“Freedom is from within” - Frank Lloyd Wright
Thesis submitted to the faculty of Virginia Polytechnic Institute and State University, in partial fulfillment of the requirements for the degree of Master of Architecture in Architecture

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Reflection

“Reflection” is an experiment with what I call “symbolic architecture” i.e. design where the features of the building have a profound meaning or a strong recall to some familiar aspect in our lives.

It is a meditation center designed to rejuvenate visitors by providing an ideal environment to practice and teach meditation.

The design is inspired by concepts of Hindu philosophy and each element of the building, the light, the materials, the water and the structure is likened to an element of the spiritual being that helps a meditator achieve a connection between the body and the soul.

dhara yogendra patel
For my best friend and husband, Siddhit, thank you so much for all your love and support.
I love you

Profound gratitude to my committee, Prof. Hans, Jim, Heiner and Steven for their unending patience, precious time, and valuable and firm belief in my capabilities as an architect.

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Studying in Virginia, the ideal spot to have my center came easily to me: The Blue Ridge Mountains. It’s beautiful panorama would provide the perfect view and atmosphere to visitors. The “Reflection” Meditation Center is a symmetrical square structure spread out over approximately 200,000 square feet on a cliff overlooking a Blue Ridge Mountain valley.
Resurrected from a bankrupt hotel by the Vals community, the thermal bath, designed by Peter Zumthor, is responsible for bringing the remote Alpine village of Vals, Switzerland to international attention.

The spa’s design focuses on the touch of stone, hot water and steamed air for a rich and natural bathing experience. It offers several types of pools and various kinds of treatments.

The main areas of observation of this architectural masterpiece were its use of water and stone, transitions from light to dark and its ability to blend itself into the landscape.

The building at the Beyeler Foundation in Riehen, Switzerland, designed by Renzo Piano was made to display works of art.

The building, mainly composed of stone, glass and steel, uses sophisticated technology such as the multi-layered translucent roof; this roof admits the soft light from the North but not the harsh light from East and West. Its panels prevent the formation of shadows in the gallery.

Its clean lines, beautiful landscaping and blending with natural elements made it an inspiration.

The MIT Chapel, located in the campus of Massachusetts Institute of Technology, USA designed by Eero Saarinen and is known as an example of mid-century modern architecture.

The outside of the chapel manages to portray a strong, earthy feel to the observer by the use of brick, the moat and the large cylindrical structure while the play of light falling on Harry Bertoia’s screen gives the interior a cozy, subtle feel. Furthermore, its interaction with the pool of water and simple form also interested me.
“Symbolic Architecture” is a term that defines the design of my meditation center. The features of its structure represent concepts of Hinduism.

The square shapes represent the symmetry in nature and phases in the circle of life. The location of the center and its alignment with the four directions symbolizes harmony with nature. The visual of a materialistic, variable body (the reflection in the pool) and the eternal, clear soul (the glass cube) combining to make a united being conveys the concept of the self.

Though the center is inspired by Hinduism, it has no specific religious affiliation because the notion of spirituality is different for everyone and is defined by the individual. The careful use of light, water, material and structure is designed for this individual experience. Walking barefoot on the pebbles in the tunnel, the sound of the water interacting with the stones, the play of the sunlight on the water and the marble are other subtle features that complete the meditation experience.
the appearance of full cube: completeness is attained only when the physical body aligns with spirit. Unity of Body and Soul.

the path: dark lonely journey one day leads to clarity and light when realized from heart

pool of water: the physical self which keeps changing form and temperament subject to the forces of world. also, a natural boundary signifies lack of restraint

glass cube: the openness and transparency of a soul that is at peace with itself

central half cube (elevator inside): heart through which soul can be reached

half reflected cube: the body which is an illusion and a physical reflection of one inner self. it reflects everything around it due to its materialistic nature and is lucid only when cleansed

continuous/infinity pool: edge between the water and cube floor and pool garden. the constant tussle between physical/materialistic self against spiritual self
The meditation center is a symmetrical square structure of approximately 3,000 square feet on a cliff overlooking the Blue Ridge Mountains. [initial idea, fig. 14.8]

The central cube is enveloped by a vast 38,000 square foot pool of water that enhances its elevation by making it appear to float. The pool itself mimics a real pond with its natural edges, allowing the water to freely interact with the pebbles on one end and the draining into a gutter in the other.

A single underground path leads to the bottom of the cube where an access to the main meditation zone is provided. The cube has a platform around it for walking and sitting that directly touches the water. The exit is an elevated path on the pool exactly opposite to the entrance. This circulation is descriptive of the different stages of meditation.
“Being one” is experienced when you get in touch with your inner self. To attain this feeling, you should feel, touch and sense the path [initial idea, fig. 14.6], its materials and light and hence the shoes are left outside before starting on this path.

The cube is connected to the outside in a very limited manner. The cubical glass volume is accessed by a walkway that descends below the waterline of the pool and ends at an elevator which leads up into the center of the main space of the cube.

The path has a gradual transition of materials and lighting from a sense of openness to darkness in a sequential manner.
First one experiences the texture of the grass, then the pea gravel which can slow a person down without making them realize their pace. It is very important that the transition from light to dark is gradual and not sudden. Caustics are developed along the path in such a way that one can focus on the right amount of light with the feel of the material at the same time.

The path also holds promise as it gives a glimpse of the ‘light at the end of the tunnel’ with sunlight filtering in from the central elevator shaft in the center of the cube.
The Cube of Darkness is filled by an array of massive columns and an elevator shaft that leads up into the cube. The strong pillars convey a sense of heaviness exactly opposite to space above. [initial idea, fig. 14.7]

In this cube, the only source of light is the one from the elevator shaft. This darkness, combined with the exposed concrete texture conveys the stage of struggle experienced before finding oneself.
cube of darkness
cube of enlightenment

initial ideas
cube of enlightenment

fig. 15.1  first floor plan 1/8" = 1'-0"
The glass cube [initial idea, fig. 14.10], based on its material and structural qualities was envisioned as the soul for the following reasons:

Clarity: The soul is as clear as a glass sheet. There is no confusion or doubt about it.

Transmission of light: The soul passes light from the Almighty unto the person.

A window to the universe: the spectacular first time view of the Blue Ridge Mountains awes the visitor.
The elevator leads into the most important part of the center, which is the glass cube, called “the cube of enlightenment”. The light from the glass walls of the cube filter into the cube of darkness giving a glimmer of hope to the spiritual traveler and invites one closer to the destination they are born for. The clear glass, the panoramic view of the valley and the clean look of the room contribute to a sense of lightness and stress release. The entry is from a smaller room in the center of the glass cube, which is like the “heart” because this is where you can look into yourself, whereas the glass structure as a whole is like a “soul”, clear, pure and eternal. The marble of this room is aligned east-west, just like the passage and the special crystal marble shimmers along with the sun in its journey from east to west. The walls are well supported by strong concrete pillars and cooled by movable windows as well as a water pump cooler. In this room, a visitor may meditate, practice yoga or in general, reflect.
cube of enlightenment

fig. 18.1
cube of enlightenment

fig. 19.1

fig. 19.2
cube of enlightenment

the facade as seen during the rain. [intial idea, fig. 14.5]

fig. 20.1  fig. 20.2
The ceiling has the same pattern as the floor with two main panels running across the middle along east and west axes. This makes the crystal marble on the floor sparkle from dawn to dusk as the sun shines through the glass.
The boundary between the cube and the pool is not fixed but natural. A sloped ledge allows the water to enter the drain naturally. [initial idea, fig. 14.9]

On the garden side, a sloping edge with gravels naturally stops the water and makes a soothing sound.

The sloping edge forms shapeless interactions between the land and the water signifying the constant tussle between the body and the soul. This is observed from the fact that we often ignore our subconscious (said to be a voice from our soul) and fall into meaningless traps in the material world.
night lighting
Once the visitors are satisfied and relaxed, they may walk around the cube on a platform that extends about 4 feet outwards on each side or they may exit from a passage called the “path of fulfillment”.

This path is open to air and is elevated to a level slightly above that of the water by a series of underwater columns. The proximity to the open water and availability of fresh air and sunlight conveys a feeling of rejuvenation. The bare feet touch the water as it is swept on to the path by the wind. The floor of the path is covered by anti-slip tiles to prevent slipping. The combination of these conditions provides a sense of walking on water.
From a distance, the cube is whole, half physical and half as reflection in the water. This central aspect of the design expresses the deep relationship between the ever changing body and the eternal soul.
The making of this thesis has been especially enlightening for me. The choice of the project, a meditation center, its apparent simplicity and its actual complexity put me on a train of discovery and knowledge.

The meditation center is like and unlike other modern architecture examples I have studied. The similarity is in simplicity of design and a clear vision and I have tried to inculcate that into my thought process while designing the center.

As I studied meditation centers and Yoga, the design took on another hue. Digging deeper into Hinduism, I realized that meditation’s medical benefits are but the most superficial ones; the ultimate goal is to be completely self-aware. I realized that I then wanted the building to ooze spirituality from each pore. I wanted it to be a scared space without it being a religious space. I had to provide an atmosphere where people could attempt to reconnect with themselves. Even the word "Yoga" was derived from the Sanskrit word "yuj" which means to unite or join.

It was then that my thesis got delayed, partly due to my own fallacies and partly due to circumstance. It reflected exactly how a person would feel at his or her stage of struggle: confused and searching. But my panel, my family and friends all told me it was a fantastic project and it should be completed at all costs. It greatly inspired me to bring back my focus.

The constant back and forth with my professors (who were very patient) taught me that only perseverance will bring perfection and you have to really design as if you want to live in that place. Every aspect has to be scrutinized to see if it’s really relevant and credible. How do I convey my vision without compromising on architectural integrity? How do I make the structure beautiful without making it impractical? How do I recreate the atmosphere for meditation like it was in the ancient times while maintaining a modern, efficient and universally acceptable design standard? There were many questions I asked. Most were answered by my professors and others, they encouraged me to pursue myself.

After many months I complete this journey as an architecture student to begin another as a wiser, more responsible and more complete architecture professional.


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