AMERICAN UNIVERSITY OF BEIRUT

ON THE OTHER SENSES
MULTISENSORY INCLUSIVENESS

by
CYNTHIA-MARIA SAMER DEEB

An Undergraduate Architecture Design Thesis
submitted in partial fulfillment of the requirements
for the degree of Bachelor of Architecture
to the Department of Architecture and Design
of the Maroun Semaan Faculty of Engineering and Architecture
at the American University of Beirut

Beirut, Lebanon
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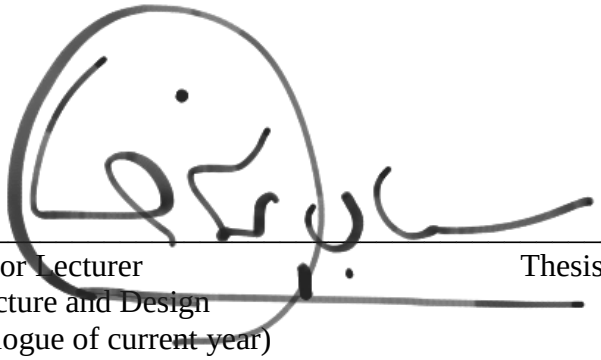
Approved by:



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Department of Architecture and Design
(as listed in AUB Catalogue of current year)

Date of project presentation: May 12, 2021

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ACKNOWLEDGEMENTS

At such a great end, I would like to thank:
My Family, who encouraged every decision I've made
Jenny, who stood by my side through the five years
Sinan Hassan, my advisor who allowed me to follow my passion

ABSTRACT

Title: On the Other Senses – Multisensory Inclusiveness

Within the discourse of experiential architecture, the design approach has been mainly exclusive, excluding the non-conventional senses, while stressing greatly on the visual sense. This visual bias has been resulting in the consequent disappearance of sensory qualities in architecture which in turn are affecting a person's experience and perception of the built environment.
The thesis focuses on achieving a more optimal and inclusive multisensory experience to fully sensualize architecture through integrating all the sensory realms rather than just the prevailing visual one.
Through ample experimentations, evaluations, and a matrix of analysis, the project unfolds into an architectural winery pavilion providing the most possibility and flexibility to incorporate and engage all of the senses.
The design and experiential architectural spaces have been studied in a way to trigger all the senses allowing for an optimized, inclusive, multisensory, architectural inclusiveness.

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I dedicate my thesis to:

My passion for the senses

and

My love for wine

On the Other Senses

Multi-Sensory Inclusiveness

Cynthia-Maria Deeb

How can architecture be multi-sensory beyond the five senses, especially the visual one?
How can architecture immerse, engage, and interact with the body and all the senses?

Within the discourse of multi-sensory experiential architecture, the design approach has been mainly exclusive, excluding the non-conventional senses, while stressing greatly on the visual sense.

This visual bias has been resulting in the consequent disappearance of sensory and sensual qualities in architecture which in turn are affecting a person’s experience and perception of the built environment.

The thesis focuses on achieving a more optimal and inclusive multisensory experience to fully sensualize architecture through integrating all the sensory realms rather than just the prevailing visual one.

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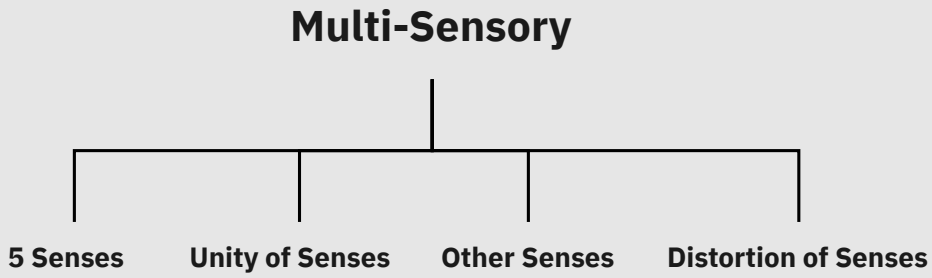
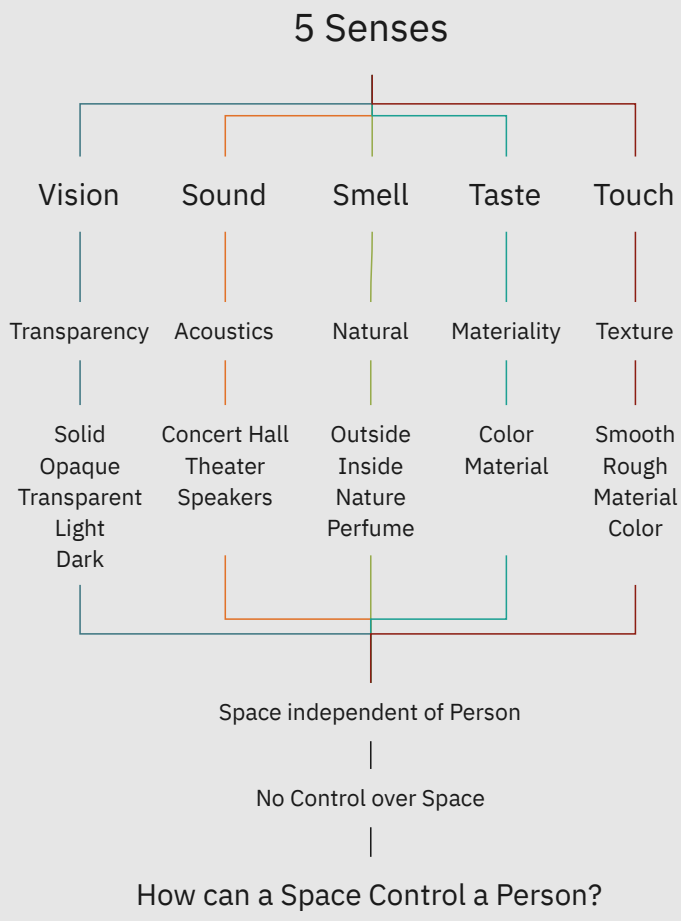
Overview Diagram



Multi-sensory is a phenomenon that can be understood through many sensory states.

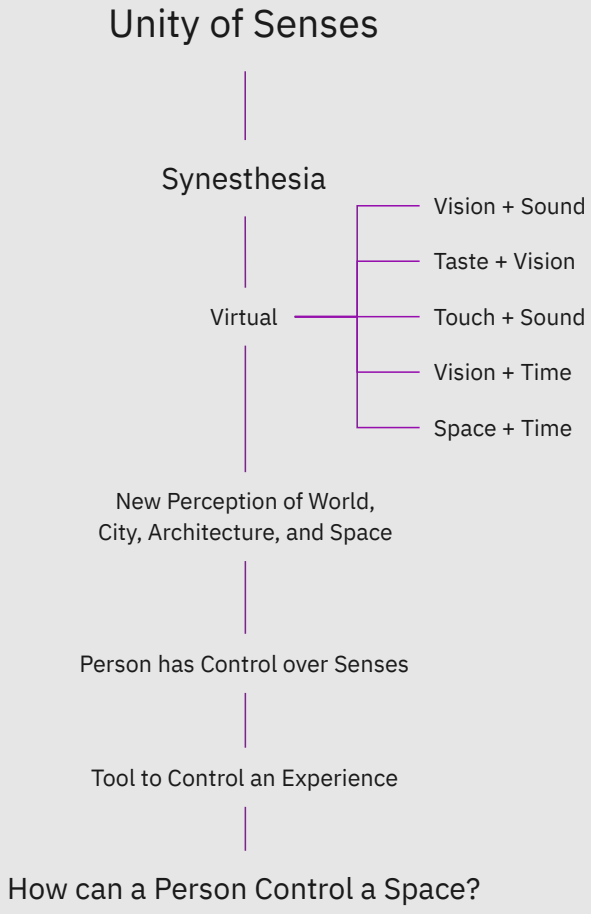
Where space and person are independent of each other and where the person has no control over his space. Thus, to explore through the case studies:

How can space control a person?



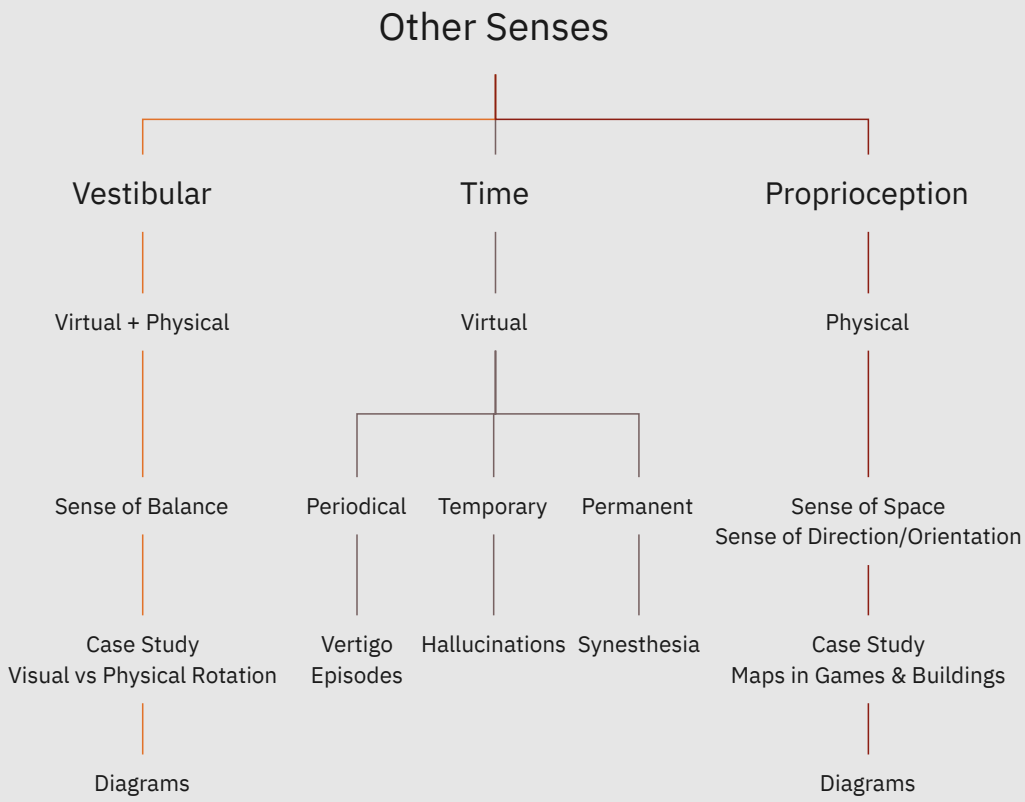
Where Synesthesia specifically will be examined to evaluate the outcomes of interconnected senses and the new ways through which the world, city, and architecture could be perceived. It can be looked at as a tool to alter a person's subjective experience of a space where the mind has control over the senses. Thus, to understand through the case studies:

How can the mind control the perception of space?



Where the virtual and physical sensations are to be enhanced and understood. Thus, to establish through the case studies:

How can space trigger all of the sensations?



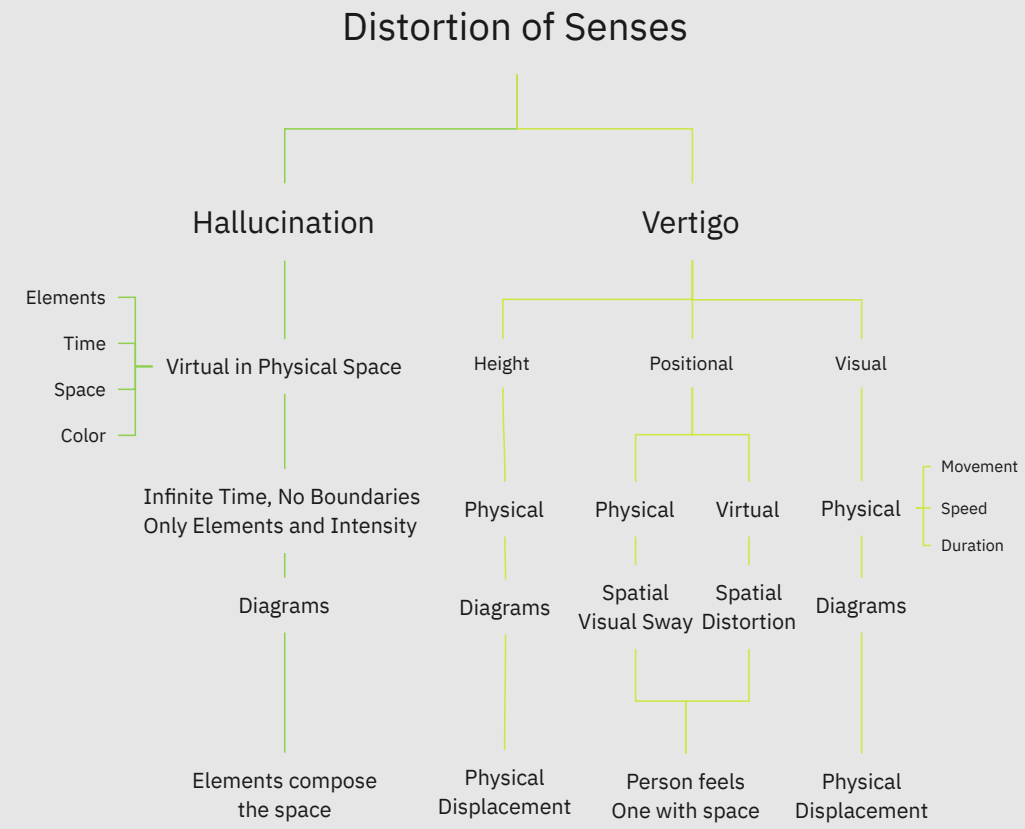
How can a Person Alter a Space?

Where hallucination is looked at through focusing on a physical space whereas the senses are adding a new layer of virtual perception to the elements, time, colors, and boundaries of a space, creating a new perceptual and unique experience. Thus, to experiment through case studies:

How can a person's mind compose a space?

Another field to look at is vertigo where a biological condition induces physical spatial sway and virtual visual distortions of space. Thus, to experiment through case studies and diagrams:

How can a person's mind decompose a space?

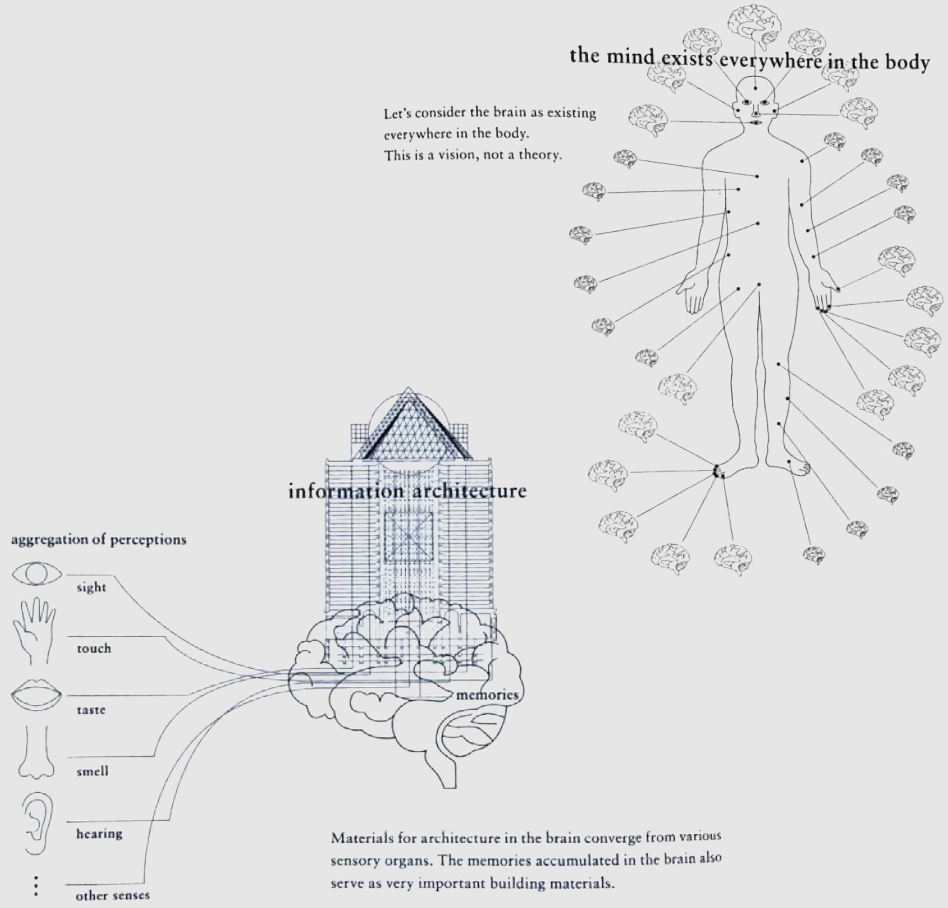


How can a Person Compose a Space? How can a Person Decompose a Space?

How can we design for all the senses by targeting the body's multitude of brains?

Japanese designer Kenya Hara acknowledges the importance of senses and states that *As designers, we create an architecture of information within the mind of the spectator.* This message is captured through the assorted perception channels of sight, touch, taste, smell, hearing, and other aggregated senses to produce what we consider an "image" and an architecture. He then proposes the idea of considering the brain as existing everywhere in the body and not just in the mind.

How can we trigger people to experience and react to space consciously by receiving input from all sensory organs?

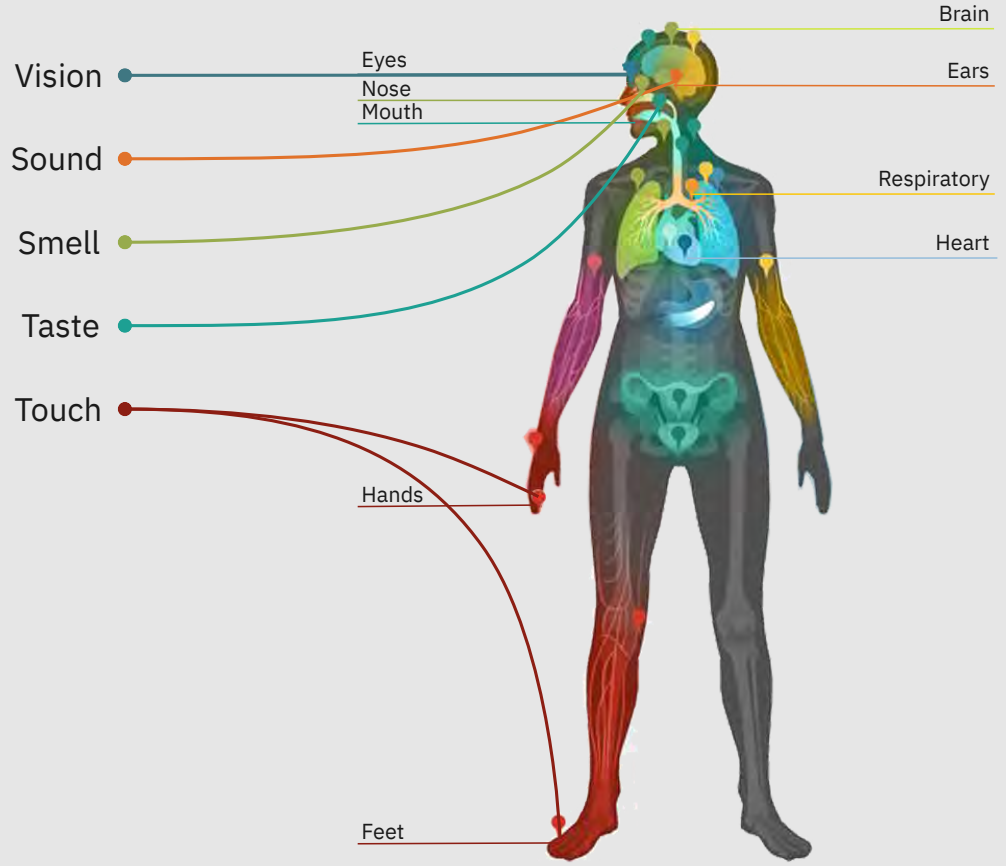


Five Senses

- Vision
- Sound
- Touch
- Smell
- Taste

The Essence of Senses

Sense of perception - Sense of consciousness - Sense of feel - Sense of pressure - Sense of awareness - Sense of nature - Sense of life - Sense of physical

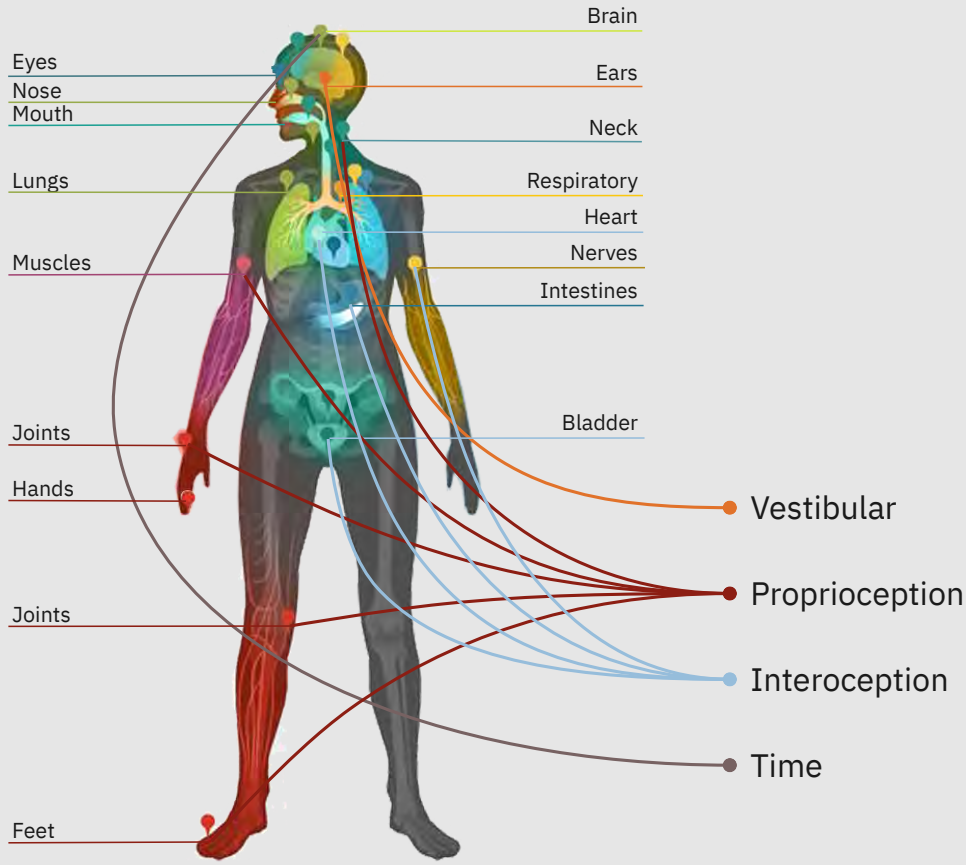


Other Senses

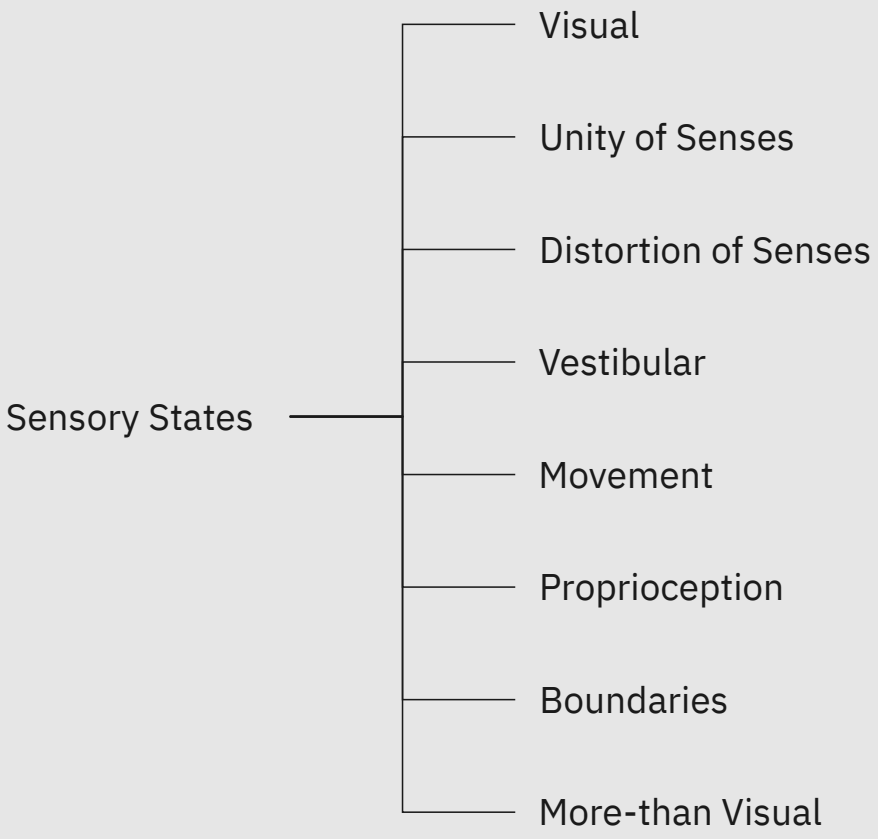
- Vestibular
- Interoception
- Proprioception
- Time

The Essence of Senses

Sense of balance - Sense of direction - Sense of orientation - Sense of movement - Sense of rhythm - Sense of space - Sense of time - Sense of self - Sense of virtual



Case Studies



Visual Approach

Architecture shapes and defines the spaces and cities where people live, work and navigate. It integrates people in a space and an experience through triggering their various senses. However, as much as architecture tries to unite with the human body, it is evident that it mainly pleases the eye and fails to delight the body as a whole. Thus, there is always a tendency of visual bias and visual appreciation or function in architecture, and in turn, this is projected on people's experience and perception of the space.

Is a visually appealing space enough to trigger sensations?
Is it enough for a person to experience a space visually?

Modern architecture has focused on vision and intellect, leaving the body and the other senses unaccounted for. So visual perception nowadays mainly focuses on light, material, color, and nature as means and parameters to enhance the architecture and life within the space.

Light

Material

Color

Nature

Multi-Sensory Approach

As design practices in architecture are primarily visual in focus, it would be more valuable to attract a more holistic approach to it taking into account all the senses.

Therefore, a sensory notation to study, question, and research would be a system for multi-sensory descriptions of architecture and space with an aim of encouraging design for all senses rather than a presumed visual bias.

A multi-sensory experience is one that relates to or involves several senses.

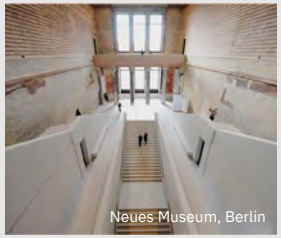
How can we achieve a multi-sensory architecture beyond the five senses?

Multisensory architecture can be seen through light and shadow, acoustic architecture, smellscapes, and materiality. These interventions have been applied to increase curiosity in architecture, specify its programmatic functionality, and improve its spatial experiential qualities.

5 Sense-Focused Rooms

Vision

Sound



Touch

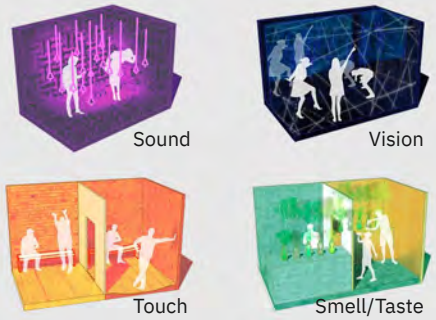
Smell

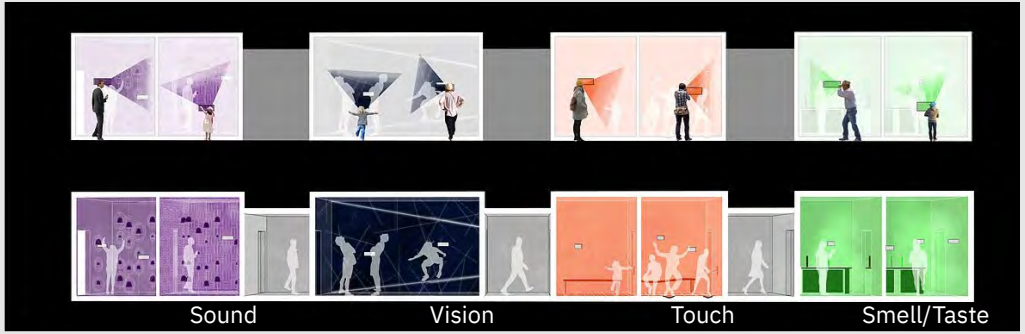
Taste

Multisensory space can be seen in exhibitions where specific rooms trigger one specific sense highlighting its important features. It is an interesting exercise to see how people interact to the senses that they interact with on a daily basis but are not aware of. However, it is only limited to the 5 senses.

5 Sense-Focused Rooms

The 5 Senses





Exhibition Design: Spatial Alchemy - Thomas Cunningham

The Unity of the Senses

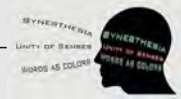
The unity of the senses could be a way to trigger multiple senses and the main union is vision and sound which is the most conscious in architecture and our daily lives. Another aspect is Synesthesia, a condition that certain people have, where two of their senses overlap creating new ways to perceive certain aspects of life. This helps us understand further the senses and question the possibilities of their unification.

How by uniting some of the senses can the spatial experience be altered?

Synesthesia

Synesthesia is where certain people hear colors, see words as colors, feel sounds, taste shapes, see time, and spatialize time. The presented visuals show a simplified idea of how a synesthete views the world. This phenomenon proves that the unification of the senses improves the spatial and perceptual experience within space and architecture.

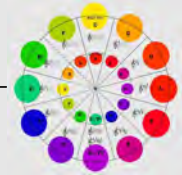
Words & Numbers as Colors



Taste Shapes

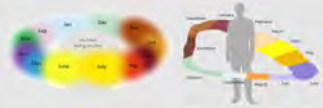
Sounds as Colors & Texture

Hear Colors



Feel Sound

See Time in Colors



Spatialize Time in 3 Axes

Synesthetic Architecture

The terminology multisensory has been named to multiple projects that should be better identified as Synesthetic Architecture. In Peter Zumthor's design, he focuses on vision and touch through textures and materials. He also clearly states that *to experience architecture means to touch, see, hear, and smell it*. This shows that these architectural spaces are focused on multiple senses of the five conventional ones but not all the senses, thus they are not multisensory but synesthetic.

Vision + Touch

Vision + Sound + Touch

Vision + Sound

The Distortion of the Senses

The distortion of the senses is equally important to look at because it enhances the way we percieve and experience architecture .

Hallucinations

Hallucination is when our perception is highly empowered and where the senses are triggered by the mind rather than from the environment. In Doors of Perception, Aldous Huxley states that “there is an inside to an experience as well as an outside”; in other words, a virtual perception in a physical space. He also stated that the experience of psychedelics makes time become infinite, space loses its boundaries, and objects glow with color.

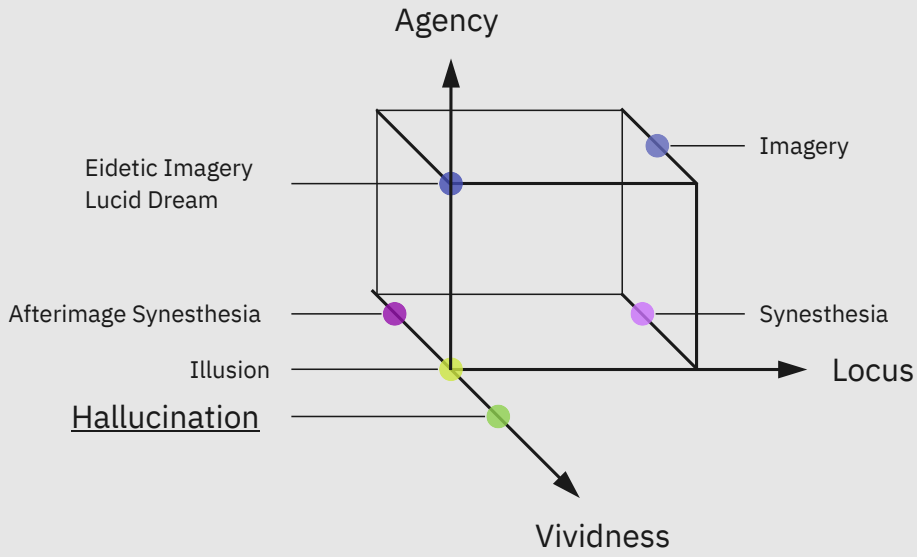
"There is an inside to an experience as well as an outside." -Aldous Huxley

Virtual Perception
Physical Space

"If the doors of perception were cleansed everything would appear to man as it is infinite." -William Blake

Infinite Time
No Boundaries

In the diagram comparing hallucinations to other modes of perception, it is apparent that hallucinations are the most vivid experience in relation to dreams, images, and even synesthesia.

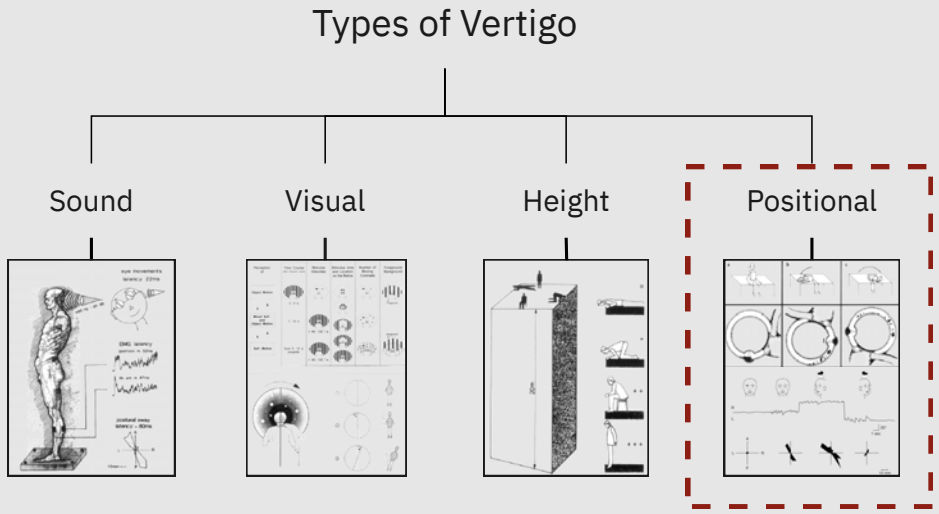


Vestibular Sense

To understand the vestibular sense at best, Vertigo is considered as a case study to analyze the way this sense can affect our perception of space. The experience of balance is so pervasive and so absolutely basic for our coherent experience of the world, and for our survival in it, that we are seldom ever aware of its presence.

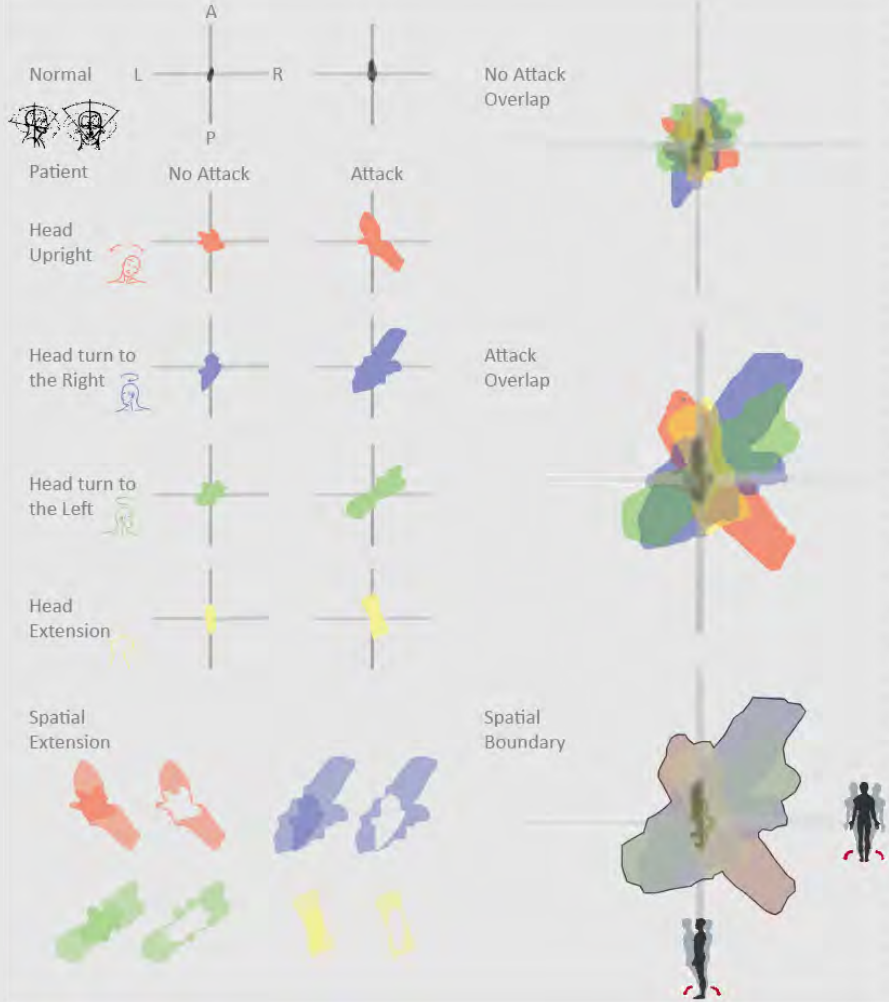
Vertigo

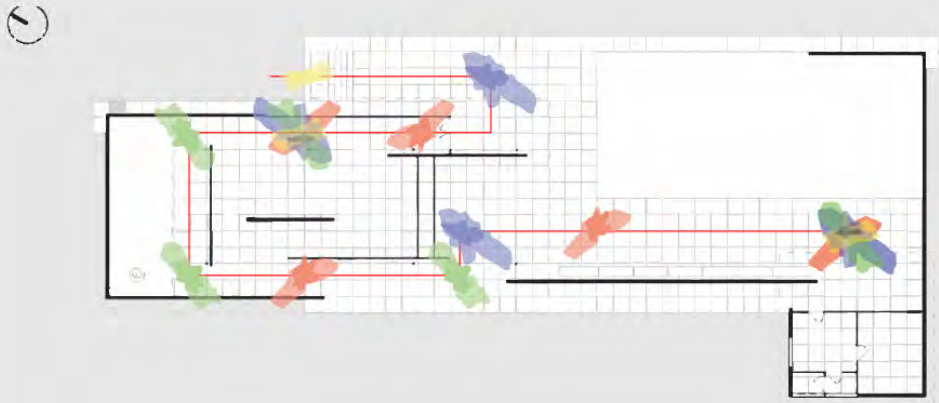
Vertigo is ***the illusory sensation of motion of either oneself or one's surrounding***. There are many types of vertigo, but the ones most relevant to architecture and space are induced by sound, vision, height, and positional. For experimental purposes, **Positional Vertigo** will be the field of study to understand the vestibular sense in its alternate state.

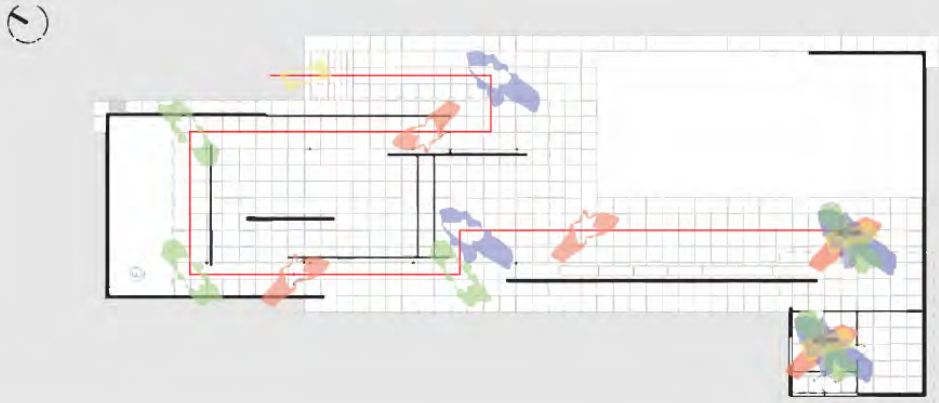


Positional Vertigo

Through positional vertigo, the body sways whether physically or mentally can uncover the different ways a person can get disoriented, unbalanced, and unsteady. Positional vertigo mainly targets the vestibular sense where biological dysfunctioning in the ear can cause loss of balance whether physically or virtually. Through a case study of physical swaying of a person undergoing vertigo, the Barcelona Pavilion has been a space of experiment where these attacks could be further examined, explored, and generated.





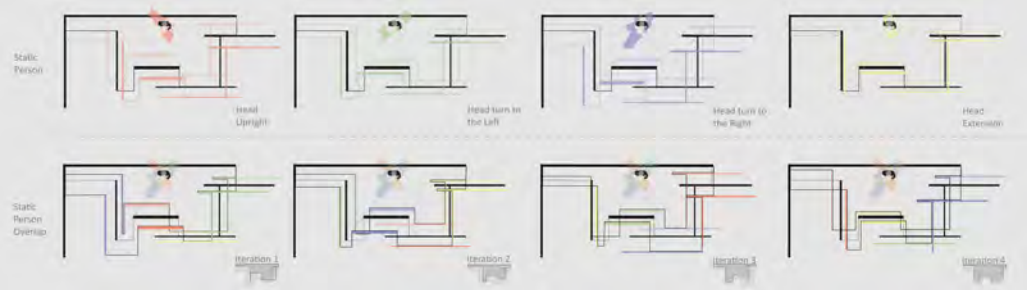


Barcelona Pavilion

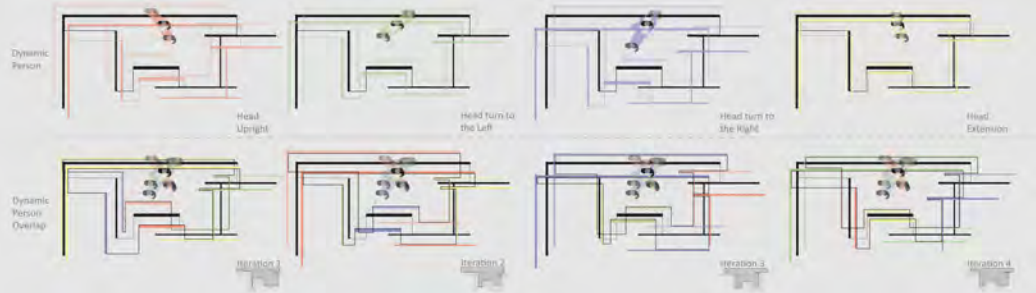
Experimentations

Through understanding the physical, I was able to assume and produce the virtual decomposition of the space through directional and angular virtual oscillations of a static versus a dynamic person.

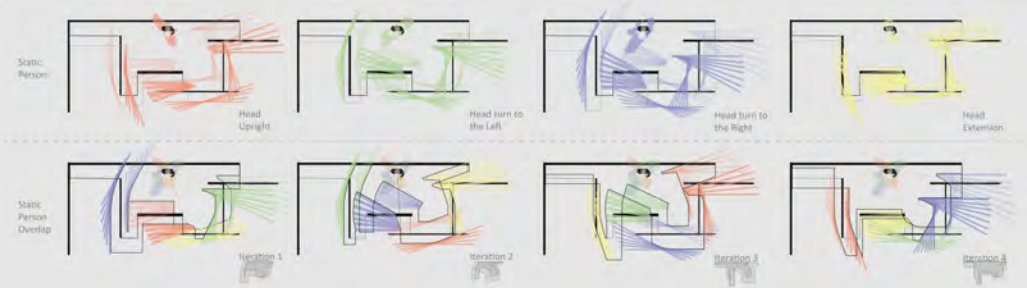
Static Person with Directional Sway



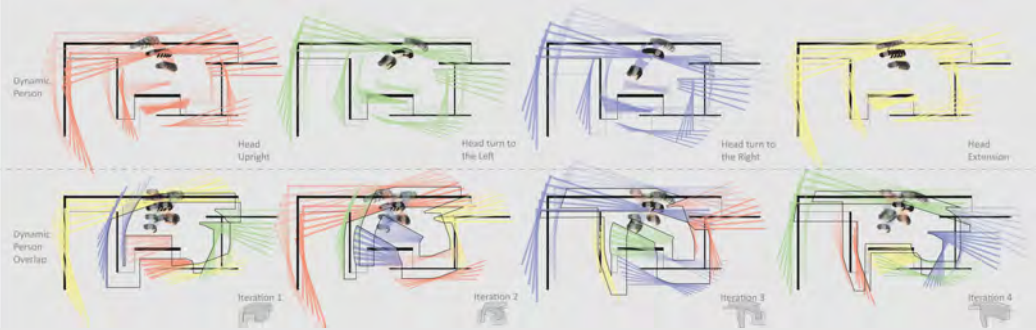
Dynamic Person with Directional Sway



Static Person with Angular Sway



Dynamic Person with Angular Sway

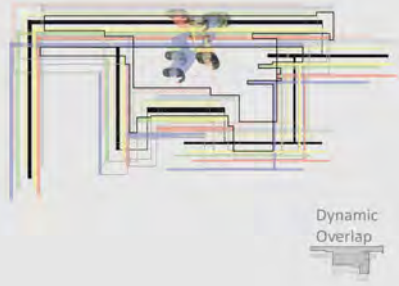


The overlap of the set of experiments shed light on the minimized boundaries of the space in contrast to the factual ones, and I was able to generate out of them a distortion scale that could be used as a tool in any other architectural space to distort and decompose its elements.

Static Person with Directional Sway

Dynamic Person with Directional Sway

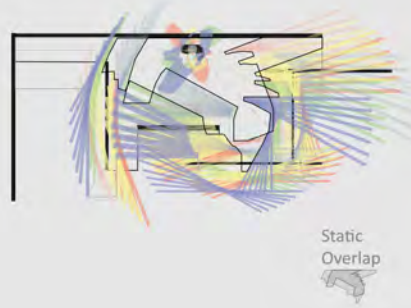
Directional Overlap

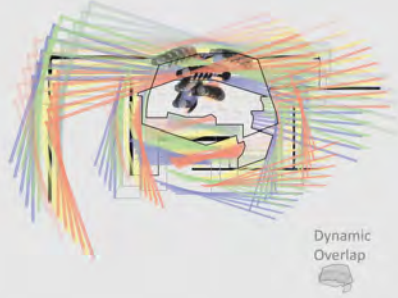


Static Person with Angular Sway

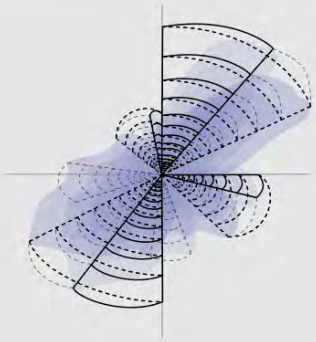
Dynamic Person with Angular Sway

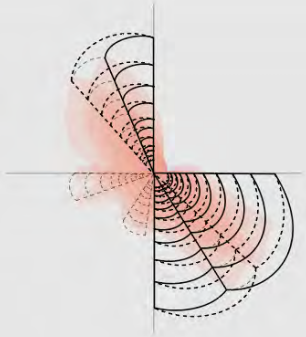
Angular Overlap





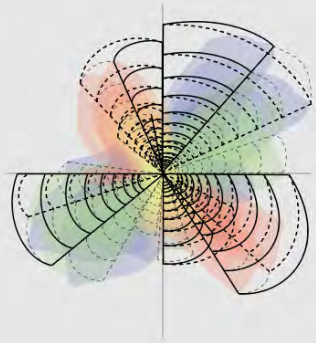
Directional Spatial Overlap





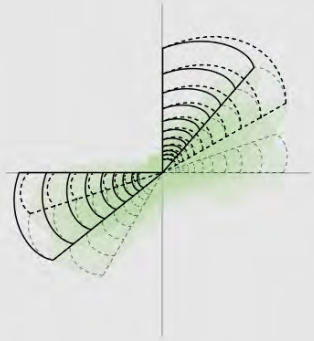
Head turn to the Right

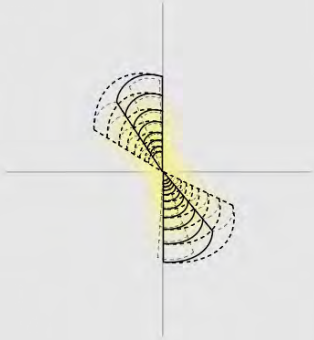
Head Upright



Distortion Scale Overlap

Angular Spatial Overlap



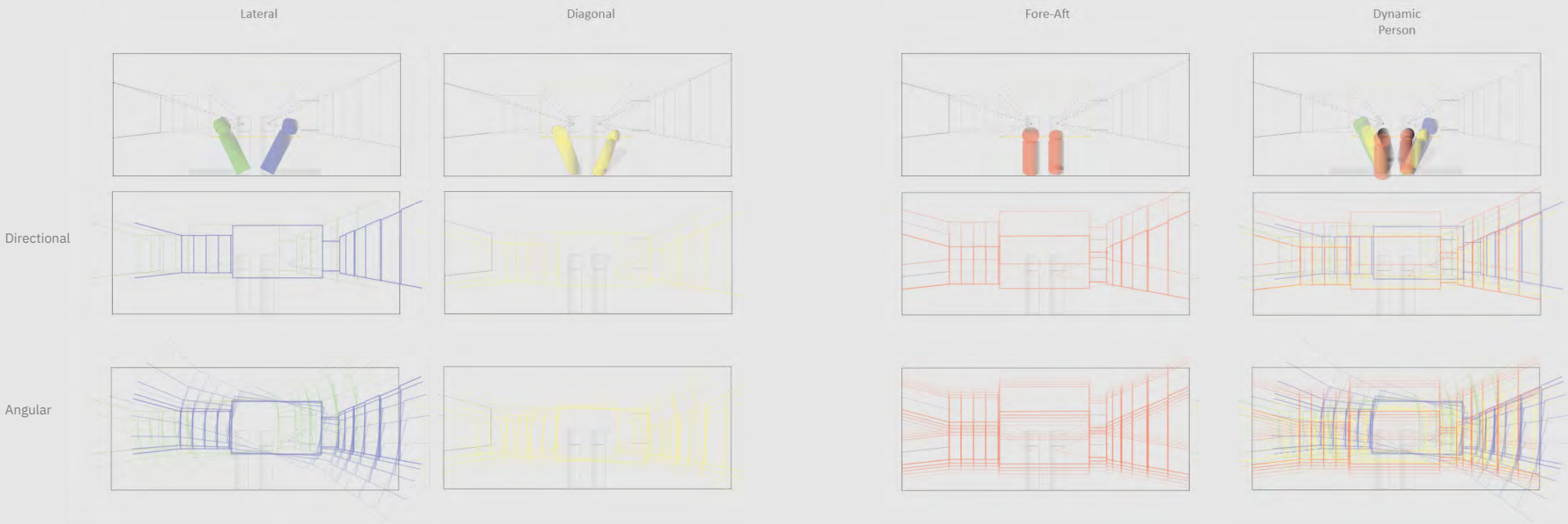


Head turn to the Left

Head Extension

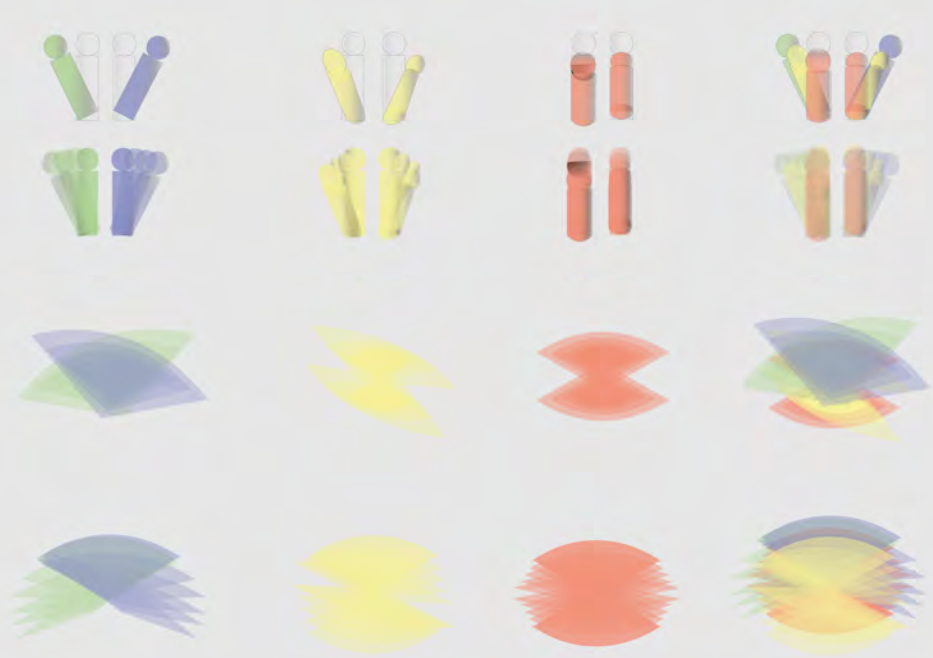
Single Directional Sway

Dynamic Directional Sway



Through generating the directional sways in the perspectival view, I was able to simulate the distortion diagrams upon the sectional axis to allow a total understanding of the decomposition of the space upon planar and sectional swaying and disorientations.

Distortion Diagrams



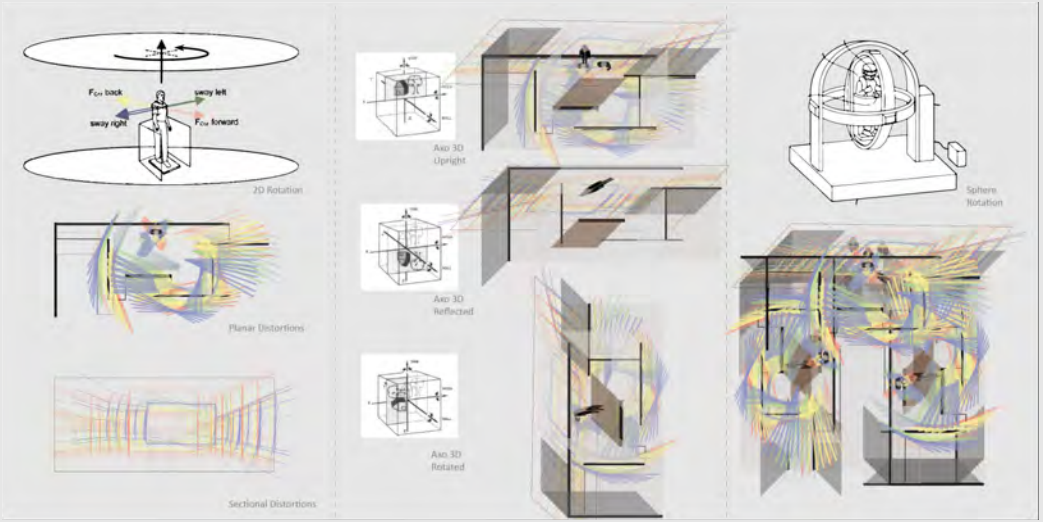
Lateral Diagonal Fore-Aft Overlap

Positional vertigo also targets the axes of a space. It questions the Cartesian coordinate system x, y, z where the disorientation occurs sometimes as 2D body sways around a disk (x, y), others as rotations in a 3D field of view (x, y, z), and in other times in an anti-gravitational sphere where all coordinates lose their direction, and space is then seen as a medium.

2D Body Sway

3D Perception Sway

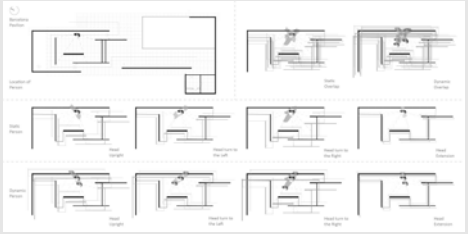
Spherical Anti-Gravity Sway

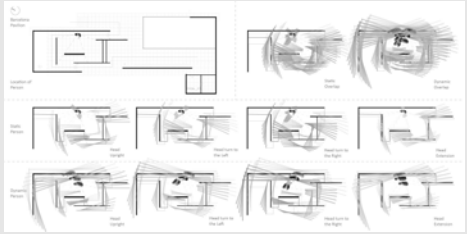


Movement

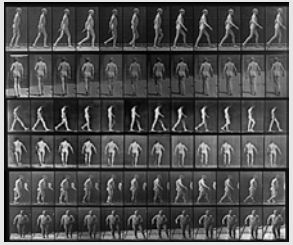
From vertigo, it is evident that the experimentations can be documented in a similar way to that of Edward Muybridge that in turn apply to the movement of the body. Through that, it is understood that motion with a ceratin intensity in a certain speed, space, direction, and orientation can result in an illusion of movement defining its own new space and boundary and its own time frame.

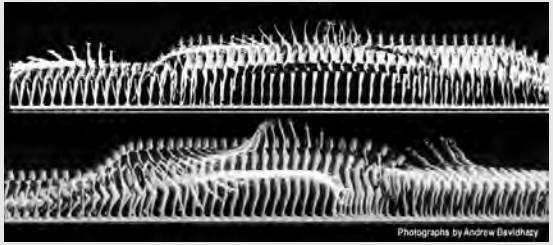
Movement of the Architecture



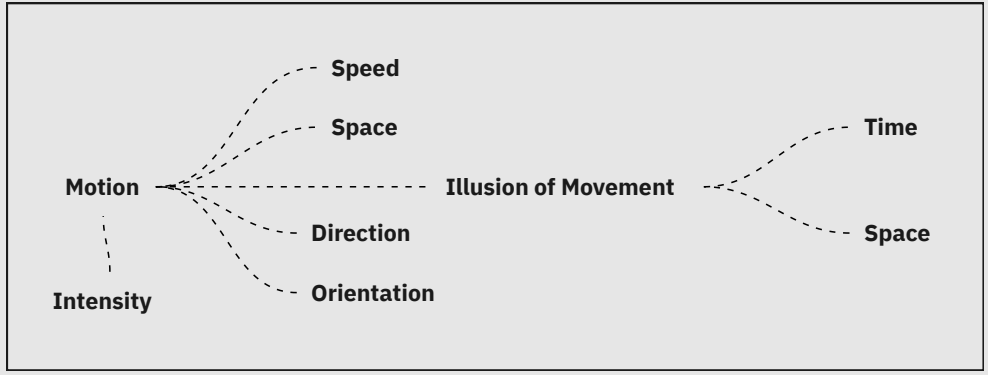


Movement of the Body





Edward Muybridge

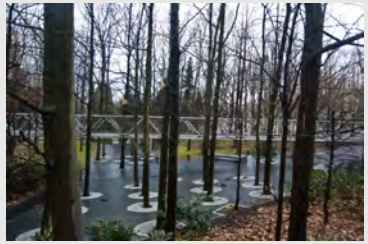


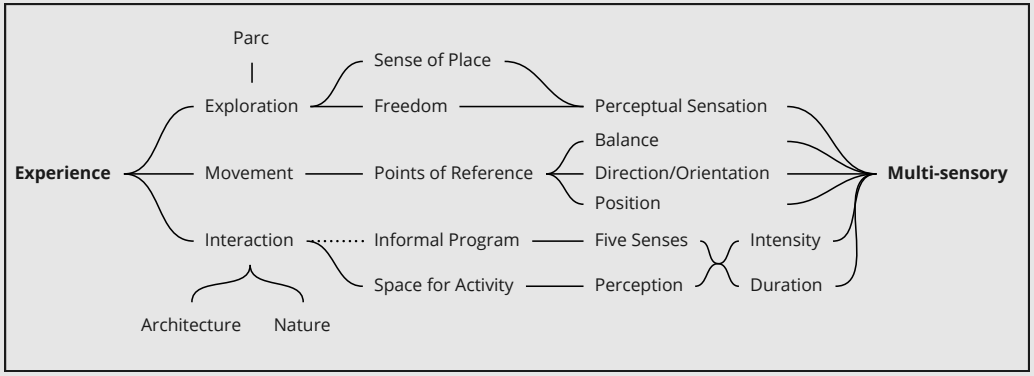
Proprioception

Tschumi wanted the park to be a space for activity and interaction that would evoke a sense of freedom within a superimposed organization that would give the visitors points of reference. His overall goal was to induce exploration, movement, and interaction. The repetitive nature of each folly, even though each one is unique and different, allow for the visitors to retain a sense of place through the large park. Each of the deconstructivist follies are centers for informal program. There is no designated program just a space that can harbor activity.

Red Follies, La Villette Park



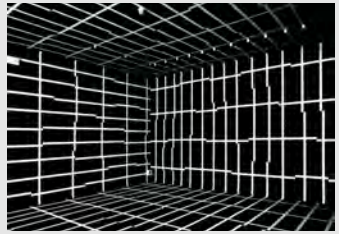


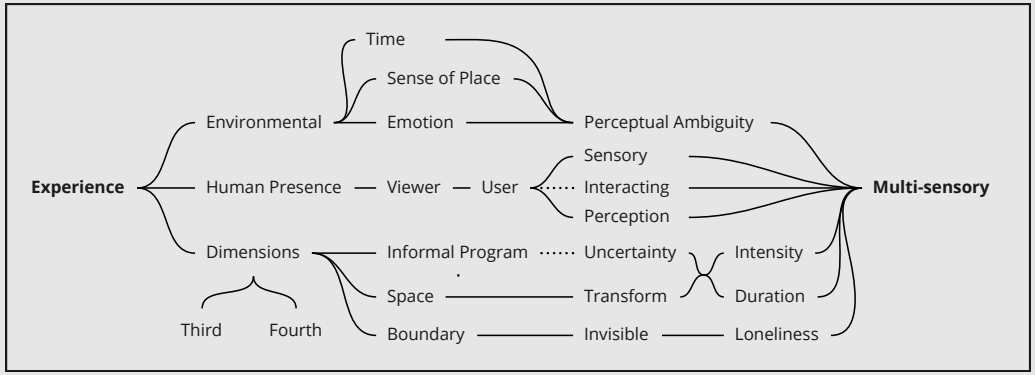
Boundaries

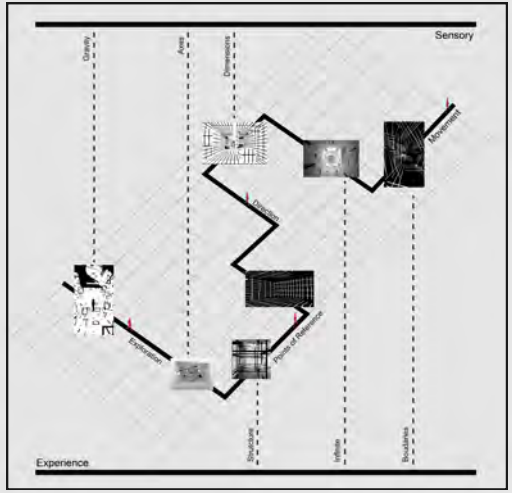
In the installations of Esther Stocker, he focuses on ambiguity by questioning the different dimensions of the space, its boundaries, and gravity. He induces his viewers to become users exploring the boundless spaces, and the infinite limitations of space, gravity and axial dimensionality.

Esther Stocker Installations



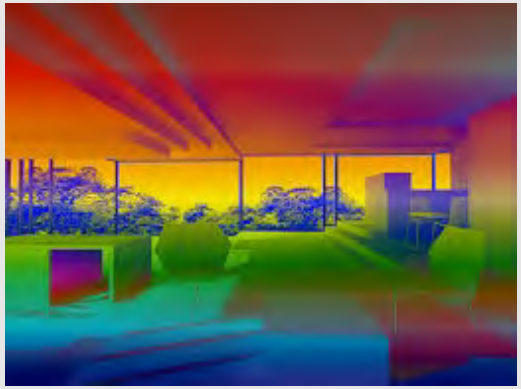





More-than Visaul Approach

Concluding the case studies section, it is important to look at other precedents where architecture was designed through a more-than visual focus. The following examples are based on atmospheric and immersive architecture.

Blur, DSR

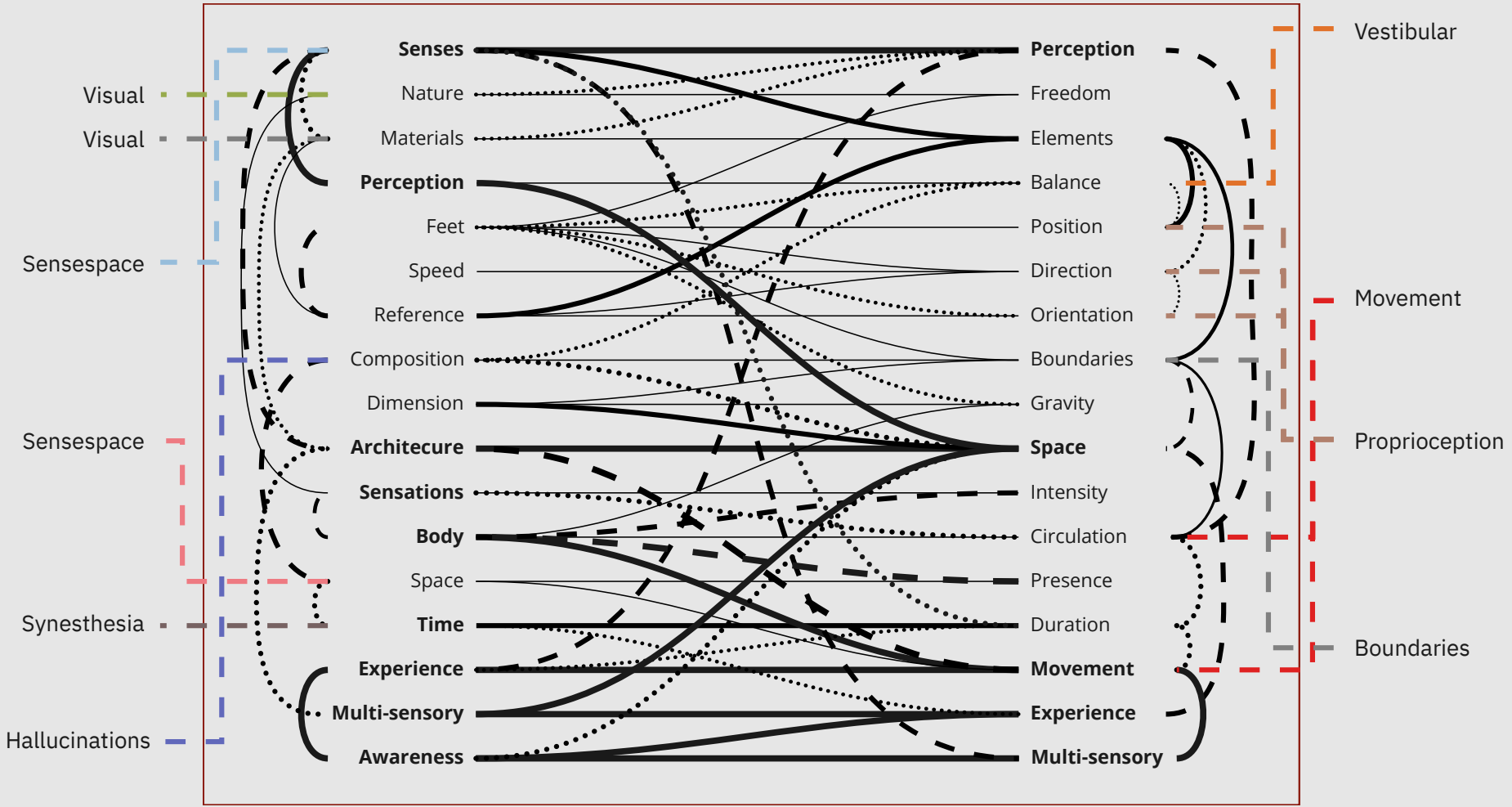


Archimedese House,
Philippe Rahm

Air Architecture,
Yves Klein

Parameters

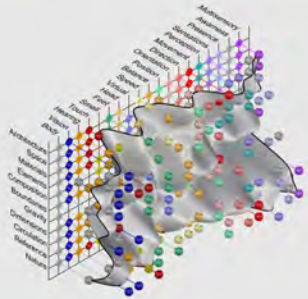
From each case study, I have gathered parameters that identify each sense in relation to the body or the architecture. This would allow a correlation and integration of the parameters within an architectural experience to achieve a multisensory inclusiveness. Therefore, through the movement of the body in a space and through the perception of the senses within that architecture , we achieve a multisensory experience that we are aware of.

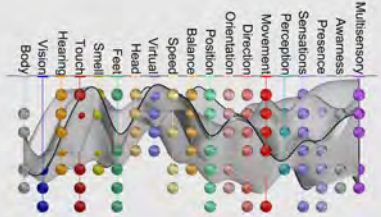

Visual
Visual
Sensespace
Sensespace
Synesthesia
Hallucinations
Senses
Nature
Materials
Perception
Feet
Speed
Reference
Composition
Dimension
Architecure
Sensations
Body
Space
Time
Experience
Multi-sensory
Awareness
Perception
Freedom
Elements
Balance
Position
Direction
Orientation
Boundaries
Gravity
Space
Intensity
Circulation
Presence
Duration
Movement
Experience
Multi-sensory
Vestibular
Movement
Proprioception
Boundaries

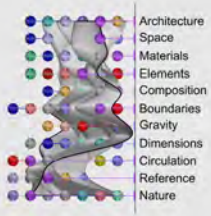
System of Evaluation

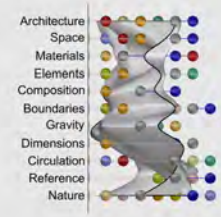
By using these parameters, I have created a three-dimensional table to qualify, quantify, and objectify them. Through it, I studied the body and its parameters in relation to architecture and its parameters. So each iteration is in respect to a sense. This system of evaluation will help me later on in identifying what elements to focus on more and to analyze specific designs and find ways to enhance the sensorial experience.

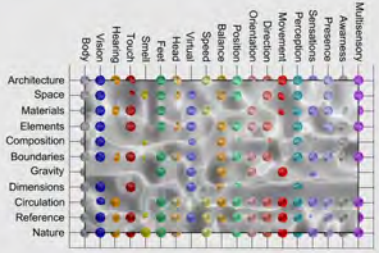
General Graph



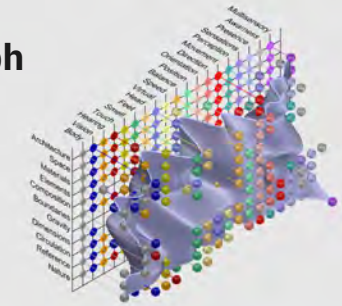


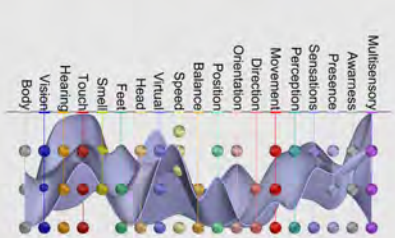


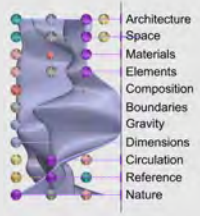


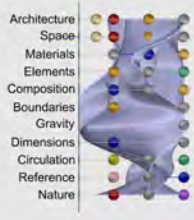


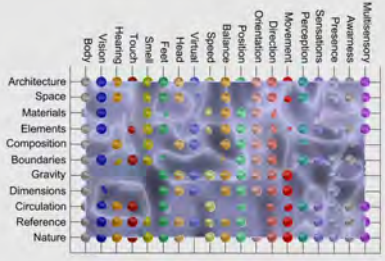
Duration Graph



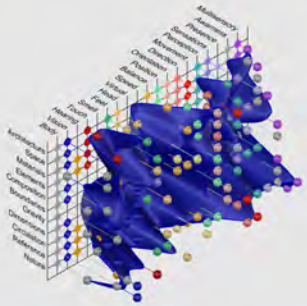


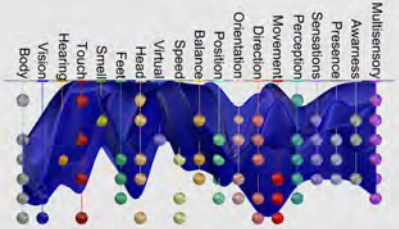


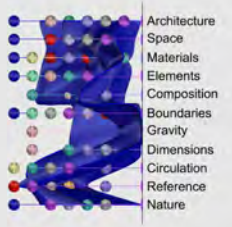


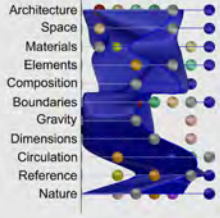


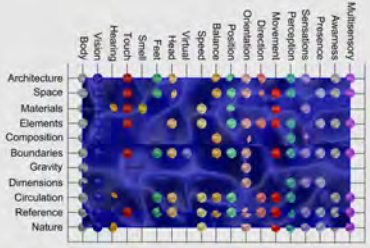
Vision Graph



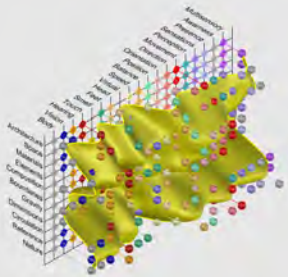


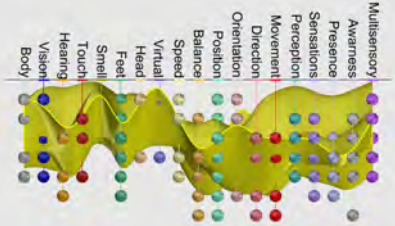


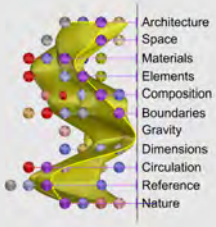


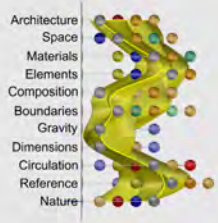


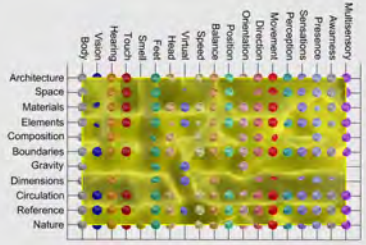
Sound Graph



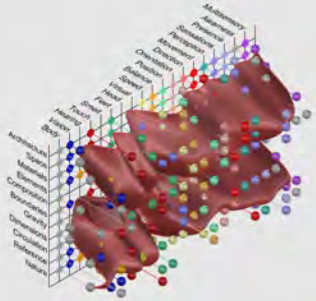


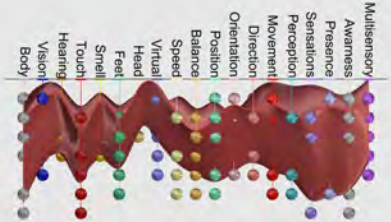


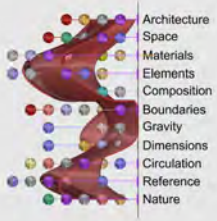


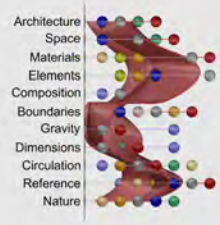


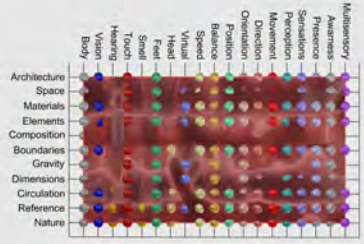
Touch Graph



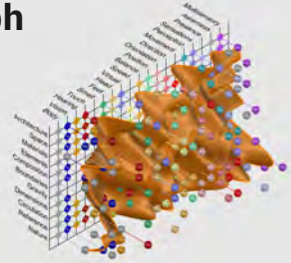


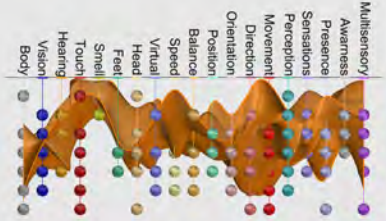


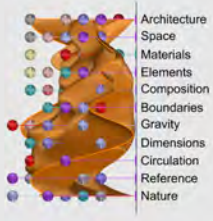


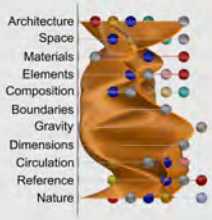


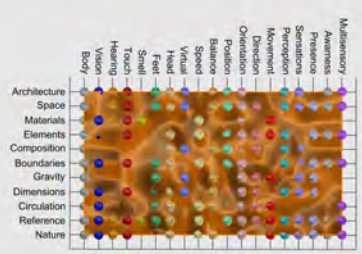
Vestibular Graph



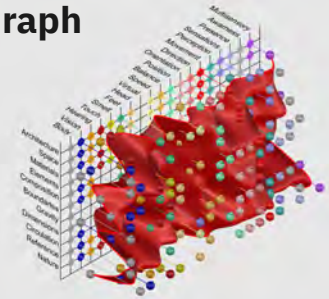


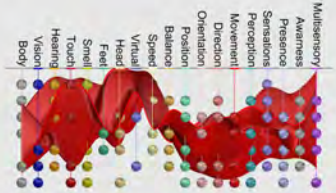


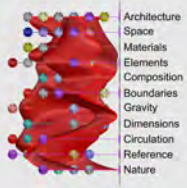


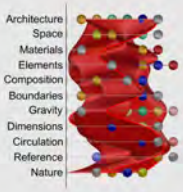


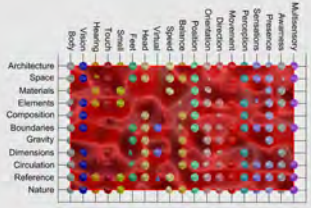
Proprioception Graph



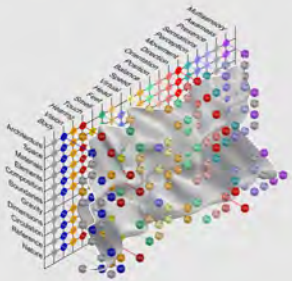


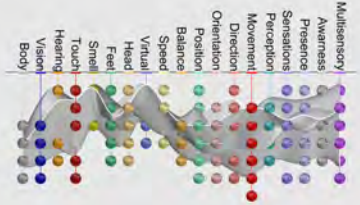


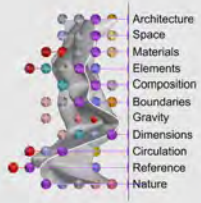


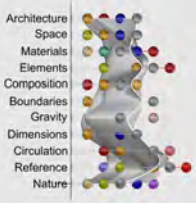


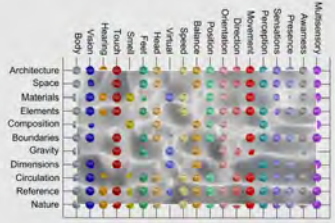
Overall Graph





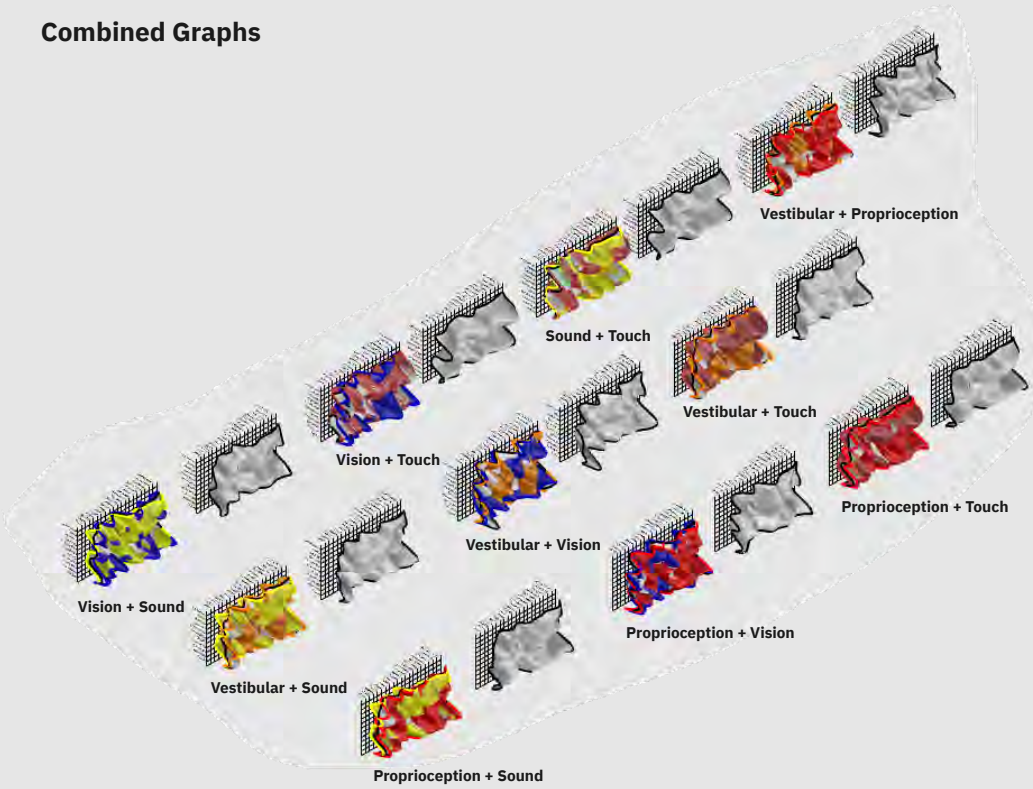






To relate to the idea of synesthetics, I have combined each two forms to understand their weaknesses, strengths, and impact onto architecture and the body.

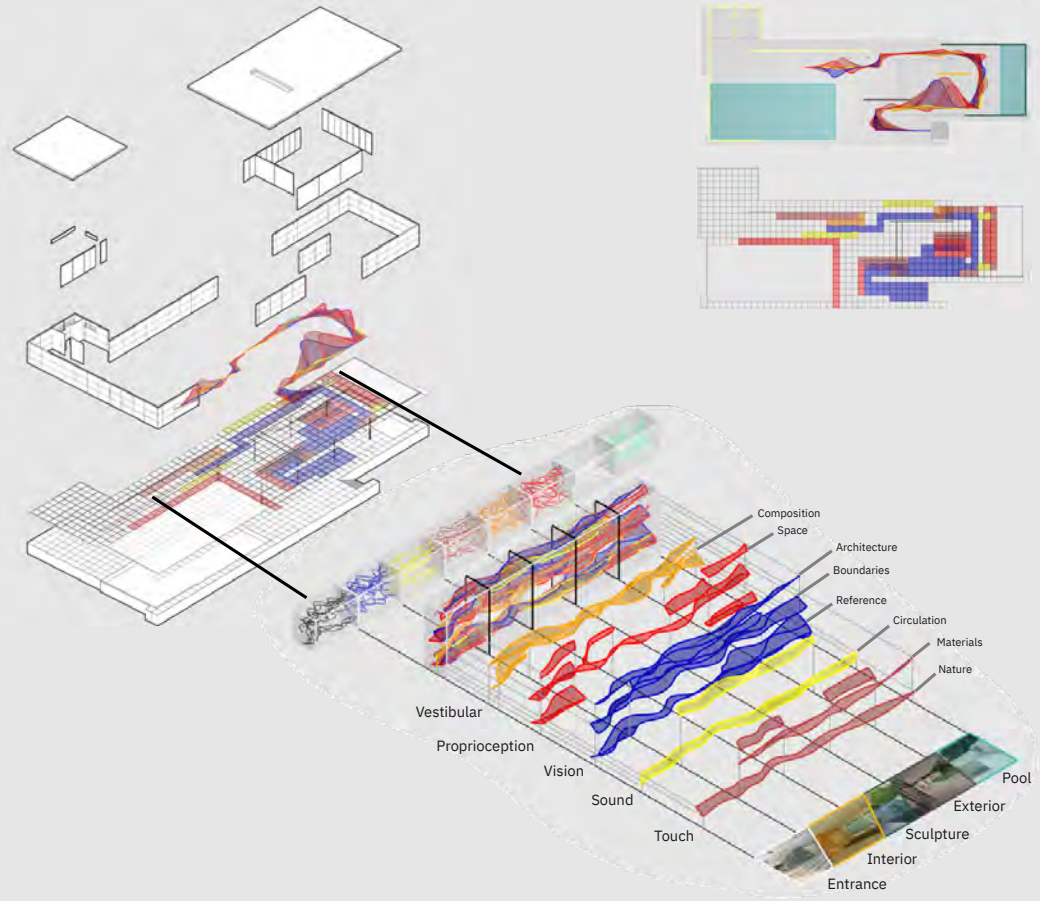
Combined Graphs



Circulation Graph

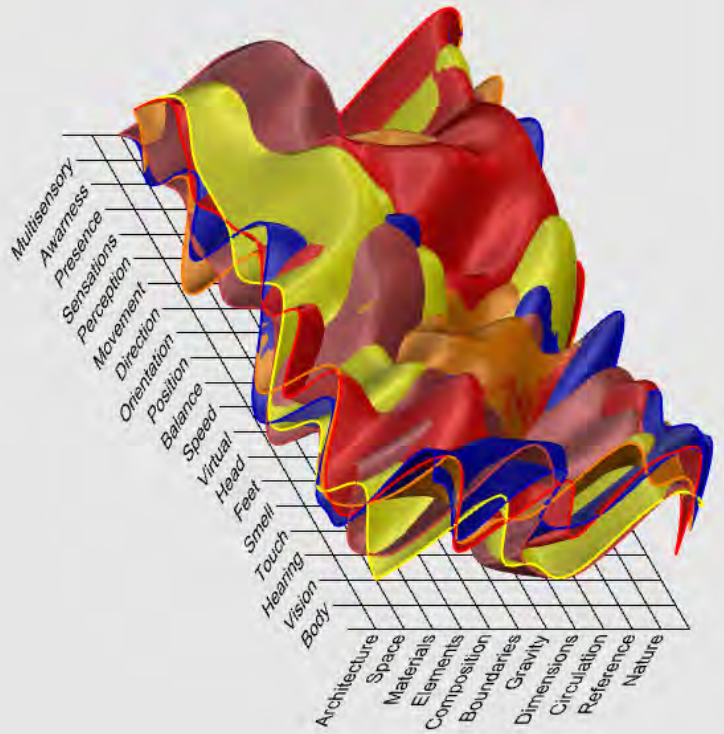
Relating my design explorations to
the barcelona pavilion once again allows me to understand its spatial qualities. Through applying a circulation graph onto the space, it is evident that Mies van de Rohe designed it based on visual focus and on proprioception using the sculpture and pool as reference points. By examining the graph points within the architecture, certain architectural elements and senses are correlated, but others are missing and overlooked.

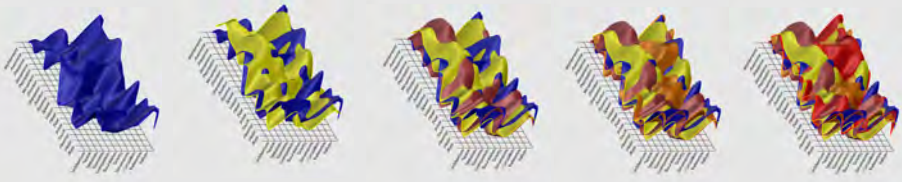
Barcelona Pavilion

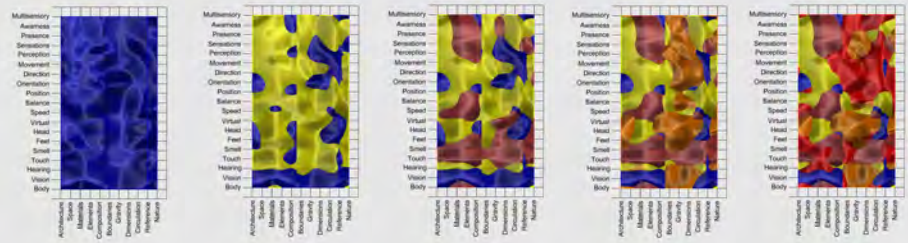


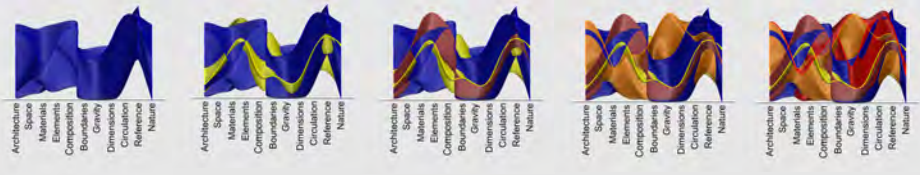
Composite Graph

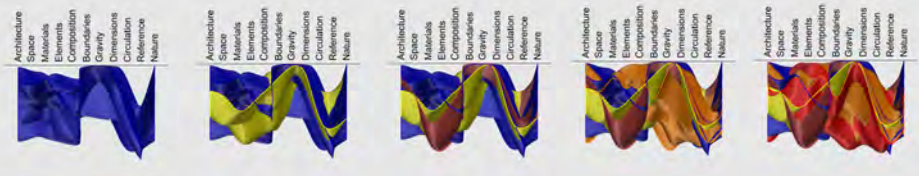
Overlaying the different forms allows me to show and conclude that a multisensory architecture is one that isn’t just a combination of all the senses at once, but it's actually an journey through movement to experience different moments creating a fully optimal and more inclusive architectural experience.


Multisensory
Awarness
Presence
Sensations
Perception
Movement
Direction
Orientation
Position
Balance
Speed
Virtual
Head
Feet
Smell
Touch
Hearing
Vision
Body
Architecture
Space
Materials
Elements
Composition
Boundaries
Gravity
Dimensions
Circulation
Reference
Nature









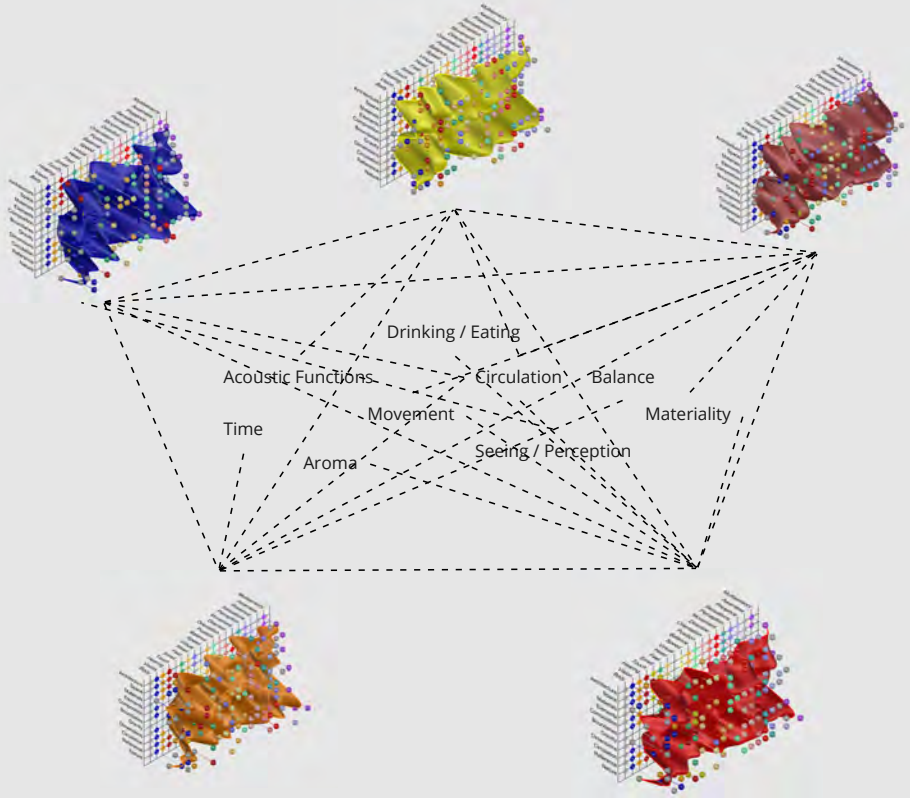
Reflection

How to enhance the architectural tools through these exploratory outcomes to achieve multisensory inclusiveness?

Hybrid Program

The composite graph then guided me to look for a program through which I can connect all the senses and architectural experiences. Therefore, I have chosen to adapt a hybrid program that reflects the logic of the composite graph.

The core program is winery that has the most possibility and flexibility to incorporate and engage all of the senses and allows me to apply my previous findings to achieve an inclusive multisensory experience especially that winery provides a good base for a sensory experience that already engages the 5 senses through the tasting experience and so this would allow me to enhance and focus mainly on engaging the other senses within this hybrid program.



Case Studies

I looked at case studies of hybrid wineries and identified the programs that have been added to the winery

Antinori Chianti Classico




- Winery
- Wine Cellar
- Restaurant
- Wine Shop
- Tasting Rooms
- Cooking School
- Resort

Rocca di Frassinello




- Piano Wine Cellar
- Auditorium
- Wine Shop

Lahofer Winery



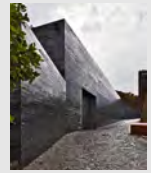
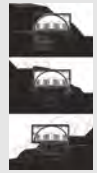

- Winery
- Restaurant
- Wine Shop
- Tasting Rooms
- Wine Cellar
- Open Auditorium

Marques de Riscal




- Winery
- Restaurant
- Wine Shop
- Tasting Rooms
- Wine Cellar
- Event Space
- Resort
- Spa (Wine Therapy)
- Museum

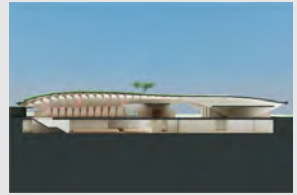
Quinta Do Vallado

- Winery
- Tasting Room
- Wine Cellar
- Wine Shop
- Resort

Chateau Cheval Blanc





- Winery
- Tasting Room
- Wine Cellar
- Wine Shop
- Resort

Case Studies

For the design approach and exploration, I looked at the architectural aspects of some wineries and defined some interesting elements such as roof structures, light shafts, horizontality, and framed views.

Bodegas Ysios



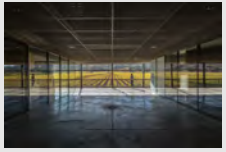
Blending Roof Structure - Limited Height - Framed Views

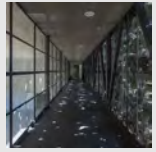
O. Fournier Winery




Roof Plane - Light Shafts - Framed Views

Dominus Winery



Perforated Facade - Limited Height - Framed Views

Ixsir Winery

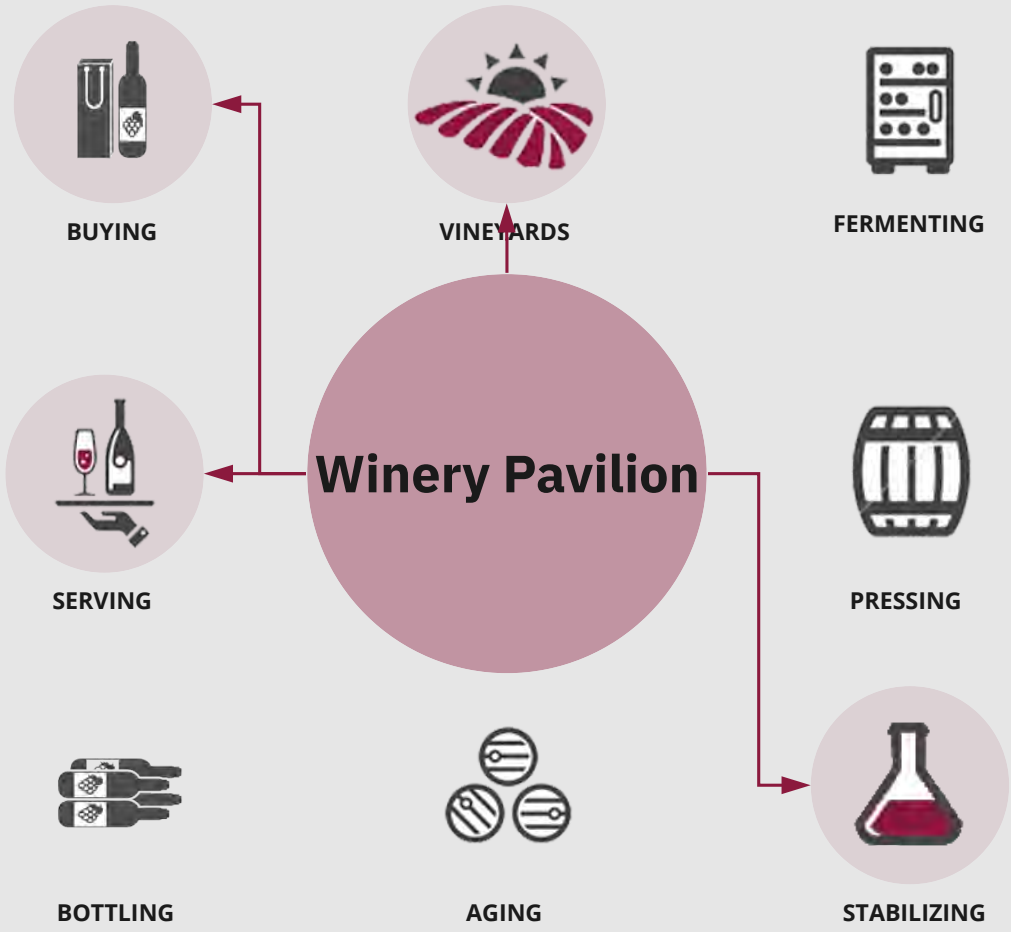



Light Shafts - Underground - Indoor Framed Views

Winery Pavilion

As I don’t want to shift the focus on technicality but rather reflect on the experience, I will be creating a winery pavilion that will be added to a functional winery to enhance the user and sensory experience.

I looked at the different stages of the wine cycle which starts from the vineyards where grapes are picked then crushed then fermented and pressed. The wine also needs to be stabilized, then it's aged, and after a specific time it's bottled and either served or sold at the wine shop. I also highlighted the ones that I will be integrating as an experience within the pavilion, which are the vineyards, the wine tasting experience, and the wine stabilization process.



Vineyards provide an outdoor aspect and allow for an open circulation that can be integrated within it.

Vineyard Tour

- Walk
- Taste
- Photograph

WALKING EXPERIENCE

Circulation → Movement

Wine tasting provokes the five senses through every step of the process. First, the type of wine is identified from its color then the bottle is popped open and poured into the glass. The glass is then held and swirled, then the wine is smelled to identify its aroma, and finally the wine is tasted.

Wine Color

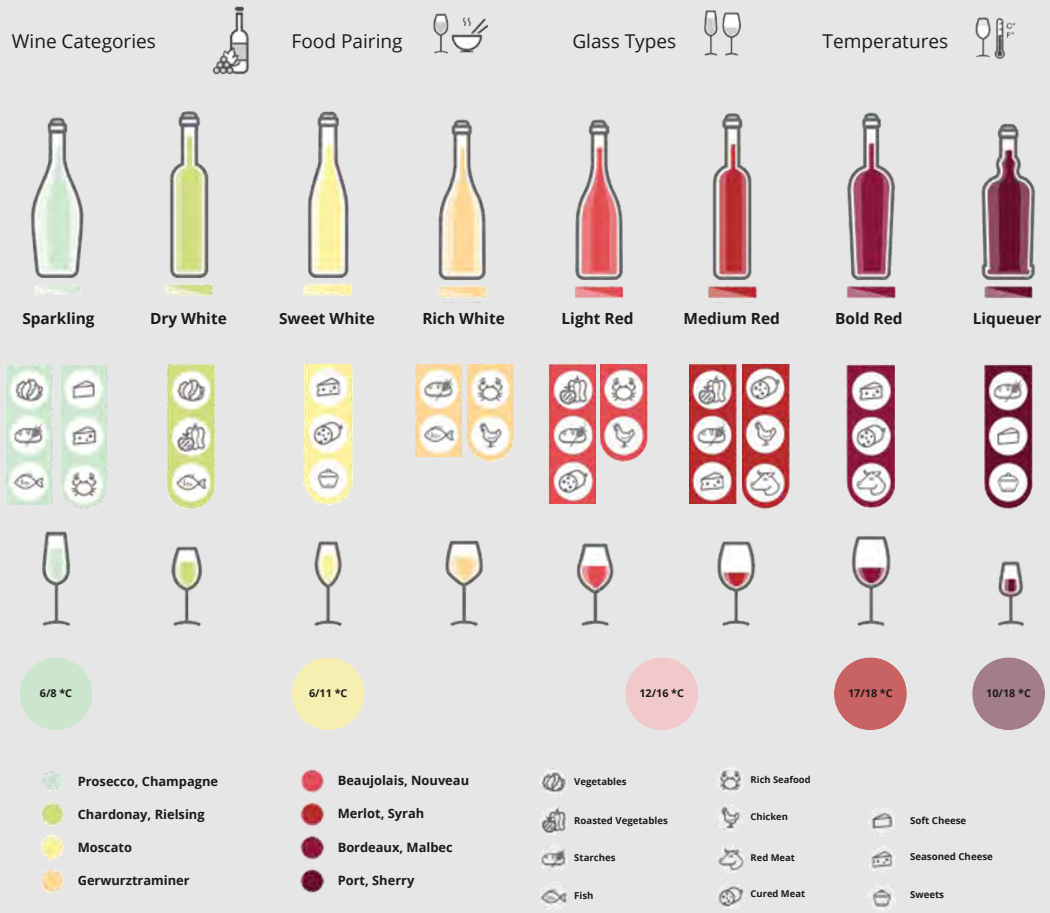
Wine Pop & Pour

Wine Hold & Swirl

Wine Smell

Wine Taste

At the restaurant, food is paired with a specific wine type. Listed here are the different categories of wine and the food they are paired with, the glass type, and the temperature it is served at.



Wine therapy engages the vestibular and proprioception sense through its components. As wine is served throughout, one can experience the wine aroma, the specific texture of the wine lotion, and the wine baths. The experience also focuses on balancing and focusing on the muscles and joints, skin care which helps with anti-aging, and this would help in focusing on the body and meditating within the space.

Color Palette

Aroma

Texture

Elements

Wine

Skin Care

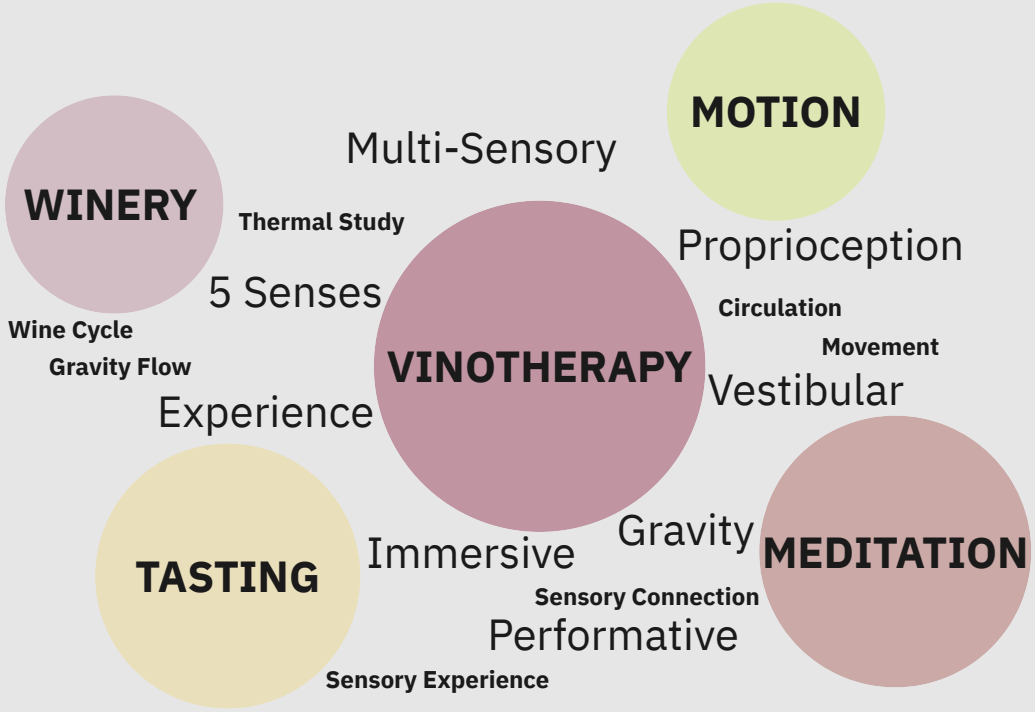
Balancing

Meditation

Muscles & Joints

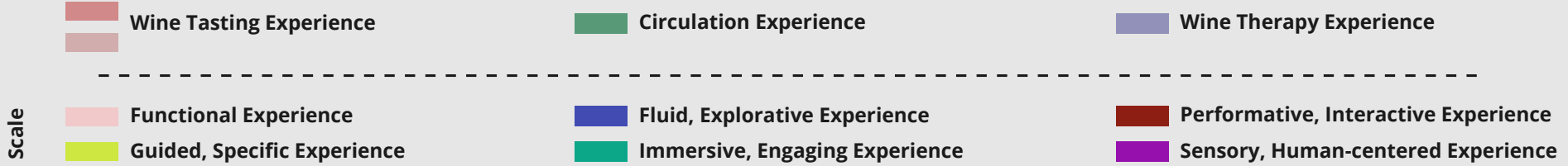
Body Focus

To look further at these activities through experiences, I will integrate within the pavilion the wine tasting experience where I enhance the spatial aspects and add a sensorial lead, the vineyard experience that enhances circulation and motion and adds an atmospheric wine environment, and the wine therapy experience that uses wine stabilization as a concept to reflect on one's body and balance. I have highlighted here all the senses and some design aspects that I intend to achieve through this hybrid to result in an immersive multisensory experience. So it is a means to prove how we could better work with all the senses.

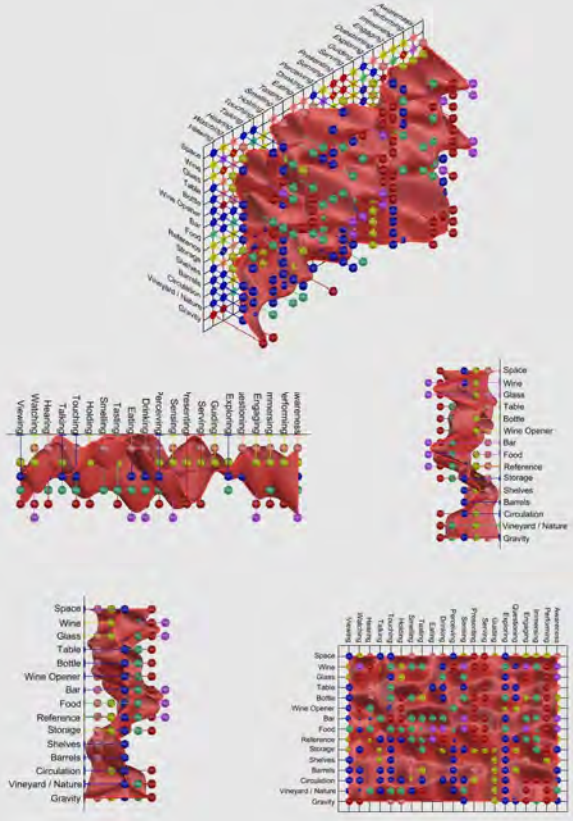


Existing Winery Experience

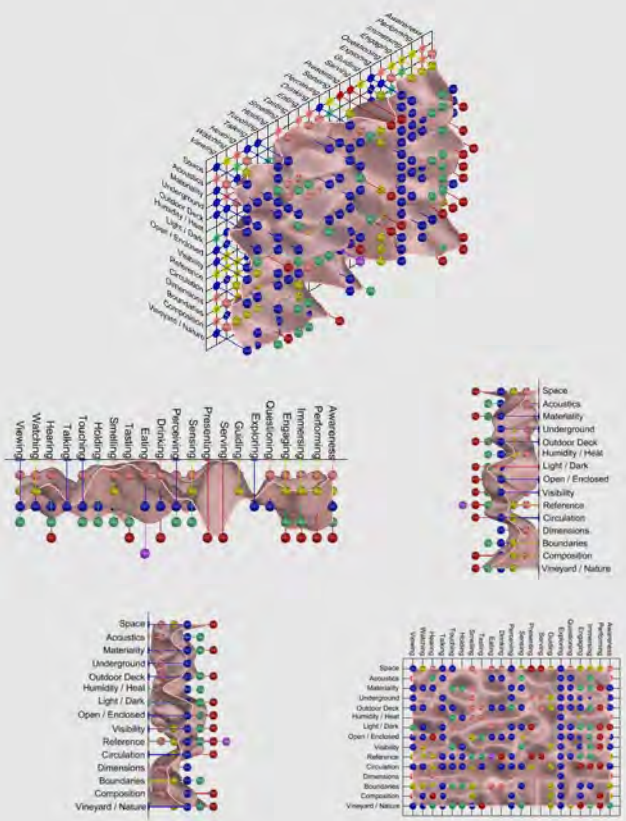
After choosing the program, I studied and analyzed these specific experiences through their specific altered parameters using the diagram method. I also created a new scale to analyze them that range from functional to guided to explorative to immersive to performative and finally to fully sensory experiences.



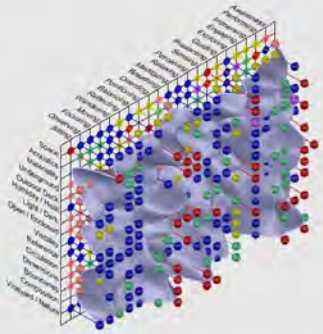
Wine Tasting Elements Graph

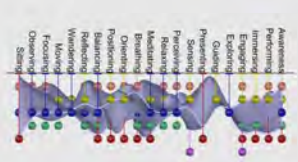


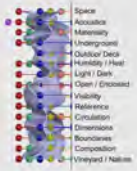
Wine Tasting Architecture Graph

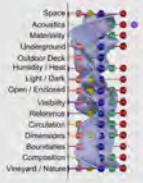


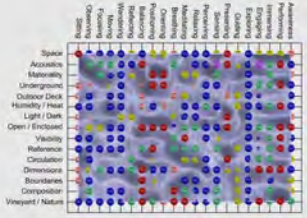
Wine Therapy Graph



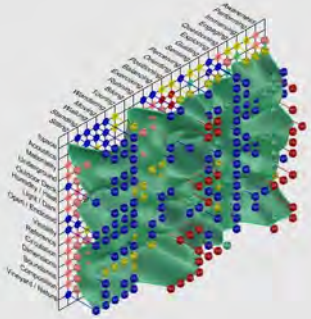


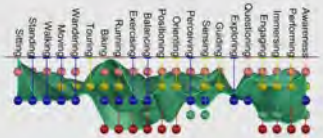


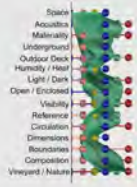


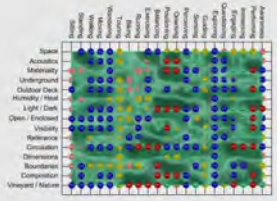


Circulation Graph



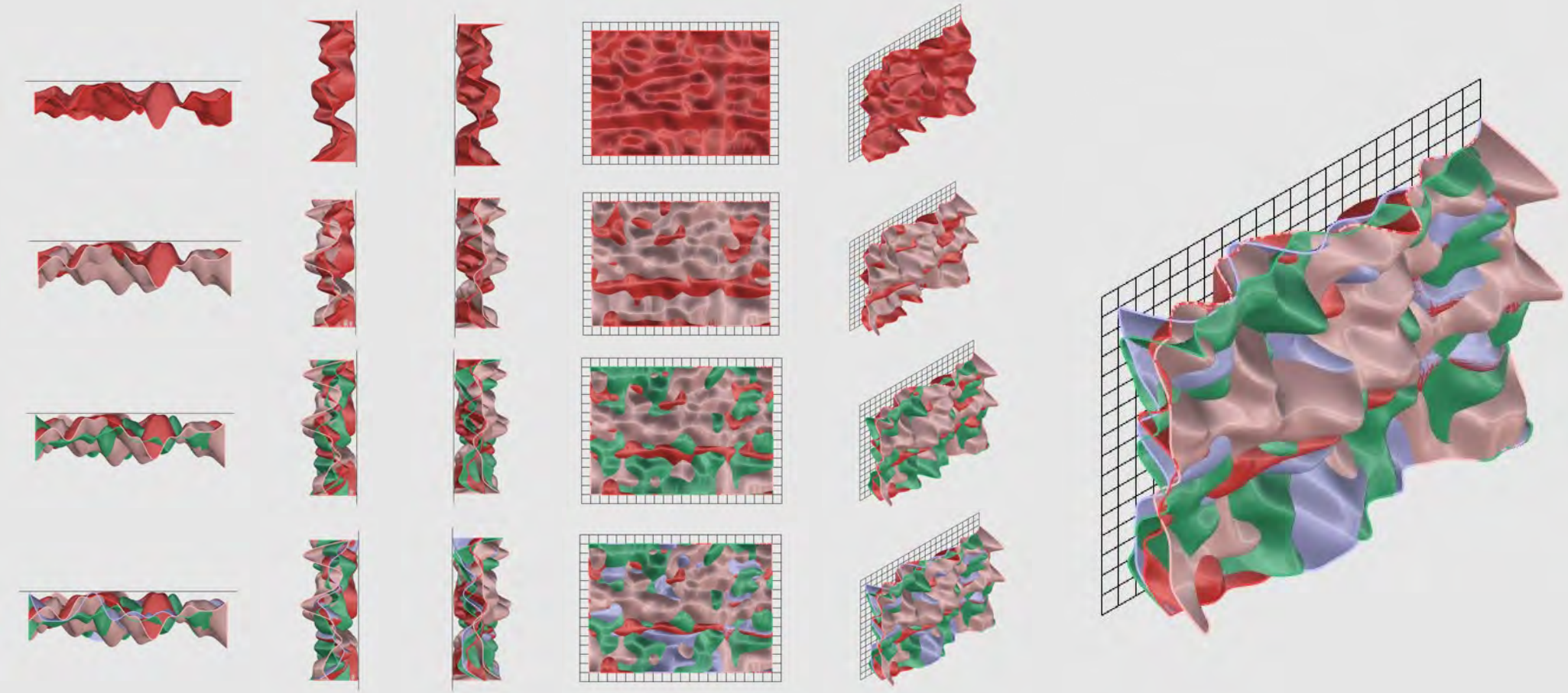






Composite Graph

As I did this analysis, I realized that there were a lot of functional and guided experiences, and little were the immersive, interactive ones.



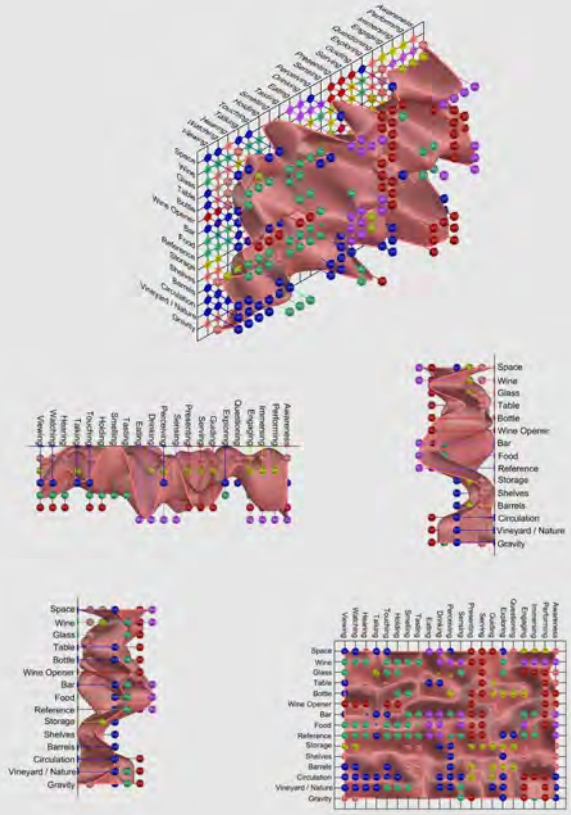
Sensory Winery Experience

I started designing my pavilion through this method by looking at each parameter connecting the senses and architecture to improve the experience reaching a multisensory and more inclusive one. So i did that by transforming guided tours into more performative experiences for the user and transforming exploring circulation into immersive, mysterious ones.

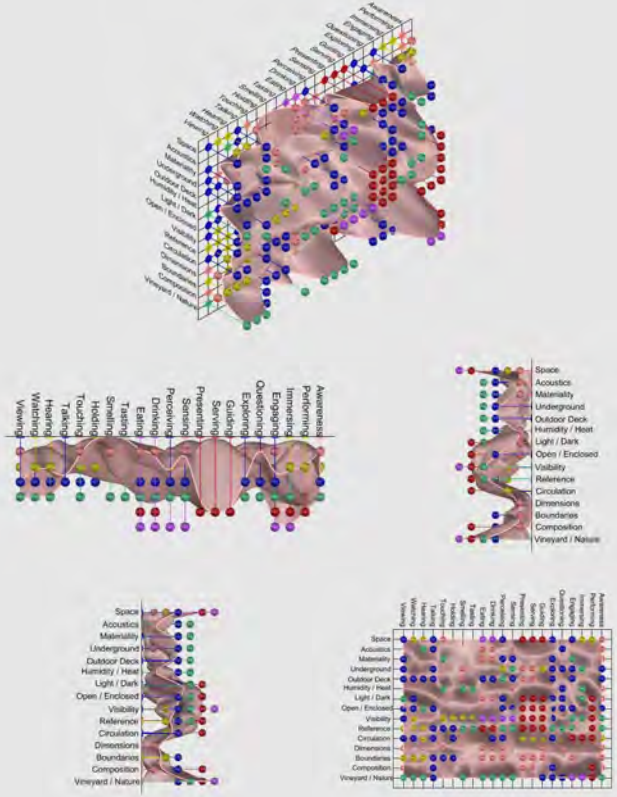
Scale

- Wine Tasting Experience
- Circulation Experience
- Wine Therapy Experience
- Functional Experience
- Fluid, Explorative Experience
- Performative, Interactive Experience
- Guided, Specific Experience
- Immersive, Engaging Experience
- Sensory, Human-centered Experience

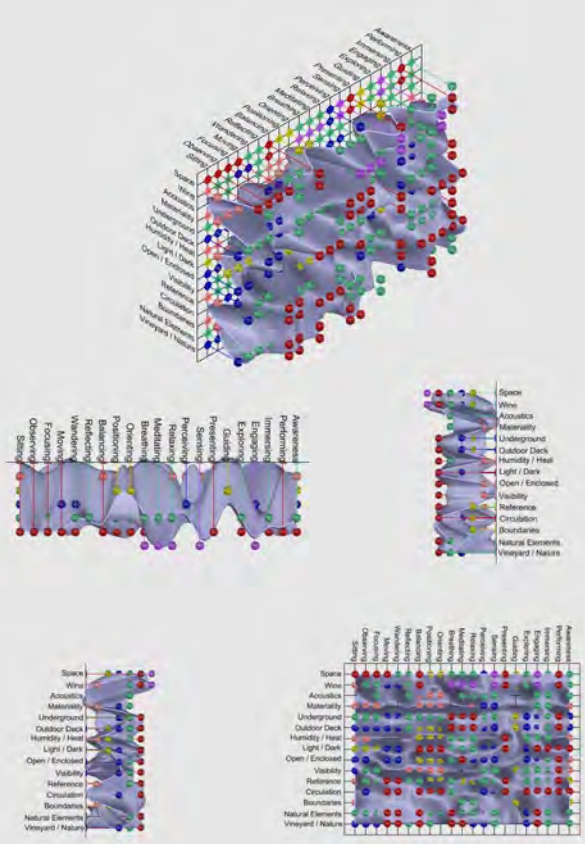
Wine Tasting Elements Graph



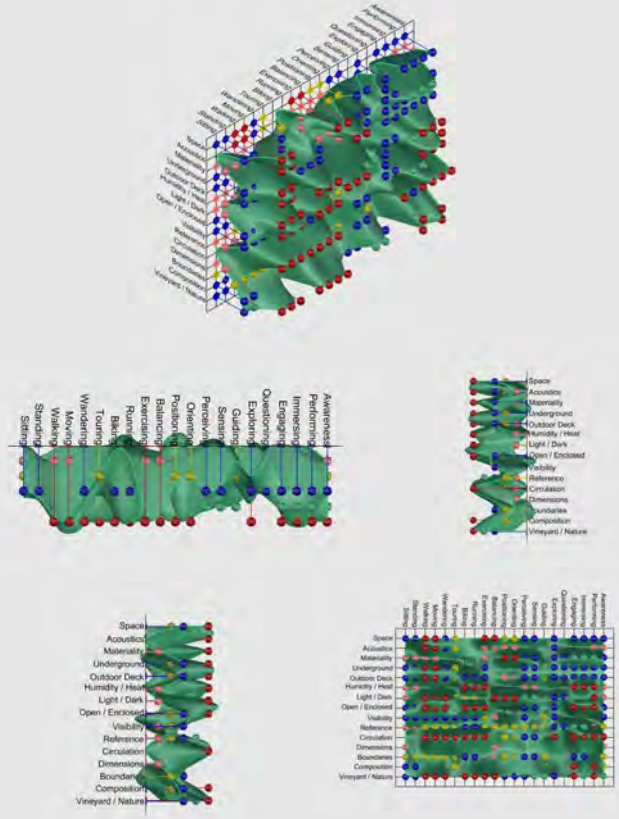
Wine Tasting Architecture Graph



Wine Therapy Graph

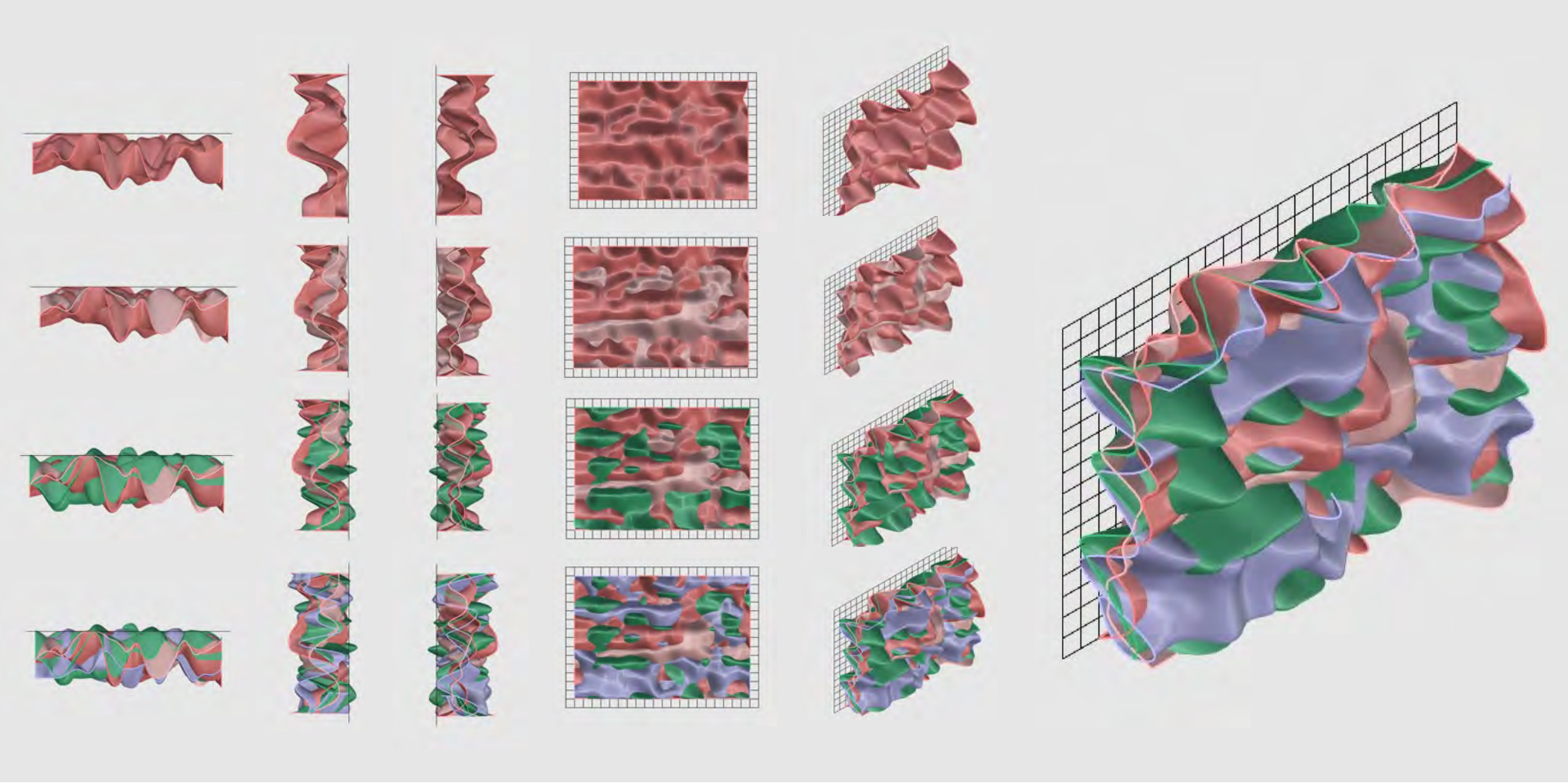


Circulation Graph



Composite Graph

In the optimized composite graph, all experiences are triggered allowing for an inclusive multisensory experience.



Matrix of Analysis

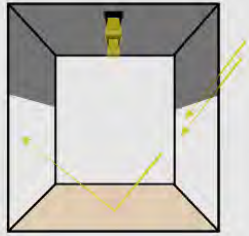
After having the graph, I decomposed its elements and parameters to objectify them spatially and experientially looking at color, texture, light, nature, size, senses, and the experience which resulted in a morphology. The table is a highlight from the diagrams showing the immersive and performative experiences that are triggered as a connection between certain senses and architectural elements.

Wine Tasting

Color

Texture

Objects



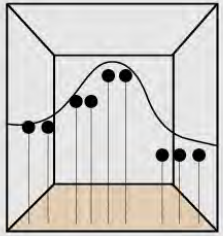
Light

Nature

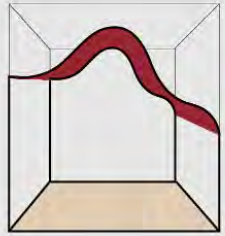
Size

Space

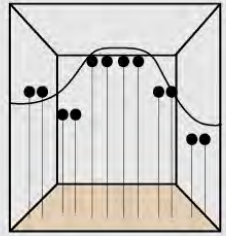
Senses



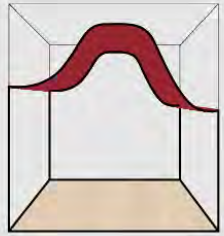
Experience



Morphology



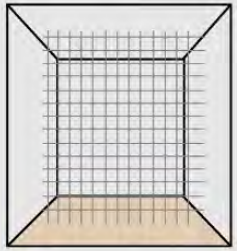
Experience



Morphology

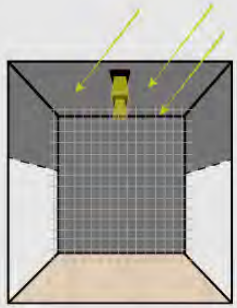
Wine Shop

Color



Texture

Objects



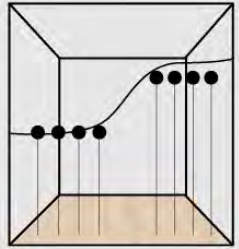
Light

Nature

Size

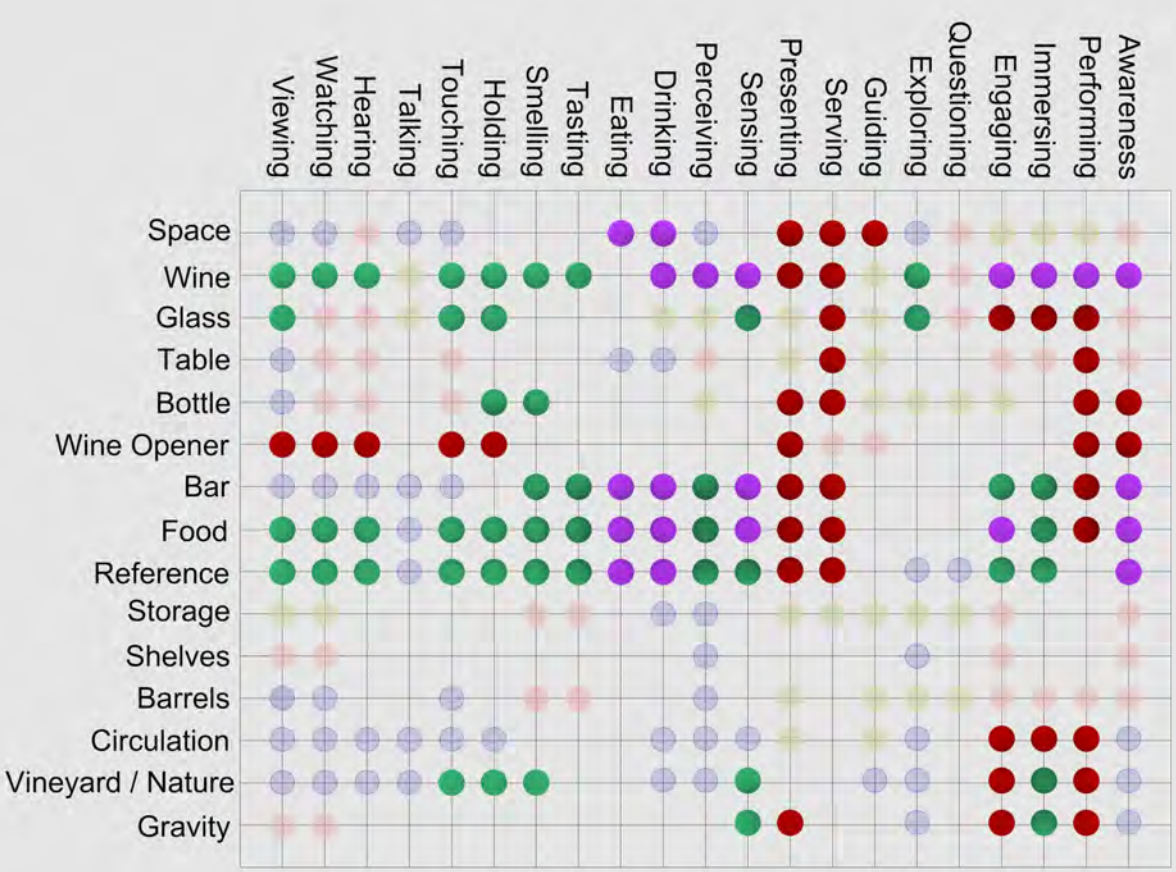
Space

Senses



Experience

Morphology



Wine Tasting

Taste & Balance

- **Wine Types**
- **Matched Food**
- **Glassware**
- **Reference**

For wine tasting, it goes beyond the five senses by triggering the sense of balance with the space and also integrating motion with the connection of food and wine and the five senses.

5 Senses

Immersive

Tasting

Balanced

Sensory

Engaging

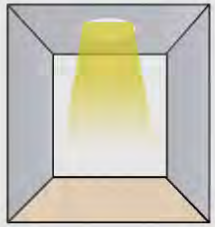
Performative

Wine Tasting

Color

Texture

Objects



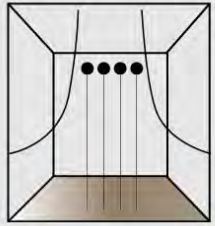
Light

Nature

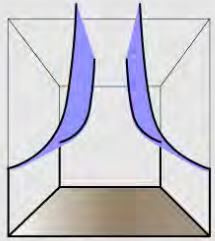
Size

Space

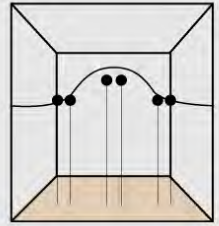
Senses



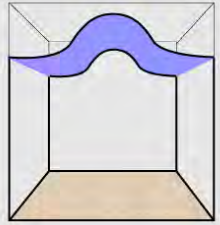
Experience



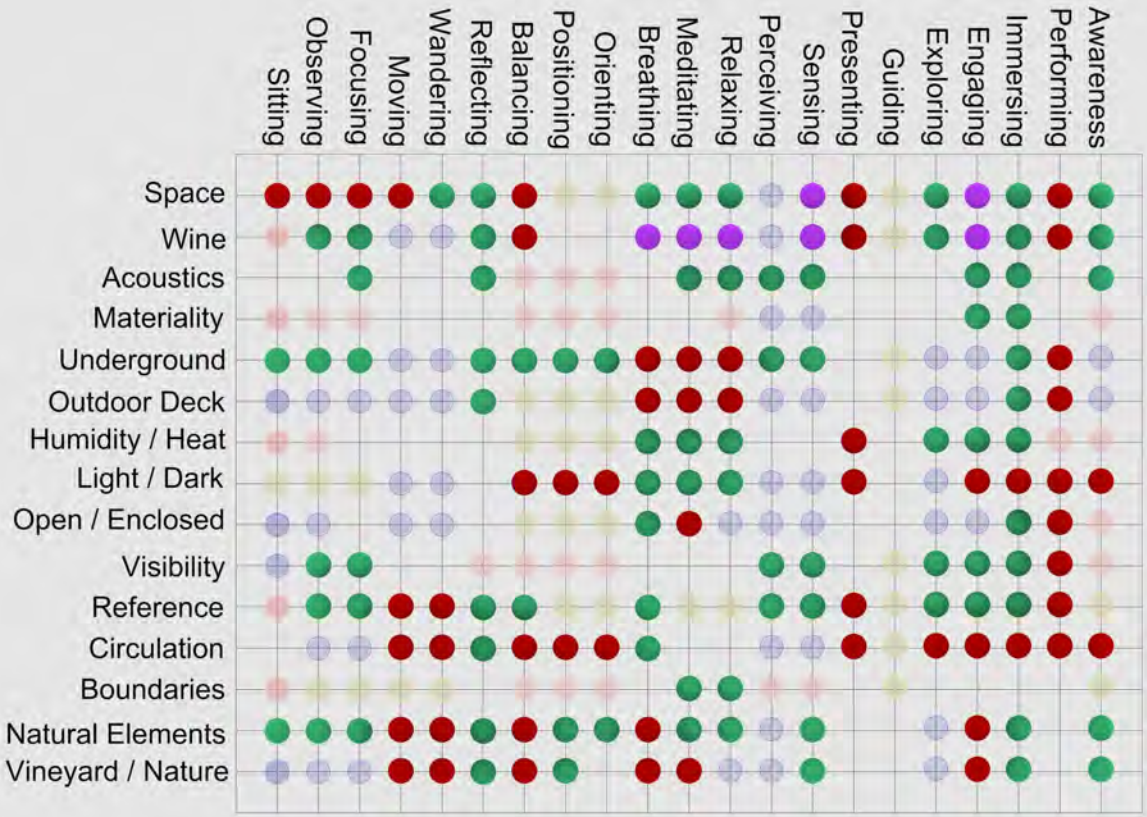
Morphology



Experience



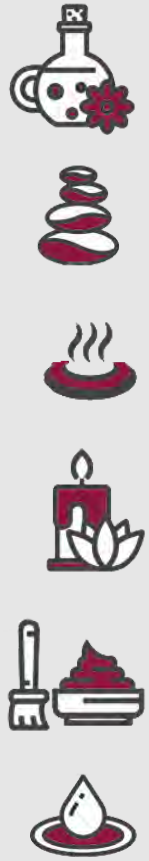
Morphology



Wine Therapy

Body & Time

- **Wine as Natural Elements**
- **Light & Ambience**
- **Visibility**
- **Acoustics**
- **Materiality**



Collage representing the moment and morphology of the space.

For wine therapy, the light is more centered toward the human creating a more human-centric space and the morphology also represents that. The body is at the center of the experience and is challenged by the omnipresence of wine through time, visibility, light, ambience, and being underground.

Vestibular

Therapeutic

Relaxing

Meditative

Body Focus

Immersive

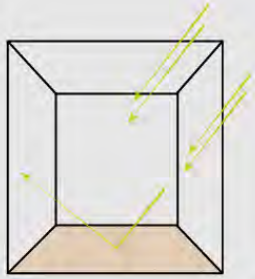
Performative

Wine & Food

Color

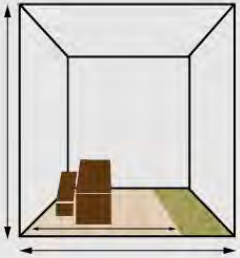
Texture

Objects



Light

Nature

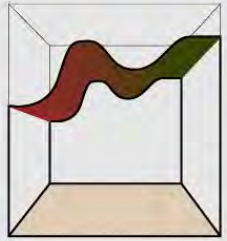


Size

Space

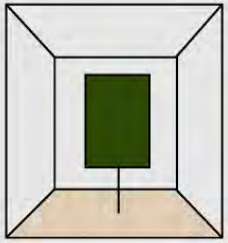
Senses

Experience



Morphology

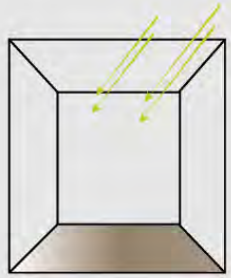
Circulation



Color

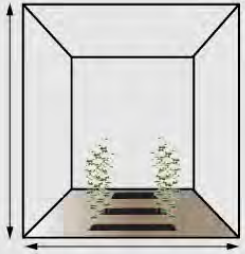
Texture

Objects



Light

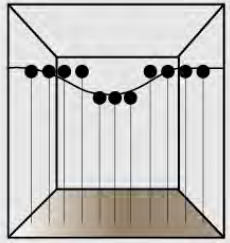
Nature



Size

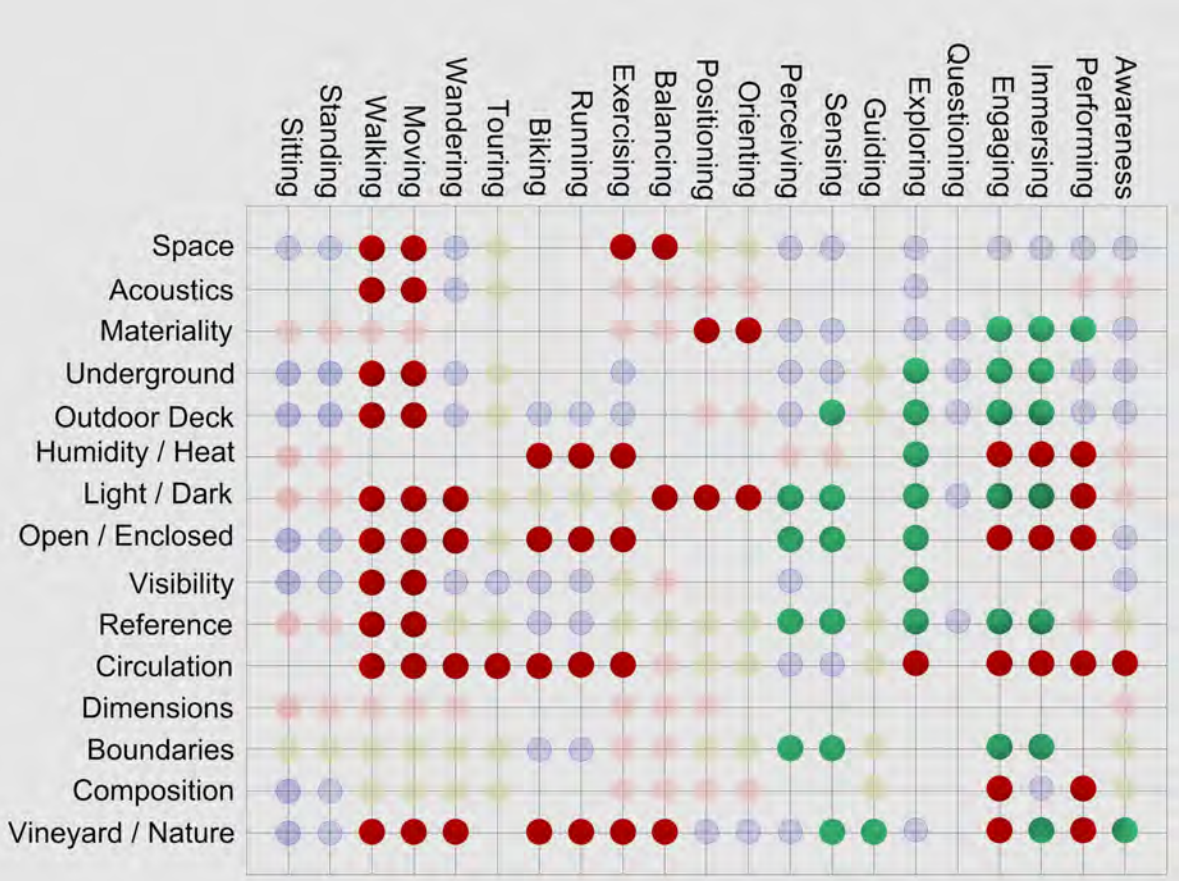
Space

Senses



Experience

Morphology



Circulation

Movement & Immersion

- **Atmospheric Entrance**
- **Hypnotizing Aroma**
- **Engaging Vines**
- **Interactive Path**
- **Sensory Awareness**

For circulation, it is more of an open space where people are integrated within nature and the vineyards allowing for a performative experience. Movement and immersion are highlighted allowing for an interactive and engaging path with sensory awareness, so its not only guided by visibility but rather enhanced through the atmosphere aroma, engaging with the vines, and unconscious triggered motion.

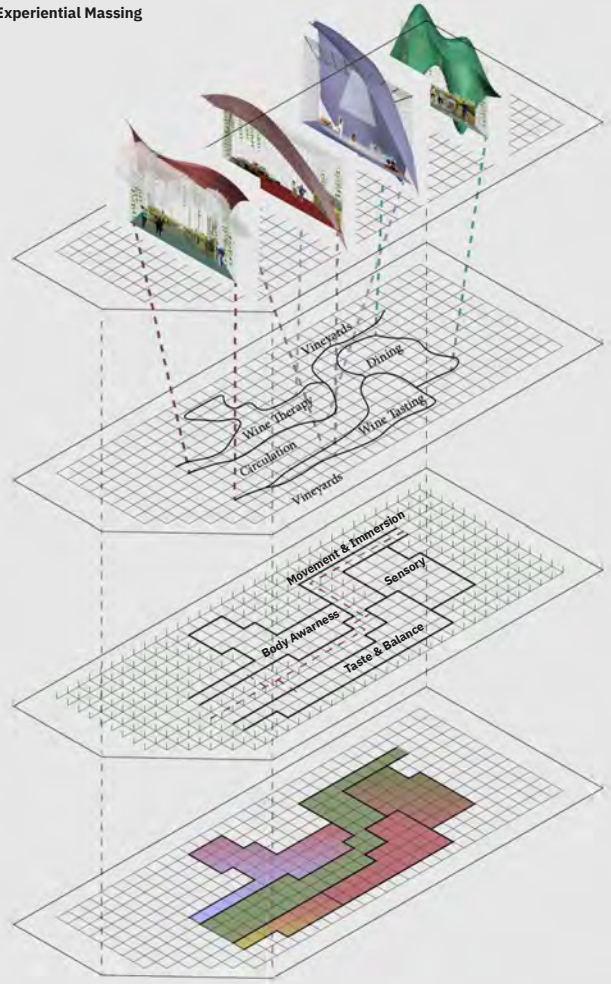
Atmospheric	**Time**	**Open**
Engaging		**Exploring**
Interactive		**Balanced**
Sensory	**Proprioception**	**Movement**
Immersive		**Perceptive**
Performative		**Performative**

Ksara Winery

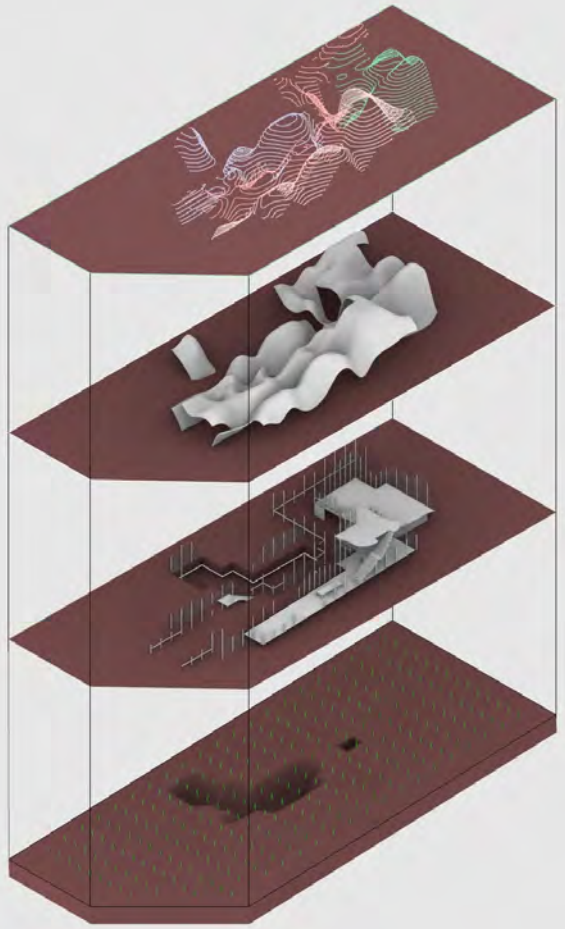
To apply all these explorations within an architecture, I chose Ksara winery as the site because the spaces are very independent from each other and very functional rather than experiential. Actually, Ksara is the oldest winery in Lebanon and has the first observatory in the MENA region so its experiential aspects should be optimized. So I chose one of the vineyards to apply the pavilion onto.

The different experiences are connected within a conceptual massing and experiential, spatial programming, which then unfolds between the vineyards. A layer of the experiential senses is added to the pavilion.

Experiential Massing

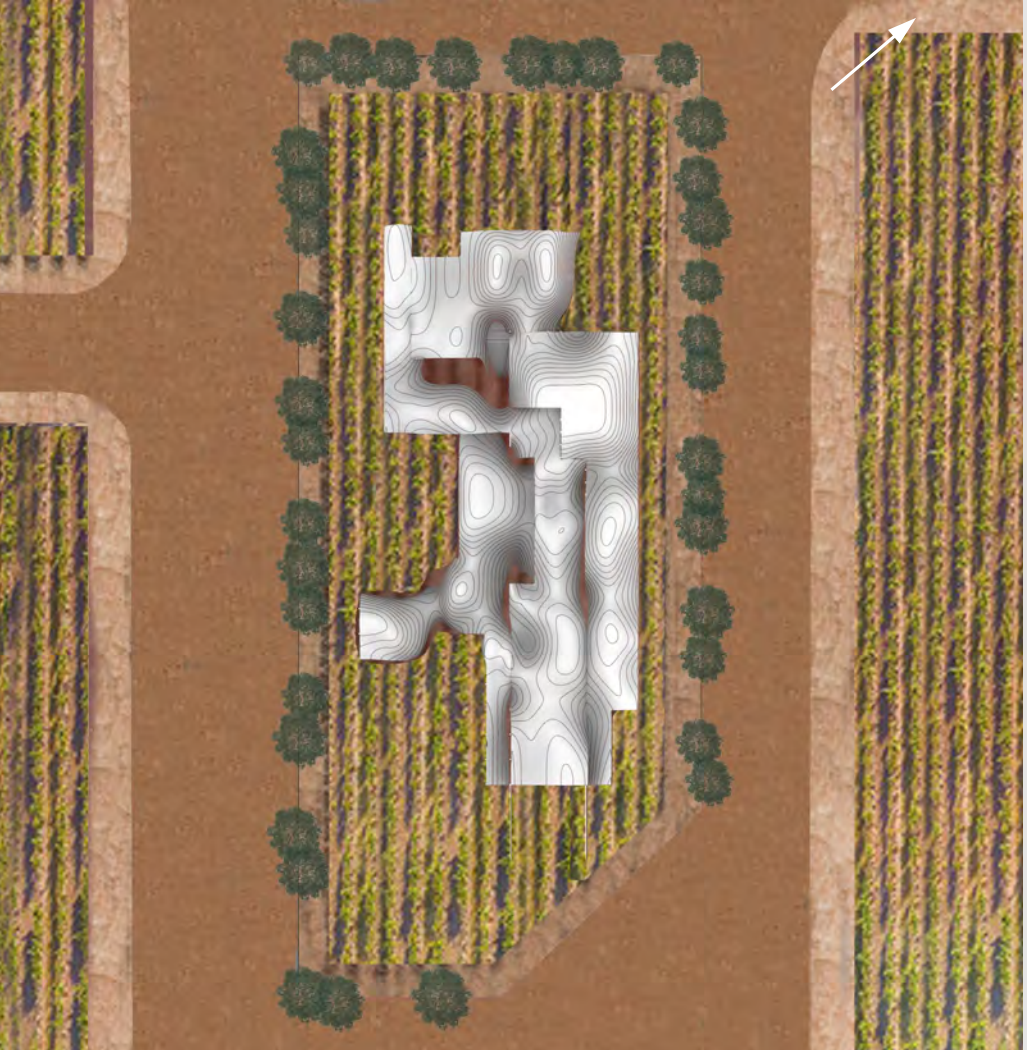


The different morphologies are then connected to create an organic self-generated roof structure that sits on top of a more defined grid structure following the vines.

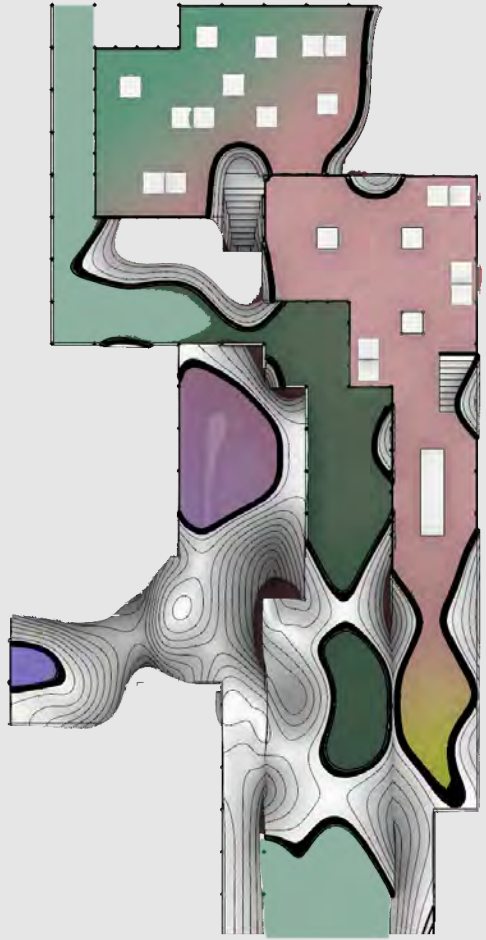


Plans

The top view and the ground floor plan show all the spaces within and how the roof morphs in between them to create different pathways.



I also highlighted how the senses merge with each other as one experiences these spaces. The circulation is the green space, to which merges into the wine shop to the right and into the wine tasting area. To the left, it morphs underground to the wine therapy space, and at the end it merges with the restaurant area. So the circulation would be the main central spine connecting the other experiences. It would trigger most of the senses throughout and the user would circulate into the spaces depending on which senses were stimulated and triggered the most. This is because the goal here is to make the person an agent within the architecture and to feel one with the space rather than being guided.

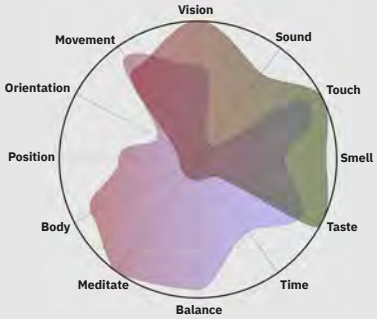


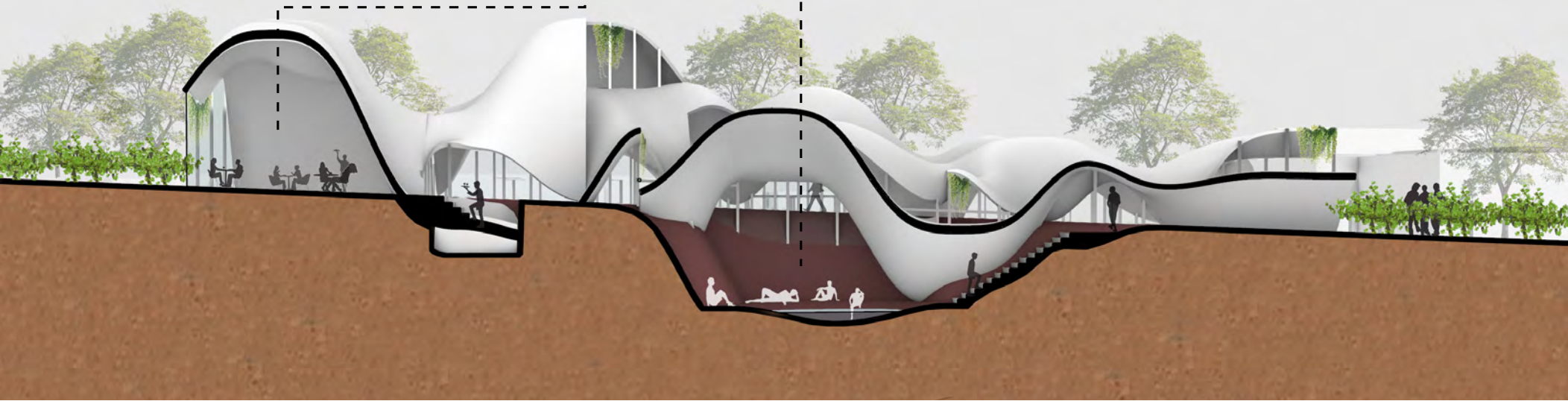
Sections

I formulated the experiences of the spaces shown in the sections through diagrams highlighting the senses triggered in each.

Longitudinal Section

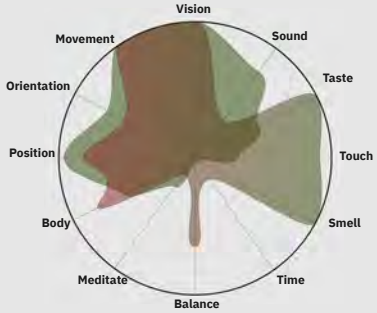
Within the therapy space, there is a central wine bath creating an atmospheric immersive experience while being underground allowing the human to reconnect with their body and balance, and this shows in the senses highlighted such as movement, touch, balance, and body. As for the restaurant, its more about the experience of matching wine with food and feeling within nature.


Vision
Sound
Touch
Smell
Taste
Time
Balance
Meditate
Body
Position
Orientation
Movement



Longitudinal Section

The circulation shows how the roof changes heights morphing with the adjacent experiences, engaging with the human, and challenging perception in relation to proprioception. The entrance is more of an atmospheric experience with a mixture of senses, immersing visitors with mystery, wine aromas, and questioning the humidity, transparency property of the wine. In the vineyards and dining experience, more activity, exercises, and movement are induced and engaged. This experience allows the person to be in direct contact with the different stages of wine from the vines to its tasting property. The diagram highlights the body, position, orientation, movement, vision and touch as the senses that are mainly triggered within this space.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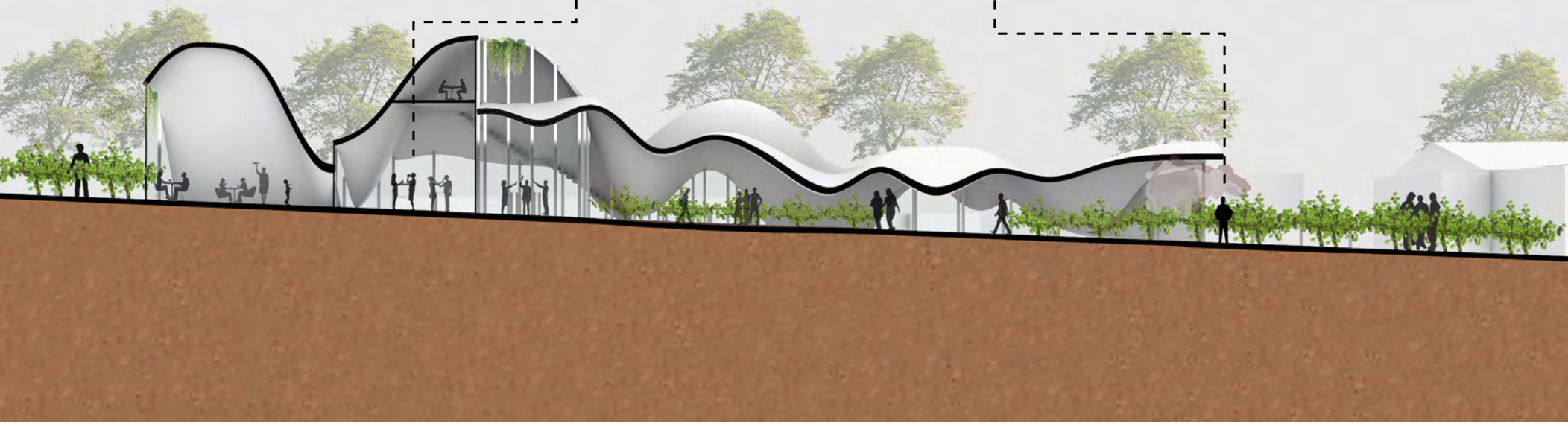
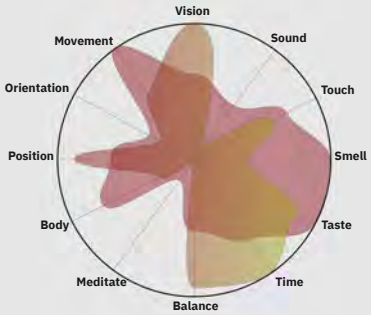


Longitudinal Section

The wine shop links to the wine tasting area which is an active experience starting by being seated and then transcends to one where you circulate between stations to taste the wine. This would trigger and challenge the person’s vestibular sense as they gradually get affected by the wine. Thus, it’s not just about triggering the senses directly with the wine but also triggering bodily senses and challenging them. The diagram highlights most of the senses being triggered from the five senses to the proprioception and vestibular ones.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Position
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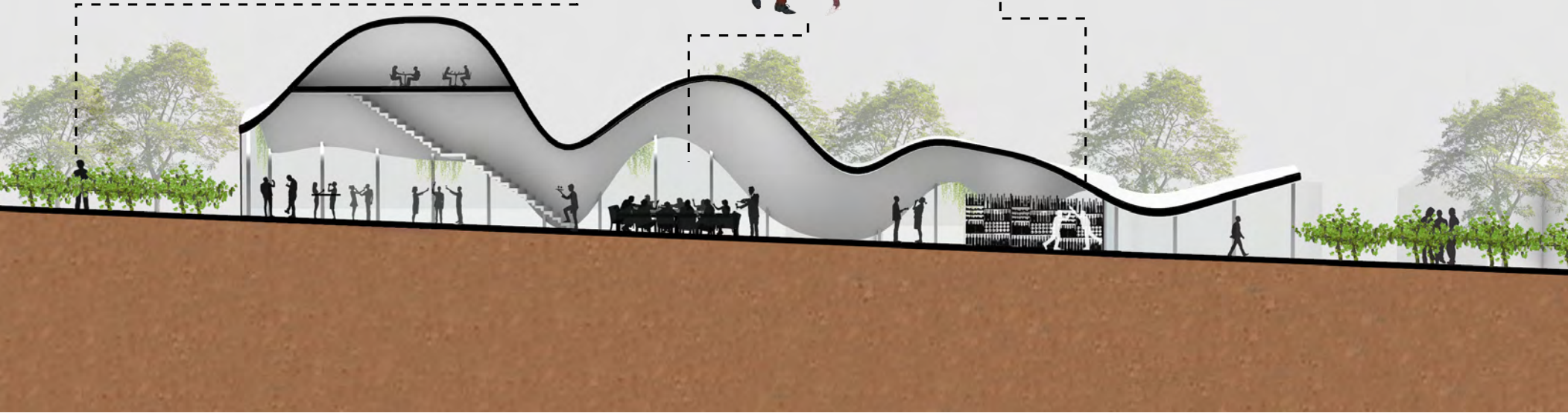
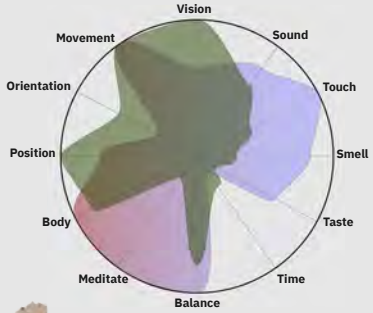
Movement



Cross-Section

The meditation space is more secluded and human-centric allowing for a full awareness of the senses and the space which are shown in the diagram. This would allow for a relaxing, therapeutic immersive space and a new way of engaging with wine which is to balance ones self with the stabilization of wine. The circulation shows where the roof fully encloses the path from one point triggering an unconscious movement from the human into a new space.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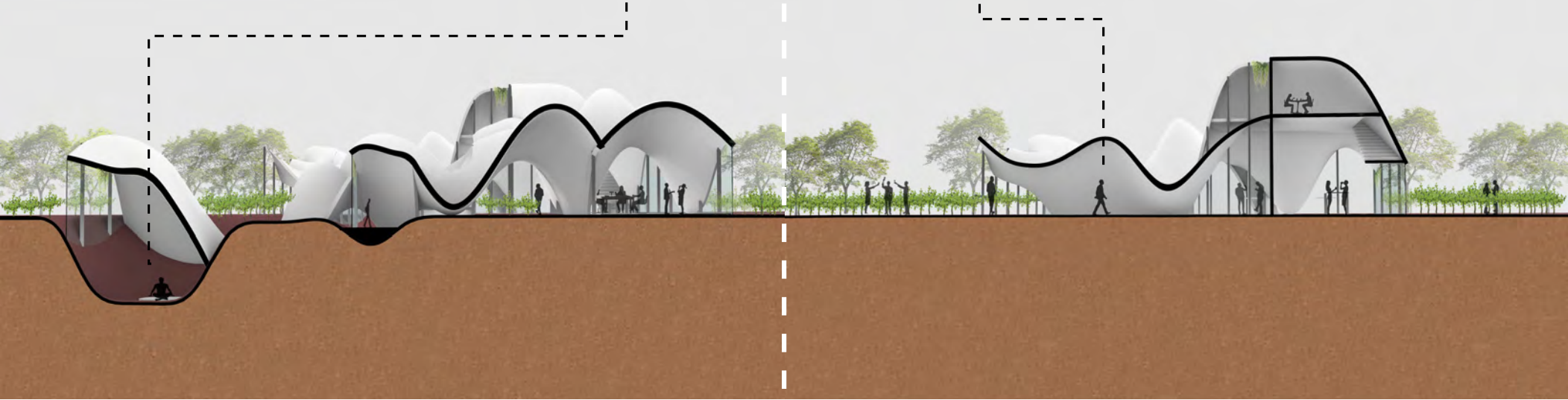
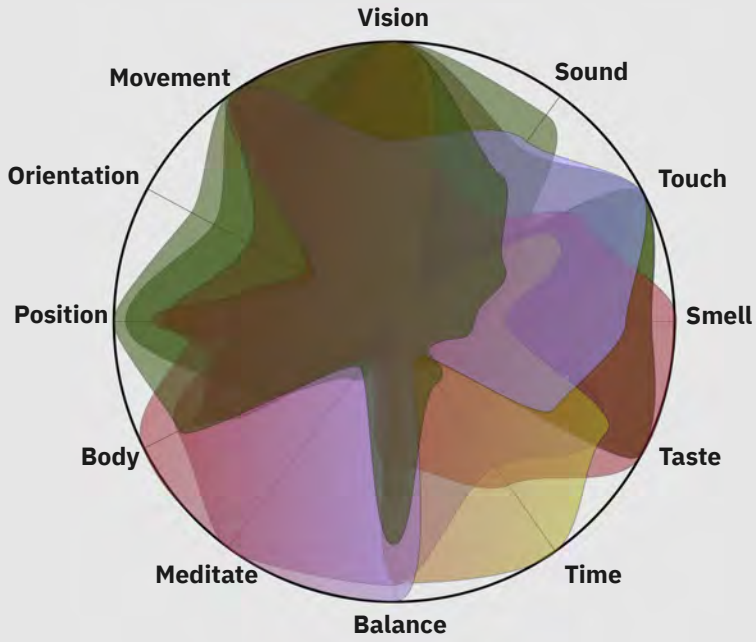
Movement



Composite Graph

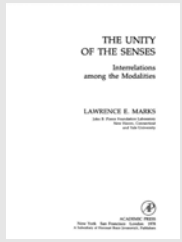
I overlapped all the diagrams to show that throughout the pavilion all the senses are being triggered allowing for an optimized, inclusive, multisensory architectural experience.

By engaging and immersing the senses in that way, the pavilion would result in a multisensory experiential architectural inclusiveness.



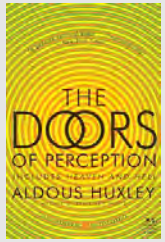
So within the pavilion..

The body and nature merge
The nature and architecture engage
The body and architecture immerse and interact

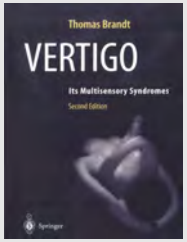


The Unity of the Senses
- Lawrence E. Marks

Understanding
Multisensory Architecture
-Sona C.N. & Shailaja Nair



The Doors of Perception
-Aldous Huxley



Vertigo: Its Multisensory
Syndromes - Thomas Brandt

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