Zumthor wonders if architecture is a receptacle to objects, (Atmospheres). Since coffee is the dominant business motive, it seems poetic to grow or roast in-house coffee.

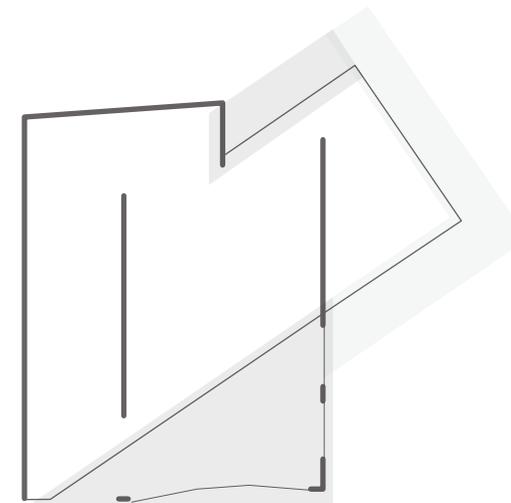
Light on Things

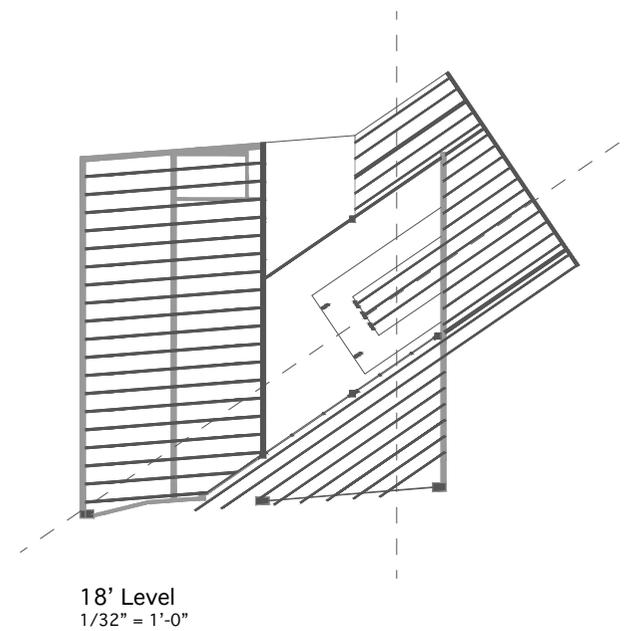
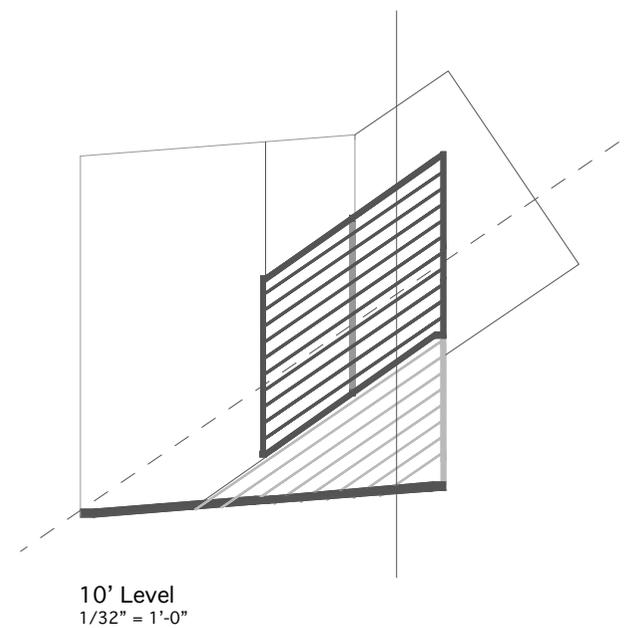
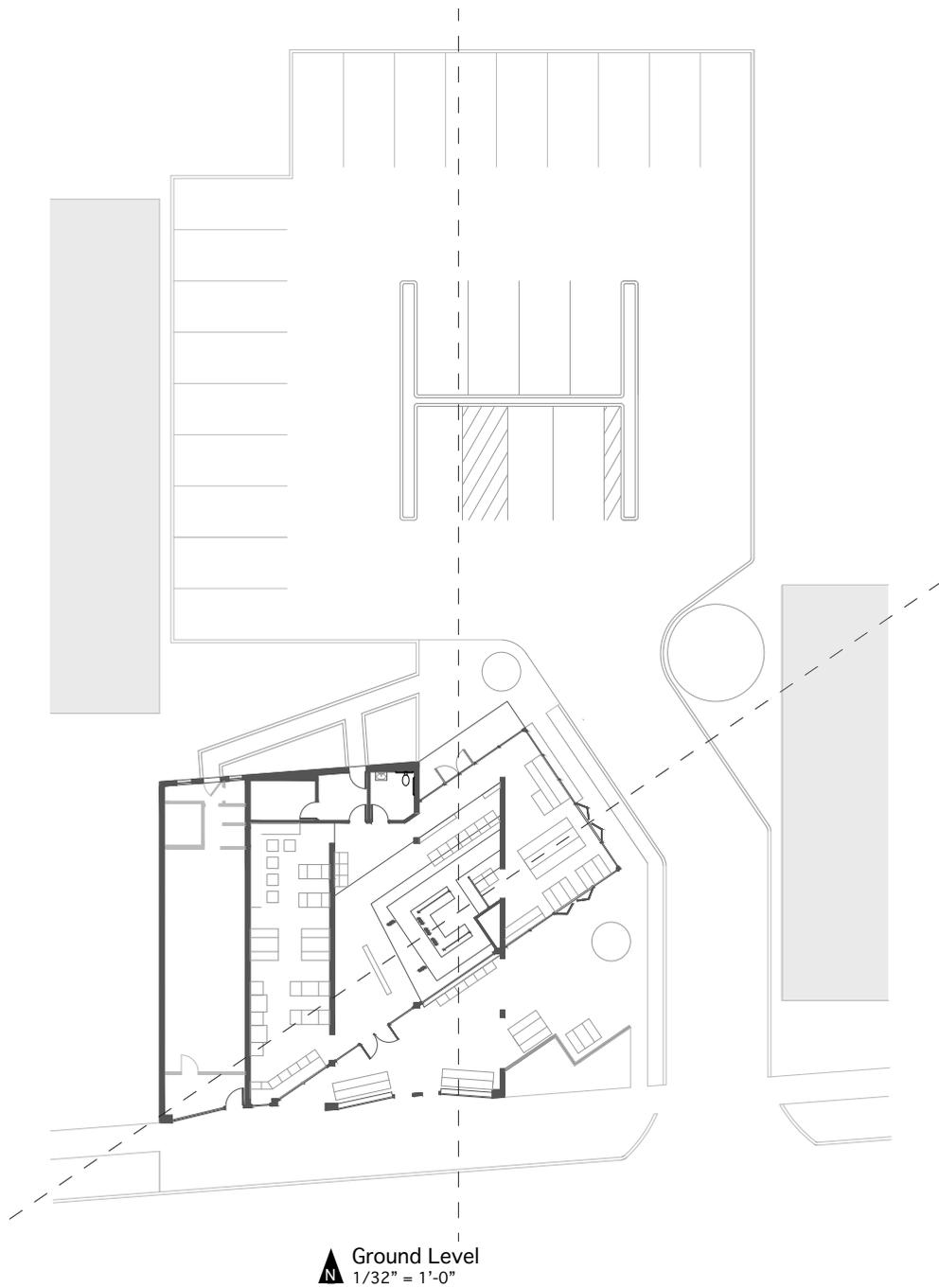
Apart from the lounge space, which is very exposed to the sunlight, a building creates shadow. Zumthor's idea of designing light is to "think of the building as pure mass of shadow, and add light as if to hollow out the darkness," (Atmospheres). The addition of diffused lighting in the spaces with a limited sun could be an respected accent. With the addition of the mezzanine and increased ceiling height in the converse space, it was a perfect location to add a high window wall. The mezzanine would block direct sun from entering, but add some openness. Since the work space is even less exposed to the exterior, it was assumed diffused lighting would also be desirable. By applying gypsum board to the existing steel trusses, spots in the ceiling are open for skylights; additionally the soundproof panels force subtle light.



Interior Exterior Tension

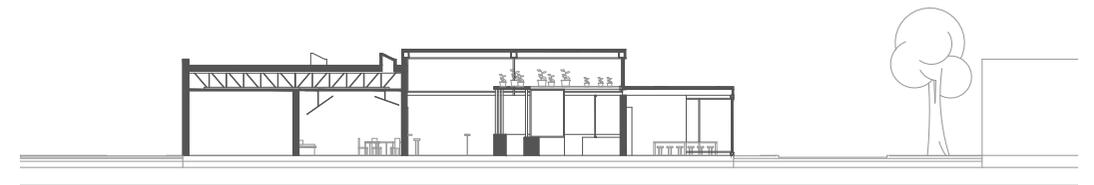
The façade of the building gives the café character. Keeping the original buildings front façade, but pushing the interior entrance north ten or so feet, provides an elongated threshold from the exterior into the interior. The wood beams added to the lounge space, are extended out into the space between the front façade and café entrance. Because there is no roof on top of the beams, it is still considered part of the exterior, creating a transitional space into the building. Entrances were also added in the lounge space to further accentuate the contrast between its interior space the completely enclosed storefront glazing. In the back, the building line was pushed south, six feet from the corner of the CMU keeping the entrance from feeling secluded. Then, allowing the roof to provide cover, transition is created for the user by forcing interaction with the building before entering.







North-South Section
1/32" = 1'-0"



West-East Section
1/32" = 1'-0"



South Elevation



East Elevation



North Elevation



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If there were a continuation on this thesis, the density of particles analysis, and how it could graphically represent space and a humans relationship to architecture, would be further explored. The images shown are a mock-up built to allow critics to personally feel how a density of particles creates atmosphere.



