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Affect of Space:
Nature Connectedness

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PEOPLE ARE losing their relationship with nature. The process of modernization is diminishing people's association with nature and is defining its identity based on economic value. The complex mixture of the values embedded within nature are being flattened and ignored. The natural world has always been the place where people receive their inspiration. Its undetermined character has led people to various interpretation which enlightens or inspires in terms of understanding the world. However, people are staring away from the origin of their existence – nature. Usage of concrete, a scale-less and manmade material in creating a house is destroying the world in the 21st century. It is resulting disassociation of people from nature, reducing human settlements according to economic. The house can serve a role in promoting relationship between people and natural world. It can be an "in-between" role and restore the bond through sensual and embodied human experiences.

The project I am proposing will analyze the presence of atmosphere and the human experience on it. How atmosphere of the "house" can restore the disconnected relationship between nature and people. Maurice Merleau Ponty claims that people come to understand the work to understand the world, and it is the "house" which gives understanding of the world to dwellers. I believe the "house" can encourages connectedness between nature and people through atmospheric feeling. My research will begin understanding atmosphere in the space. The analysis of atmosphere space would not only focus on the visible aspect, such as material substance, shape, light, color, and texture, but also focus on human experience through different senses. After the analysis, the project will primarily focus in applying discovered qualities of the atmosphere; studying the effect of the atmosphere on people. At the end, a specific group of race, who share same geographical and cultural background, will be chosen to apply my discoveries in research.

The first phase of research will explore the relationship between nature and people. How connectedness in the "house", through atmosphere, plays "in-between" role in restoring the association. The natural world always has been the place where people receive their pleasure from. The nature does not only fulfills the people's needs as material, but also grants emotional satisfaction. The constant experience of nature increases people's inclusion with environment. It grants people understanding of nature and its composition. Ralph Waldo Emerson, through his essay Nature, describes the pleasure of connectedness with nature that comes of perceiving it. "Nature satisfies by its loveliness, and without any mixture of corporeal benefit... how does Nature delight us with a few and cheap elements." His experience of pleasure results his feeling of inclusion to nature: "I am nothing; I see all, the currents of the Universal Being circulate through me — I am part or particle of God". This language of nature communicates with a man through its natural appearance that describes a man's state of mind. It restores the connectedness between people and nature, countering the current problems of modernization. And the "house" as a connector. It connects people with nature by creating natural connectedness moment. It gives dwellers the moment of association to nature.

The second phase will search the atmosphere and how it can be manipulated within the space. Natural light is such a common thing to manipulate a strong impression, yet most important agent in the world. It stimulates sight and makes things visible; material substance, shape, light, color, and texture. It is most fundamental element in nature which constitute our universe. The phenomenon of light produces atmosphere in the space. Using this elementary light as an instrument, one can construct atmospheric effect in the space; transition from darkness to light, from light to darkness, the material radiance with different lighting, temperature, and color of space. Edmund Burke, through On the Sublime and Beauty, explains the power of light and its effect, "the power of a well-managed darkness, that in describing the appearance of the Deity, amidst that profusion of magnificent images, which the grandeur of his subject provokes him to pour out upon every side, he is far from forgetting the obscurity which surrounds the most incomprehensible of all beings". The phenomenon of light defines characteristic of our reality, and its control can alter the perspective of one's view on nature. It can create the experience of nature that is "fearful, without being afraid of it" and "unordinary". Therefore, natural light connects people with nature by granting different experience of environment through change of light. It can create powerful atmosphere by controlling its characteristic.

The final stage will analyze the works of artists and architects which have character of atmosphere, such as James Turrell. How atmosphere can be physically manipulated would be primary goal of the final stage research. The analysis of atmosphere space would not only focus on the visible aspect, such as material substance, light, color, and texture, but also focus on atmosphere experience through different senses. The site of project would be in Iceland, nation part of northern hemisphere. The color of sunlight is much more vibrant because of its location, constructing unique natural lighting effects during summer and winter season. During summer, Iceland receives 24 hours lighting with vibrant colors, while winter sun creates dramatic atmosphere with lingering twilight for 5 hours due to its low sun angle. Its lighting have various effects that cannot be observed in other places. Also, it is one place where roaming natural world are accessible and remain untouched by human civilization. Thus, Iceland is suitable place to deploy my research and reconnect nature and people through control of light.

This research will be mainly focused in promoting connectedness with nature through control of light. The "house" will be used as a connector in restoring the relationship. It is because the "house" is not just a shelter, but something more. It is the place where people, consciously and unconsciously, engages with one's inner mind. It is not only "a machine for living in", but also a connector linking between the inner world and nature. It is full of sensual quality which could mentally affect dwellers. However, the consequences of modernization are driving people's focus away from material object of aesthetic value. It is resulting a disconnection from the aspects of the natural world, and the modern houses are failing in creating
linkage to the poetic world. The space has intangible environmental qualities which can give the unique sensation to an occupant. According to the Merleau-Ponty’s assertions in Phenomenology of Perception, “The body and mind cannot be separated as subject and object.” What is perceived by the mind influences the perception of the body. The space is a stage which allows interplay between one’s body and consciousness. The emotional experience based on the cognitive subjects (memory, perception, judgment, and emotion) gives an occupant a poetic moment in the space. How the space plays in-between role in connecting relationship between inner world and natural world. The book will help me understand how to construct powerful atmosphere using light, and how its effect will encourage connectedness with nature.

Notes
Figure 3. Natural light is such a common thing to manipulate a strong impression, yet most important agent in the world. It stimulates sight and makes things visible; material substance, shape, light, color, and texture. It is most fundamental element in nature which constitute our universe. The phenomenon of light produces atmosphere in the space.

Figure 2. Usage of concrete, a scale-less and manmade material in creating a house is destroying the world in the 21st century. It is resulting disassociation of people from nature, reducing human settlements according to economic. The house can serve a role in connecting relationship between the inner world and natural world.

Figure 1.
Figure 4, the phenomenon of light in the space produces sublimity. Light is such a common thing to manipulate; a strong impression. But light from the sun gives overwhelming sense of "terror". The presence of sunlight makes powerful impression on the dweller's mind.

Figure 5, transition from darkness to light, and from light to darkness. Edmund Burke, through On the Sublime and Beautiful, explains the power of light and its effect: "the power of a well-managed darkness, that in describing the appearance of the Deity, amidst that profusion of magnificent images, which the grandeur of his subject provokes him to pour out upon every side, he is far from forgetting the obscurity which surrounds the most incomprehensible of all beings."
Figure 6, example of the dynamical sublime; James Turrell uses gradient color and space to construct the sublime. He experiments with light and color, creating surreal and unordinary space. James Turrell was selected for the precedent because he manipulates the sublime through light and space. He reinterprets the light sublimity that could be experienced in nature. His technique in using light will be studied and referenced in my own experiment in studying light and space.

Selected Annotated Bibliography


- The origin of sublimity: It defines its definition, and its methods in creating the presence of sublime.


- The origin of Transcendentalism in 19th century America. Explains the importance of connection between Nature and people. And how it could be achieved.


- Extension work of Burke’s sublimity. Manipulating the “terror” is what makes sublimity, and it can be categorized into two: Mathematical and Dynamic.


- The space is a projection of a person. The phenomenology of space is defined through how people perceive it with their mind. There is close relationship between space and inner mind of dweller.


- The space is not experienced not only through vision, but also through different sensory of human body. The experience of space can be defined beyond the visual aspect. Understanding the domination of empirical thinking.


- Home is more than just a shelter. It is projection of dweller’s inner world.


- Material have aurora which gives sensual experience to dwellers. The experience may be varied from aesthetic to sublimity.
**Chapter 01**

**Light and Darkness**

LIGHT is the most common element in the world. It is invisible, yet have profound role in forming our universe. It is everywhere, but we only see it when it strikes the plane surface. Its sudden reveal gives powerful impression on the dweller’s mind. The power of light gives “terror” to people. However, power of darkness is equal to light. One cannot talk about light if one do not talk about darkness. Their relationship is unbreakable. Light cannot be seen unless there is darkness. The power of light and darkness are equal, and presence of these two elements gives sublimity within the space.
Experiment 1

Light testing in 4"x4" cube. Light is invisible. It is only revealed when it strikes the surface. Depending on the condition of edge and light angle, it constructs certain shadow in a cube. Its brightness defines depth of the space by revealing cube’s edges. It makes the space. It is always accompanied by shadow. One cannot talk about light, if one does not talk about darkness.

Experiment 2

Depending on the opening, power of light can be amplified. Narrower light becomes, more dramatic is space it creates. It have tendency in becoming dramatic in rich dark room. The conflict between two opposite condition in the space creates dramatic experience to dwellers. Also, its movement constantly changes atmosphere of the space.
Experiment 3

Existence of two different condition creates dramaticness in the space. Power of darkness is equal to power of light. Extreme condition of both phenomenon dominoes focus and edge in a cube, creating illusion of infinity. Extreme light and darkness give sense of edge to different world, the inner world. Creating gradient colors. Angled surface supports in creating depth.

Experiment 4

Understanding depth in the space. Gradient color on the surface, total darkness, and focused edge toward darkness create depth in the space. The depth of space is defined not by physical dimension, but by a perspective of dweller’s eyes. The size of space is defined by mental aspect. The space is projection of one’s mind.
Experiment 5

The space is projection of one's inner world. Beyond the physical dimension of the space, space can be seen more deep and enormous by dwellers. By tricking the eye of person, space can be experienced differently. Dream and surreal quality manipulated by light can construct sublimity in the space.

Experiment 6 note

Can depth of space be amplified? If 3 factors introduced in Experiment 4 note manipulate illusion of infinite depth, can depth be even more amplified? Can a 4’x4’ cube be seen more deeper than its actual space? Multilayered space have an effect in creating deeper space. It is because each surface reflects different colors, while layers of surface gives depthness.
Experiment 7
Is this same 4”x4” cube space? The depth of space is immense from its actual space. Multilayered surface gives effect of drivingness to the infinite darkness. Its gradient color also supports its affect.

Experiment 8
Layer of spaces gives effect in creating depth. Presence of extreme light and darkness at the end gives experience of infinity. It represents the inner world.
Light creates threshold. Light creates different experience in the space. The amount of light defines atmosphere in space. Different settings give different experience. Even though they are 4” x 4” cube, they all have different feelings.

Symbols and geometries can manipulate certain atmosphere in the space according to its containing meaning. Carl Gustav Jung, through his book “Man and His Symbols”, claims the effect of symbols on people’s mind. The symbols generate memories of the users, creating meaning to the space, and light plays a role in highlighting its meaning.
Experiment 11 note
Luna Eclipse. power of darkness is as strong as power of light. Conflict between two elements manipulate sublimity in the space.

Experiment 12 note
4"x4" cube without condition of edges. Edges defines depth of the space. By removing edges, one can manipulate flatten or deep space. The depth of space is defined by dweller’s perception of space.
Movement of light represents the presence of time.

Time is a concept. Time does not exist in the natural world. It is invented by mankind to define the past, present, and future. Time is also invisible like light. It is only visible when something moves. If the motion of an object is obvious to a person, it gives a sense of time and a observer. If motion stops in the space, a person feels the stop of time. Time is motion and it can be represented in the space.
Experiment 1

Initial study of light and darkness.

Experiment 2

Several studies have not been included or been
incomplete due to the limitations.
LIGHT is invisible. It is revealed when light strikes object or particles in air. Density of air reveals invisible light and give strong impact on people. Thicker it gets, more dramatic the space becomes. Air makes the light reflect in a particular way, giving the space additional control over the play of light. It also manipulate expressiveness or atmosphere in the space, the viewer being able to notice the strength and speed applied by the space. Thick layer of air dematerializes objects in the space. The blurrness removes edge in space. Separation becomes one, connecting inner world and outer world together.

Vibrant air becomes more extreme condition of space get constructed. Space becomes fearful, mysterious, and unknown. The effect of gassy space dematerializes familiar space.

Experiment 18

Particles of air blur the space. It makes objects in the space blurry and more mysterious.
LIGHT is not white. The multiple composition of various color makes light look white. The color of light plays great role in manipulating space atmospheric quality. The color can convey sensorial experience to people according to Josef Albers’ color.

1. Color can carry specific meaning.
2. Color meaning is either based in learned meaning or biologically innate meaning.
3. The perception of a color causes evaluation automatically by the person perceiving.
4. The evaluation process forces color-motivated behavior.
5. Color usually exerts its influence automatically.
6. Color meaning and effect has to do with context as well.
Experiment note:
Light is not white. It is a combination of multiple color. And its different colors in the space gives different atmosphere.
Experiment 20 note
Light and color influence how people perceive the space. Different light sources affect how the colors of walls and other objects are seen. Color meaning is either based on learned meaning or biologically innate meaning. Certain colors manipulate temperature in the space.

Experiment 21 note
The color of light has psychological affect on people. It can convey not only temperature, but also emotions and meaning.
Anger

Sorrow

Joy

Affection

Confusion

Fear

Shame

Sadness

Altruism

Anger
Experiment 19 note
Warm color. Colors related to sunlight construct warm atmosphere/temperature to the space.

Experiment 20 note
Cool color. Colors related to water or cold weather construct cool atmosphere/temperature to the space.
Chapter 4
Vik, Iceland

The site of project would be in Iceland, nation part of northern hemisphere. The color of sunlight is much more vibrant because of its location creating unique natural lighting effects during summer and winter season. During summer, Iceland receives 24 hours lighting with vibrant colors, while winter sun creates dramatic atmosphere with lingering twilight for 5 hours due to its low sun angle. Its lighting have various effects that cannot be observed in other places. Also, it is one of place where roaring natural world are accessible and remain untouched by human civilization. Thus, Iceland is suitable place to deploy my research and reconnect nature and people through control of light.
The Arctic Circle is the southernmost latitude in the Northern Hemisphere at which the sun can remain continuously above or below the horizon for 24 hours. On the Arctic Circle, these events occur, in principle, exactly once per year, at the June and December solstices, respectively. It is only region where building gets most direct sunlight at the eye level of a person.

The site of project would be in Iceland, a nation part of Arctic Circle. Iceland is located very close to the Arctic Circle at 66.5 degrees north, locating at a latitude of 65 degrees north. Because of its in-between zone on the Circle, Iceland has a large range of daylight and darkness hours throughout the year. Sun spends a period of days completely above the horizon during the summer months and completely on the horizon during the winter months. A high latitude location creates a dramatic atmosphere with lingering twilight and vibrant color of sunlight. It is between transition zone from temperate and sub-arctic area to high arctic. Monthly temperatures are above 10 °C for at least one and at most three months of the year, allowing vegetation and trees to be grown in such extreme weather conditions. Also, sea smoke and Arctic sea smoke, throughout a year, get constructed due to Iceland's warm temperature and its island condition. It is one of places where roaring natural world are accessible and remain untouched by human civilization. Thus, Iceland is suitable place to deploy my research and reconnect nature and people through control of light.
Iceland has a large range of daylight and darkness hours throughout the year. It is perfect place for me to document a path of sun. In order to document full path of a sun, I had to choose southern part of Iceland. It is because Iceland winter sun goes below 20 degree.
The southern village in Iceland, located on the main ring road around the island, around 180 km (110 mi) by road southeast of Reykjavík. Despite its small size, it is the largest settlement for some 70 km (43 mi) around and is an important staging post. It is an important service center for the inhabitants and visitors to the coastal strip between Skógar and the west edge of the Mýrdalsjökull glacial outwash plain.
The church in Vik, Iceland

The church in Vik was built in 1934. The church was built on the highest hill in Vik in order to allow dwellers to look up to the church from everywhere. The town’s church, located high on a hill, is believed to be the only building that would survive such a flood. During 50’s and 60’s, church faced sudden decrease of population, but tourism brought the church houses were given a new life. The church is currently playing an iconic figure of Vik for tourism.
Because of its dynamicness and vegetation, Vik, Iceland is most visited site by tourists. Vik is a town located in the southern region of Iceland. It is known for its black sand beaches and its proximity to glaciers. The town is also a gateway to the popular hiking spot, the Dyrhólaey Peninsula, which is known for its sea birds, puffins, and the large rock arch called the Little Arch.
Behind view from the site. Have full view of mountain-scape surrounding the site. The great scale of moun-
tain gives feeling of overwhelmingness to the viewer.

Highest Hill in húvík, Iceland
Sunpath of Vik, Iceland. The path of sun goes below 8 degrees in winter, and 49 degrees in summer. It is the most lowest sun path observed among any other nation.
Data of sunpath provided by Timeanddate.com. By studying change of sunpath, one can manipulate specific effects according to the change.
Chapter 5

The Moment - Connectedness

The natural world has always been the place where people receive their inspiration. Its undetermined character has led people to various interpretations which enlighten or inspire in terms of understanding the world. However, people are stirring away from the origin of their existence - nature. Usage of a scale-less and manmade material is destroying the world in the 21st century. It is resulting disassociation of people from nature, reducing human settlements according to economic. The space can serve a role in promoting relationship between people and natural world. It can be an “in-between” role and restore the bond through sensual and embodied human experiences.
The Moment
Nacreous Cloud Observatory

Optic Phenomena called Mother-of-Pearl clouds. They are seen after sunset or before dawn when skies bright with vivid and slowly shifting iridescent colours.

Belt of Venus Observatory

Optic Phenomena caused by earth shadow. The band is the shadow of the earth on the atmosphere. Seen shortly after sunset or sunrise at horizon of 10-20 degree.
Light Pillars Observatory
Optical Phenomena created by the reflection of light from ice crystals with near-horizontal parallel planar surfaces. It can also come from the moon or from terrestrial sources such as streetlight.

22° & 46° Radius Halos Observatory
Optical Phenomena that forms a halo circle. It forms as sunlight is refracted in millions of randomly oriented hexagonal ice crystals suspended in the atmosphere.
Aurora Borealis & Northern Polaris Observatory

Aurora is natural light display in the sky seen in the high latitude. Aurora are caused by charged particles entering the atmosphere. Northern Polaris is brightest star on Northern Hemisphere.