North Dakota State University Graduate School

Title

PSYCHOSOMATIC TRANSFORMATION: THE CATHARTIC CYCLE OF TIME AND HEALING

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PSYCHOSOMATIC TRANSFORMATION: THE CATHARTIC CYCLE OF TIME AND

HEALING

A Thesis Submitted to the Graduate Faculty of the North Dakota State University of Agriculture and Applied Science

By

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ABSTRACT

Concerning healthcare today, it is clear to see that there is a disconnect between our understanding of physical health and of mental health. Not having access or not being able to afford any type of medical treatment is a problem this country needs to solve. While not having the power to write prescriptions or diagnose illnesses, architecture has the power to affect us on a more holistic level.

Architecture's influence on our mood from the manipulation of a space's atmosphere is essential to the connection between the metaphysical mind and physical body. Our bodies respond to these emotions made through experiencing architecture, creating reactions powerful enough to encourage deeper thought and reflection. The cathartic connection between the mind and body is the solution we need in this country's healthcare crisis. I offer architecture as that solution, creating spaces meant to transform and heal the occupants throughout various cycles throughout the spaces mimicking that of the cycles of day and night, our circadian rhythms, or the seasons. Throughout the design of these spaces, my goal is to create such powerful emotions and reactions to this space and experience in order to heal the inhabitants from the inside out.

DEDICATION

To my amazing mom, dad, older sister Emily and younger sister Kelsie, thank you for supporting

me from the great state of Colorado for 5 years, I love you.

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LIST OF ABBREVIATIONS

DC	District of Columbia
SW	Southwest
US	United States (of America)

1. INTRODUCTION

1.1. Problem Statement

Within the United States healthcare system, there exist a multitude of issues; from the nurse and physician shortage to prescriptions such as insulin costing upwards of \$6,000 annually, it may be time to step back and look at the broader picture of what health really is. Diving into the history of medicine and the philosophy attached to how we think about being sick and the experience we go through with different illnesses and ailments will help bring meaningful conversations forward regarding the improvement of the healthcare system.

Somewhere in time, the relationship between the healer and the healed shifted from a family friend or member of the village to now where a patient is only known as a number on a sheet. The introspective and personal aspect of healing is crucial to its effectiveness. In many places, people don't have access to healthcare at all, which is detrimental to that community's overall wellness and health.

1.1.1. Research Questions

With the knowledge of existing and prevalent problems of, we as architects have an obligation to design and implement solutions in order to help better community wellness and societal issues as best we can. Addressing and solving these contextual issues isn't possible with architecture, so we have to ask ourselves some questions in the research process to strengthen the impact architecture can have on the people experiencing it.

Some research questions include: How can we, as architects, design to understand mood and atmospheres in order to aid in the formal and disconnected view we have of healing in the United States? How can healing and transformation happen effectively through the use of architectural design? How can we design to impact people's emotions?

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1.2. Objective

The objective for this thesis project outside of programmatic elements is to manipulate space into to be an experience of emotions. The goal is that the journey through these spaces encourages introspection while providing a place to heal, grieve, sweat, and relax.

While designers don't design in a vacuum, another goal of this thesis is to have this design to implemented in many places around the United States. While architecture doesn't have the ability to write prescriptions or 'cure' any ailments in the more formal way we view healing, this design's goal is to be able to be applied wherever it is needed.

2. BACKGROUND

2.1. Background

Within the background of this thesis, research into a more historical, contextual, and philosophical approach was made. In order to understand themes such as catharsis, mood and atmospheres, wholeness, and empathy, research into the root of these concepts is crucial.

2.1.1. Catharsis

When experiencing and recovering from most sicknesses, the theme of catharsis is clear. Catharsis, by definition, is "purification or purgation that brings about spiritual renewal or release from tension" (Definition of CATHARSIS, 2023). In order to experience and understand catharsis — one has to be aware that it is a very physical experience the body has. All this physical and emotional release of tension is so satisfying, like an itch has been scratched or when you're finally able to take a deep breath. Whether that stress be from a job, relationship, test, or sickness, the relaxation after this feeling of catharsis is truly transformative.

In Chora 1, we discover that catharsis dates back to the Greek theater, as reenacting tragedy would be a therapeutic experience, placing the viewer in the shoes of the actors, creating that space for empathy and transformation. When performing tragedy, the relationship of the audience and the performers was key in achieving this therapeutic experience, the audience had to be open to what was happening as if it weren't just a story being told. This interaction cannot be explained by normal prose, it must be discussed through poetic language, creating a distance between the story and us, but not so far that we are disconnected entirely (Pérez-Gómez & Parcell, 1994). Through this form of storytelling, designers and architects can use this theme of catharsis as it is essential to the understanding and the connection we need between our physical body and metaphysical mind.

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2.1.2. Mood and Meaning

In the essay Mood and Meaning from Mind in Architecture, Alberto Perez-Gomez discusses the importance that atmosphere has on our mood, and in turn, our experiences in architecture. He introduces the German noun Stimmung, meaning tone, mood, or atmosphere but is also described as... "Attunement, understood as a search for lost integrity, health, wholeness and holiness." (Pérez-Gómez, 2015). Understanding the concept of 'wholeness' is crucial in remedying this disconnect in our understanding of the mind and body as a unit rather than separate entities. He goes on to state that "The mind and the world are simply not separate and independent of each other; the mind is an embodied dynamic system in the world, rather than merely a neural network in the head." (Pérez-Gómez, 2015). We are such complex psychosomatic beings that if we only focus on the mind *or* the body, we won't be able to heal effectively.

In order to meticulously design specific moods and meanings, it also depends upon *what* is happening in that design. The nihilistic view that the built environment is merely shelter further separates us from the connection of our mind and body. As we are inhabiting the space, it haunts us with its atmosphere, but also by what activities are housed there. Being aware of the emotions had in a healthcare setting will help architects design better spaces in terms of those emotions.

2.1.3. Attunement

Attunement's essay Atmospheres and Moods by Alberto Perez-Gomez, there is discussion on what the importance of atmosphere has on our mood. The importance of an awareness and understanding of a space's atmosphere helps in the success of that space. To Mark Wigley, atmosphere should be "the central objective of the architect.," which is challenging for

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most modern architects, as it is "impossible to objectify" (Wigley, 1998). This is the most troubling and difficult concept to accept when researching this thesis. Another point Perez-Gomez brings up is the fourth dimension of architecture we also need to be designing for: time. He discusses how "Atmospheres are spatial phenomena, but always intertwined with temporality," (Perez-Gomez, 2016). When keeping in mind the space of time, we as designers have to be aware of the different variables when imagining even the most basic spaces in order to successfully create an atmosphere of healing.

Our emotions echo much of nature, and David Abram posits that such moods as anger or rage is easily comparable to that of our "ancestral, animal experience" of thunder and lightning (Abram, 2011). More examples Abram included are the primal emotional release after crying can be compared to that of rain, a clear and focused mind to an open sky, and confusion to fog. Such metaphysical phenomena can be mirrored in our own emotions, so why don't we do that with architecture?

2.2. Literature Review

2.2.1. Merleau-Ponty

One of our first readings we were given was The World of Perception by Maurice Merleau-Ponty. It covered a broad range of topics encompassing the idea of perception and experience. Throughout the book, Merleau-Ponty uses modern art, philosophy, time, and culture to remind and rediscover the way in which we live and understand the world around us. The rise in technology and science has taken over the value our senses used to have in terms of the lived experience. This exploration into experience as well as a sense-of-self, connecting the mind and the body together helps us look a little deeper into aspects of reality we always seem to forget. (Merleau-Ponty, 2004)

2.2.2. Gadamer

In The Enigma of Health, Hans-Georg Gadamer critiques the modern healthcare system, noting the disconnect our mind has from our bodies when we have a rigid scientific view of healing. He states: "When it is a question of applying scientific knowledge to our own health, it is clear that we cannot be treated solely from the perspective of science. Here everyone has their own experiences and expectations." (Gadamer, 1996) As well as mentioning that the history of treatment has changed from when the local doctor, a family friend who came over when you were sick, to now where you aren't able to develop a significant dialogue with your doctor. This disconnects us further, as patients are losing their identity and are now just numbers on a sheet.

2.2.3. Woolf

Virginia Woolf in her book On Being Ill, writes of sickness with empathetic tone, placing us in the shoes of someone who is ill, while also calling back to our own experiences being sick:

"Considering how common illness is, how tremendous the spiritual change that it brings, how astonishing, when the lights of health go down, the undiscovered countries that are then disclosed, [...] what ancient and obdurate oaks are uprooted in us in the act of sickness, [...] —when we think of this and infinitely more, as we are so frequently forced to think of it, it becomes strange indeed that illness has not taken its place with love, battle, and jealousy among the prime themes of literature." (Woolf, 1926)

In her words, it's impossible to not feel empathy for the sick, as we have all been there at one point in our lives. This begs the question; how can we be more empathetic to others when going through the process of healing?

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2.2.4. Ratcliffe

In Matthew Ratcliffe's essay Why Mood Matters, he first discusses Heidegger's Stimmung, deepening our understanding of the idea of mood, stating that we travel through life in any given mood, also described as Befindlichkeit, or the act of finding oneself in a world through mood. Ratcliffe then goes into the depth of mood, explaining the power of fear. He states that there are three ways to view fear; focusing on: what we are afraid of, the attitude of 'fearing', or what it is that we are afraid of. (Ratcliffe, 2009). A major theme throughout this essay was discussing the effect mood has on people's lives, which affects health and wellness immensely.

2.3. Precedents

2.3.1. Peter Zumthor's Therme Vals

A more modern example of how this project could play out would be Peter Zumthor's Therme Vals. This space provides a complete sensory experience, involving the movement of the landscape to create a cave-like system of rooms, manipulating light, sound, smell, and touch to invoke a sense of serenity to encourage healing and reflection. In his essay titled Atmospheres, he discusses the effect several factors have on architecture and its influence on mood. An atmosphere, as Zumthor describes, is the first impression we get from a space – almost immediately as you enter it, your senses reflect a mood from a space. Materials, visual weight, acoustics, temperature, context, programmatic elements, and lighting are all differing characteristics a building has that affects the mood it gives off.

Peter Zumthor uses the material of Valser Quartzite in the Therme Vals, shown best in Figure 2.3.1.1. This material is found in the Swiss alps, it is as durable as granite with the same visual movement and color composition as marble. With shades of green and gray and hints of silver and quartz, it catches the light beautifully. Peter Zumthor comments on the nature of the material in this space, stating: Mountain, stone, water – building in the stone, building with the stone, into the mountain, building out of the mountain, being inside the mountain – how can the implications and the sensuality of the association of these words be interpreted, architecturally?" (Zumthor, 2006). An exterior of the Therme Vals is shown in Figure 2.3.1.2.



Figure 2.3.1.1 Therme Vals Central Pool (Source: Dominik Gehl, n.d.)



Figure 2.3.1.2 Therme Vals (Source: Andrea Ceriani, 2009)

2.3.2. Le Corbusier's La Tourette

Another precedent I looked at is Le Corbusier's La Tourette, which, other than universally being praised as a masterpiece, is a labyrinth of spaces that takes. (Perez-Gomez, 1997). Le Corbusier's use of the landscape as well as the program transport the viewer into a sense of awe, using light and material as well to create a specific atmosphere beautifully.

A major element of this design that interests me as a designer would be the lack of lighting. When designing for a specific atmosphere, lighting plays a significant role in how that atmosphere changes throughout the day. Looking at La Tourette as a precedent, it alluded back to the themes found at the beginning of the research. The manipulation of light and shadow as well as the cold material emanate feelings of unease, anxiety, or compression. It's meant to make you uncomfortable, and it does that through material, light and shadow, as well as differing levels and views, shown below in Figures 2.3.2.1 and 2.3.2.2.



Figure 2.3.2.1 AD Classics: Convent of La Tourette / Le Corbusier (Source: Fernando Schapochnik, n.d.)



Figure 2.3.2.2 La Tourette (Source: Thierry Allard, n.d.)

3. METHODOLOGY

3.1. Approach

After researching several philosophical and historical examples of healing and atmosphere, exploration into design began. Looking more closely at my research questions, a large point of interest is the exploration into mood and atmosphere. An overall goal for this design is to connect the mind and body through catharsis through the manipulation of mood and atmosphere.

One of the first explorations into design was through the program. The formal view we in the United States lacks empathy and compassion when keeping in mind *who* it is that occupies those spaces. The concepts on *how* people feel in a space are directly tied to that space's atmosphere. An awareness of where this design is found in the US was also one thing to be mindful of when considering program. Throughout my research into sites, there was a bit of back and forth, and it was finalized that Washington DC was going to be the best fit for a design such as this.

3.2. Project Location (larger scale)

This thesis found itself in Washington, DC, whose population as of 2022 stands around 672,000 people with the median age being 34.3 in 2021 (*Washington, D.C. - Place Explorer - Data Commons*, n.d.). Regarding all of Washington DC, they are first in overall healthcare spending per capita but with some of the lowest quality of healthcare. Purely from a money standpoint, healthcare spending has increased to \$14,381 in 2020, making up 14.5% of the average income, as opposed to \$4,642 in 1991, or 7.8% of the average income. (*Health Expenditures by State of Residence, 1991-2020*, n.d.) (*Real Median Household Income in the District of Columbia*, 2023).

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3.3. Project Location (smaller scale)

A study was made regarding specifically mental health and the barrier's involved in treatment within Wards 7 and 8. Ollie Ganz and his team found several barriers, such as "low rates of insurance coverage, lack of a regular healthcare provider, difficulty finding resources for treatment of mental health problems, distrust in the healthcare system, competing health demands, and [the] stigma of mental health and mental health treatment." (Ganz et al., 2018). A majority of these barriers face the Black or African American community, which makes up over 40% of the total population of Washington DC.

When diving into this site and its surrounding area, I found a lot of low-income neighborhoods as well as several signs of gentrification. Keeping this in mind for specifically the aesthetic of design proved to be challenging, but I knew I wanted the community in this area to be comfortable in this space, so I kept them in mind.





Figure 3.3.1 Site Plan (Source: Google Maps, 2024)

Situated on the road that divides Wards 7 and 8, shown best in Figure 3.3.2, this site location is surrounded by residential area and is situated on Mixed Use land along the Mixed-Use Housing to the south and small shopping to the east of that. When looking for a site within the south end of DC, I searched for where there weren't any accessible healthcare facilities. While the program doesn't follow the typical clinic as we know it today, I wanted to see where the people in Wards 7 and 8 would best need a place to relax and heal.



Figure 3.3.2 Map of Washington DC, Wards 7 and 8 Gray

3.5. Artefact

While in design and developing the story of the architecture, the development of an artefact was included. This artefact, a cultural representation of the concepts from before, went through many cycles of development. Early on, the use of clay was imperative to the story being told. Having a working knowledge of clay is essential to understanding the theme of cycles. How long it takes to dry, how much you are able to manipulate it at different moisture levels, the chemical components, and knowing that the clay will do what the clay wants. Gaston Bachelard, in his essay Water and Dreams, discusses clay in a more poetic way, stating:

Such a working hand needs an exact mixture of earth and water in order to realize fully what constitutes matter capable of form, substance capable of life. To the unconscious of the man who kneads the clay, the model is the embryo of the work; clay is the mother of bronze. Therefore I cannot emphasize too much how important the experience of fluidity and pliability is to an understanding of the psychology of the creative unconscious. In experimenting with paste (la pate), water will obviously be the dominant substance. One dreams of water when taking advantage of the docility of clay (l'argile)." (Bachelard, 1983)

Process images of the different iterations or cycles are shown in Figure 3.5.3 below. Several of Le Corbusier's drawings inspired the development of an artefact, which then inspired my design. The drawing of the proposed promenade through the mountain, (Figure 3.5.1) represents one's journey from light into darkness into the mountain, as well as his graphic being the 24-hour day (Figure 3.5.2) led to connections to literary works, such as the Hero's Journey.



Figure 3.5.1 A sectional drawing of the proposed promenade through the mountain, Basilica at Le Sainte Baume (Source: Le Corbusier, 1953)

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Figure 3.5.2 Sign of the 24-Hour Day (Source: Le Corbusier, 1964)



Figure 3.5.3 Artefact Process Iterations



Figure 3.5.4 The Hero's Journey (Source: Wikipedia, 2012)

Simply put, The Hero's Journey is a form of storytelling. This is best told through the journey Orpheus takes from the underworld to save his lost love. Throughout this tale, Orpheus – talented enough to lull a sleepless dragon to sleep in the story of the golden fleece – finds himself in several challenges along his journey to bring his wife Eurydice back from the underworld. Taken from him in a fit of jealousy, Eurydice is originally kept in the underworld, but is allowed to return to the overworld on one condition – Orpheus must not look back at Eurydice on their way back. However, just as he steps into the light of the sun, he looks back before she has the chance to join him, being taken back to the underworld until Orpheus joins her after denying any attention, heartbroken over his wife's death (*Orpheus* | *Myth*, *Symbol*, & *Meaning* | *Britannica*, n.d.). A rendition of his journey back to the overworld is shown in the painting 'Orpheus Leading Eurydice from the Underworld' by Jean-Baptiste-Camille Corot, shown below in Figure 3.5.3.



Figure 3.5.6 Orpheus Leading Eurydice from the Underworld (Source: The Museum of Fine Arts, Houston)

This form of storytelling finds meaning in that the characters are transformed through their experiences from the known and the unknown. From darkness, we can learn, and cycling through dark and light, we are transformed. A notable example of transformation through cycles has to be clay. Several prior iterations of the artefact are shown here, and one can examine the different forms the clay takes as it is manipulated, dried, reclaimed, broken, and mended back together.

From the past cycles, experience was gained, and lessons were learned. From that experience, the final form of the artefact was decided to be representative of an early form of clay, also known as slip. When reclaiming, the dry clay is placed in water for several hours or days to bring it back to be manipulated. When combined with a large amount of water and then mixed together, slip is created. After that, the slip is placed in a large plaster batting, drawing out a majority of that moisture, leaving you with usable clay. When in the form of slip, clay is at its easiest to manipulate, a simple touch has the ability to create ridges and valleys in the clay, which is where the final piece of clay found itself. A copy of this video can be found as the supplement to this thesis document.

To best stand for these concepts of cycles and transformation, a light source encircles the final form of this piece, representing the path of the sun, transforming each ridge and valley from darkness to light and back again. Cycling through light and shadow, as Orpheus did, teaches us lessons and helps us learn from experience. In its final iteration in the exhibit, shown in Figure 3.5.7, past cycles are hung in front of the video, eclipsing our view which allows us to look into the past to understand how this artefact came to be, deepening its meaning by showing the transformation the clay took.



Figure 3.5.7 Artefact in Exhibition

3.6. Precedents / Case Studies

When looking at examples of atmospheres created in architectural space, the use of lighting plays a large part in what specific atmospheres you want to convey. From stage design (Figure 3.6.1) to Peter Zumthor (Figure 3.6.2) and Tadao Ando's work (Figure 3.6.3), light and shadow dance and transform as the sun moves, which I found inspiration in for my own design.



Figure 3.6.1 Stage design for Orpheus (Source: Appia, A. (1913))



Figure 3.6.2 Peter Zumthor's Kolumba Museum (Source: architectuul.com, n.d.)



Figure 3.6.3 Tadao Ando's Church of Light (Source: www.behance.net, 2020)

Within Flora Samuel's book Le Corbusier In Detail, she mentions various Le Corbusier notions about light and shadow. In various religions that focus on the body and soul, such as "Manichaeism, which focused upon the relationship between the body and the soul, the cosmos was described in terms of the relationship between night and day." (Samuel, 2007). This comparison of the mind and body dichotomy echoes itself in key themes of living as well, such as: life and death, good and evil, and heaven and Earth. This metaphorical night and day find similarities to the concept of sickness and health, but how can architecture be the place to show the distance between them but also where they meet?

Alongside the artefact, several precedents were chosen to deepen the story being told. First being Douglas Cardinal's St. Mary's Roman Catholic Church. The hierarchy of light and shadow alludes to the distance between heaven and earth as well, creating an atmosphere of divinity and otherness to an otherwise stagnant brick building (Figures 3.6.6 and 3.6.7).



Figure 3.6.6 Douglas Cardinal's St. Mary's Roman Catholic Church (Source: St. Mary's Parish)



Figure 3.6.7 Douglas Cardinal's St. Mary's Roman Catholic Church (Source: St. Mary's Parish)

. The Cranbrook Natatorium (Figures 3.6.8 and 3.6.9) was especially inspiring when designing for light and shadow. The use of lighting as well as reflections alludes back to the themes discussed in the artefact. The sense of awe created when submerged, looking upwards to these large circular light tunnels also alludes to this sense of distance and otherness, which I explore further later in design.



Figure 3.6.8 Cranbrook Natatorium (Source: TOD WILLIAMS BILLIE TSIEN Architects)



Figure 3.6.9 Cranbrook Natatorium (Source: Balthazar Korab)

3.7. Process Sketches and Models

From the various developments into the artefact and various precedents, design moved forward with rich contextual narratives and reasoning for every design decision. Shown in the process sketches and models (Figures 3.7.1 and 3.7.2, respectively), a very cyclical form was adopted early on and stayed a prominent design aspect.

The ecliptic nature of the artefact alongside inspiration found from St Mary's and the Cranbrook Natatorium is clear in the form, but it serves a purpose as well. When designing for light and shadow, the path of the sun throughout the day, throughout a week, or throughout the seasons was a primary factor in designing more detail-focused aspects such as the light tubes (shown in its preliminary stage at the top of Figure 3.7.1).



Figure 3.7.1 Process Sketch



Figure 3.7.2 Process Model

When experimenting in 3D, many design aspects revealed themselves. As the story grew and inspiration was found, various models were assessed when applying different angles of light, seeing how the spaces are transformed as the light changes.

4. RESULTS AND CONCLUSIONS

4.1. Project Objective

Stated before, the objective for this design thesis is to manipulate space to be an experience of emotions. Themes covered before finding themselves in design, such as catharsis, mood, atmosphere, material, time, and philosophy all find themselves in the final design. This space is designed to encourage introspection and reflection while also providing a space for the occupants to heal, grieve, sweat, eat, bathe, and relax.

Another goal of this thesis is to be aware that it is not designed to live in a vacuum. Within Wards 7 and 8, this standalone design is one possibility for transformative spaces. This informal program can be implemented all across the United States as well as other places across the world where access to healthcare is limited.

The typology of this design follows closest to a wellness center, housing spaces such as a pool, two saunas, a workout space, two locker rooms, and an eating/lounging area (floor plans shown in Figures 4.2.2, 4.2.3, and 4.2.4). Several past examples and storylines up until this point find themselves in the program.

4.2. Project Design and Documentation



Figure 4.2.1 Axonometric View (SW)

Following closely to the process sketches and models, I've chosen to keep the combination of forms rather simple. The intersecting area of the clashing cyclical forms creates connections between the north and south forms, alluding to the connections being made between the mind and body.

Entering from the west, the occupant is hinted at the rest of the space, giving them just a glimpse of the impact light and shadow have immediately when you enter the building. From the entrance, the path chosen is up to the occupant. Letting the visitors choose their own experience in this collection of spaces is how the issue of subjectivity was mediated. As the path of the sun moves across the sky for a day or lower in the sky when the seasons change, I anticipate that the occupants have their chosen order of the spaces, creating a routine out of experiencing architecture that is unique to each individual.







Figure 4.2.3 Floor Plans Program



Figure 4.2.4 Floor Plans Program Key

When in the primary space of the pool, it is beneficial in understanding the impact light and shadow have on the atmosphere created. The following renderings (Figures 4.2.5, 4.2.6, 4.2.7, and 4.2.8) follow the path of a single day, showing the different atmospheres created just by changing the time of day.



Figure 4.2.5 Site Section Morning



Figure 4.2.6 Site Section Noon



Figure 4.2.7 Site Section Afternoon



Figure 4.2.8 Site Section Night

To fully understand the impact the sun has on these spaces, one would have to repeatedly visit and spend time in the space. In Figures 4.2.9, 4.2.10, 4.2.11, 4.2.12, and 4.2.13, I've carefully taken snapshots of the most direct sun angles. From these renderings, the feeling of warmth is portrayed. When the harsh sun angle is applied, the sun and the light it emits becomes a material, playing with the dark and light-colored stone, stucco, concrete, and wood.

Using light as a material was one of the primary reasons for keeping a simplistic material palette, sticking with shades of black and white with bits of warmth through the wood used to separate and allude to the other spaces. The use of glass as well became extremely rewarding. Taking inspiration from a particular photo of the Cranbrook Natatorium (Figure 3.6.9), using reflective materials created views to other design elements *through* and off each other, alluding to the ecliptic nature of the final iteration of the artefact.



Figure 4.2.9 Entrance Detail (Afternoon)



Figure 4.2.10 Light Loft Detail (Noon)



Figure 4.2.11 Pool Perspective (Afternoon)



Figure 4.2.12 Sauna Perspective (Morning)



Figure 4.2.13 Workout Space Perspective (Afternoon)

4.3. Conclusions

Throughout the exploration of various works mentioning contextual precedents and ideas such as catharsis, atmosphere, light, time, the final design still has areas of improvement. Without knowing, the separation of this within the site proved itself to be a large issue. If this programmatic storyline found itself *within* our formal understanding of health rather than being its own entity on a site. Another issue I would've liked to address would be the issue of gentrification around this site. When this concern arose, I knew it would be difficult to remedy something so engrained in the area, and I feel as if I could've done a better job in being mindful of my forms as well as the materials used to make this issue worse.

To conclude, I wanted to be transparent in my intentions and be as practical as I can be by acknowledging larger issues that I am unfortunately unable to fix with architecture. I want to address that there are much more complex problems outside the healthcare industry that impact everyone in said industry as well as all Americans. My proposed design solution is not able to solve most of those issues. I merely hope to take a more reflective and holistic approach to the way we heal and how architecture can help be a catalyst in transformation and knowledge.

REFERENCES

2626 Naylor Rd SE UNIT C. (2024). Google Maps. https://www.google.com/maps/@38.8627889,-76.9717219,877m/data=!3m1!1e3?entry=ttu

Abram, D. (2011). Becoming Animal: An Earthly Cosmology (unknown edition). Vintage.

- Allard, T. (n.d.). *La Tourette*. https://blog.thal.art/interior-photograph-of-the-church-by-the-architect-le-corbusier/
- Appia, A. (1913). *Stage design for Orpheus*. https://www.researchgate.net/figure/Appias-stagedesign-for-Orpheus-Hellerau-in-1913-with-active-and-passive-light fig2 364698434
- Bachelard, G. (1983). Water and dreams: An essay on the imagination of matter. *The Pegasus Foundation*. https://www.abebooks.com/9780911005011/Water-dreams-essay-imagination-matter-0911005013/plp
- Ceriani, A. (2009). *Therme Vals*. https://www.archdaily.com/13358/the-therme-vals/5fc1415563c017d62c001226-the-therme-vals-photo
- Corot, J.-B.-C. (1861). Orpheus Leading Eurydice from the Underworld [Oil on canvas]. The Museum of Fine Arts, Houston.
- Cranbrook Natatorium. (n.d.). https://twbta.com/work/academic/cranbrook-natatorium/

Definition of Catharsis. (2023, November 16). https://www.merriam-

webster.com/dictionary/catharsis

Douglas Cardinal's St. Mary's Roman Catholic Church Interior. (n.d.). https://acontarionextgens.ca/2021/05/25/hidden-canada-indigenous-perspectives-in-stmarys-catholic-church/

- Gadamer, H.-G. (1996). The Enigma of Health: The Art of Healing in a Scientific Age (N. Walker & J. Gaiger, Trans.). Stanford University Press.
- Ganz, O., Curry, L. E., Jones, P., Mead, K. H., & Turner, M. M. (2018). Barriers to Mental Health Treatment Utilization in Wards 7 and 8 in Washington, DC: A Qualitative Pilot Study. *Health Equity*, 2(1), 216–222. https://doi.org/10.1089/heq.2017.0051

Gehl, D. (n.d.). Therme Vals Central Pool. https://dominikgehl.com/therme-vals

Health Expenditures by State of Residence, 1991-2020. (n.d.). [CMS.gov]. https://www.cms.gov/data-research/statistics-trends-and-reports/national-healthexpenditure-data/state-residence

Kolumba Art Museum. (n.d.). https://architectuul.com/architecture/kolumba-art-museum

Korab, B. (n.d.). Cranbrook School. https://sah-archipedia.org/buildings/MI-01-OK4.5

Kujman, P. (2020). Tadao Andō / "a short film of light & shadow."

https://www.behance.net/gallery/100070353/Tadao-Ando-a-short-film-of-light-shadow

Le Corbusier. (1953). A sectional drawing of the proposed promenade through the mountain, Basilica at Le Sainte Baume.

https://www.researchgate.net/publication/342657325_The_architectural_promenade_and the perception of time

- Le Corbusier. (1964). When the Cathedrals Were White: A Journey to the Country of Timid People. McGraw-Hill.
- Merleau-Ponty, M. (2004). The World of Perception. Routledge.
- Orpheus | Myth, Symbol, & Meaning | Britannica. (n.d.). Retrieved May 7, 2024, from https://www.britannica.com/topic/Orpheus-Greek-mythology

Perez-Gomez, A. (1997). Architectural Representation and the Perspective Hinge. MIT Press.

- Pérez-Gómez, A. (2015). Mood and Meaning in Architecture. In S. Robinson & J. Pallasmaa (Eds.), *Mind in Architecture: Neuroscience, Embodiment, and the Future of Design* (p. 0). The MIT Press. https://doi.org/10.7551/mitpress/10318.003.0013
- Perez-Gomez, A. (2016). Atmospheres and Moods. In *Attunement: Architectural Meaning after the Crisis of Modern Science* (1st edition). MIT Press.
- Pérez-Gómez, A., & Parcell, S. (1994). Chora 1: Intervals in the Philosophy of Architecture. McGill-Queen's University Press.
- Ratcliffe, M. (2009). Why Mood Matters. In *The Cambridge Companion to Heidegger's Being and Time*. Cambridge University Press.
- Real Median Household Income in the District of Columbia. (2023). FRED. https://fred.stlouisfed.org/series/MEHOINUSDCA672N

Samuel, F. (2007). Le Corbusier In Detail. Routledge.

- Schapochnik, F. (n.d.). AD Classics: Convent of La Tourette / Le Corbusier. https://www.archdaily.com/96824/ad-classics-convent-of-la-tourette-lecorbuiser/56ddcef6e58eceaa4a000001-ad-classics-convent-of-la-tourette-le-corbuiserphoto
- The Hero's Journey. (2012). [Wikipedia].
- Washington, D.C. Place Explorer—Data Commons. (n.d.). Datacommons.Org. https://datacommons.org/place/geoId/11001?utm_medium=explore&mprop=count&popt =Person&hl=en
- Woolf, V. (1926). On Being Ill. Renard Press.
- Zumthor, P. (2006). *Atmospheres: Architectural Environments, Surrounding Objects*. Birkhäuser.

Wigley, M. (2011). Architecture of Atmosphere. Daidalos 68 (1998)