

Atlas

Ashley Chen

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Studio Brief

The Estranged Theatre:
Re-Enacting (Un)Familiar Cultural Practices
Instructor: Calvin Chua

This studio will be designing a performance theatre that hosts re-enactments of past cultural practices. Set against the backdrop of a future civilisation rebuilding itself after cataclysmic climatic events, the theatre acts as an archive to allow future generations experience past cultural practices through performances.

For the past two millennia, the typology of the theatre has been relatively consistent. From ancient Greek agora to today's iconic opera houses, the theatre has always been designed as a symbolic urban marker and a civic space for citizens. Architecture has always been employed as a tool to structure social relation within a physical space. Performance takes place on stage, social interactions in the vestibule, while the complex set of mechanical audio and lighting system support the operations of the theatre. However, in a future immersive virtual world, existing typologies, spatial hierarchies and experiential qualities of the theatre may cease to be relevant or exist in a different form.

Given such conditions, we will question the way cultural practices are archived, performed and experienced in both physical and virtual space. What cultural practices are worth archiving and re-enacting? Would the performance be a re-enactment of a factual record or a reinterpretation of existing practices? Would the audience be silent spectators or active participants in the performance? These fundamental questions will guide us in designing a future theatre for past culture.

While the virtual world offers endless possibilities in form and content, we will ground our theatre design by selecting a specific cultural practice that will inform the spatial layout and qualities of the theatre. Rather than designing the exceptional, we will revisit banal and everyday spaces within today's context to accentuate an estranged experience of today for the future and virtual world. The recalibration of familiar spaces and objects found within certain cultural practices will form a new spatial grammar for the theatre and allow us to question our very own existence and confront the fictional realities of the virtual world.

Questioning conditions of scales (what is proportion of the performance stage?), motion (is the theatre kinetically operated?), time (how long is each performance?), thresholds (how do we enter the physical and virtual realm?), interiority (how does the theatre relate to the exterior world?), and hierarchy (what is the performance flow?) in the physical and virtual environment, we seek to develop visions of a future theatre that redefines the spatial-temporal relationship between the performer and the audience. Acknowledging the need to redefine typology and hierarchy of a theatre, the three typical spaces that make up a theatre (vestibule, main performance area, technical space) have been kept flexible to be defined by individual project narratives and visions. Finally, we will examine the civic qualities of the theatre in relation to a new physical reality – a world without cities but an extreme environmental and topographical condition.

" ... the theatre acts as an archive to allow future generations experience past cultural practices through performances."

" we will question the way cultural practices are archived, performed and experienced in both physical and virtual space."

" future theatre that redefines the spatial-temporal relationship between the performer and the audience. "

Narrative

This narrative tells the story of a post apocalyptic world where people study the stars as a means of survival.

After the apocalypse the world was barren. Hopeless, humans looked up to the night sky and wished upon the stars. They noticed patterns in the sky and interpreted the stars as mythical beings that could predict occurrences such as the seasons. Humans soon learnt to read and map the sky, embedding stargazing in their culture. Equipped with the knowledge and wisdom to survive, they built the most advanced city in the canyons, Astra. The city would then open its borders to citizens of other lands, turning into an educational hub to welcome all who seek knowledge. However, The city was separated from the world by a slit in the canyons. The Astrians decided to build a theatre, in place of the bridge, turning it into an immigration point, a node for people entering in and out of Astra, a welcoming and departure gate to guide flow of traffic in and out of the city. The theatre was called 'Atlas', it would be able to map the night sky and teach Astrians and outsiders to converse through the universal language of the stars.

The user arrives into the building into the ground level. When sunlight enters the space at an angle, it forms the stars in the Night World. Depending on the location of the user and time of the day, he or she is able to see different constellations forming. Upon entering the space, the user experiences a symphony of lights where the lights take on the role of the performer. The level is covered in a thin coat of water, simulating the feeling of levitation and at the same time completing the bottom half hemisphere. The sunlight hits the dome, becoming the base for virtual reality to take place. The user steps into a portal and is transported into a dimension of eternal night with beaming starlight which in turn creates different and parallel immersive environments, such as autumn and winter.

After learning about the constellations, the user then enters Basement 1, the space for leisure. On this level, the user observes as people on the level above roam around the space, forming hypnotic and alluring views. The participation of the people above as involuntary performers while the people below act as the audience, realising that a few moments ago they were in their shoes.

Basement 2 is used as a social and interactive space. Here, the cafe is turned into an archive of knowledge as people from different backgrounds perceive their surroundings differently depending on the constellation they explored in the first level. The architecture setting becomes the main performer and the visitors act as a prop to frame the scene. Virtual reality offers every single visitor a specifically crafted view and perspective of the space. Here, Astrians and outsiders cast aside their differences, and leave perceptions or impressions of one another aside and exchange conversations, building a classless society.

Basement 3 encompasses the washrooms and shop. It is the checkpoint for visitors before they ascend back up into the spaces and out of the theatre.

"Humans soon learnt to read and map the sky, embedding stargazing in their culture. Equipped with the knowledge and wisdom to survive, they built the most advanced city in the canyons, Astra."

"The theatre was called 'Atlas', it would be able to map the night sky and teach Astrians and outsiders to converse through the universal language of the stars."

"What is your sign?" The wave of the 21st century hits us with astrological memes, personality quizzes, and match-making tests. The fascination with astrology in the modern world has become a social and a commutative tool.

This project takes the fad we have today regarding astrology and displaces it into a post-apocalyptic world where astrology is the way of life. Turning the stars into a language that binds a society, while also serving as a crutch.

In the canyons, there exists the city of Astra, built on the foundation of astrology, where fiction is made and retold as fact. The first Astrians interpreted the stars as creatures that could predict natural occurrences such as the 4 seasons. Equipped with the knowledge and wisdom to survive, they built the most advanced city in the canyons.

Astra opened its borders by building a bridge between the city and the rest of the world, turning into an educational hub, welcoming all who seek knowledge. The bridge was built in the form of a theatre that guides the flow of traffic in and out of the city, acting as a node. It was given the name 'Atlas'. Built like a sphere, the pureness of the Atlas becomes the expression of symmetry, a social condenser, assimilating Astrians and outsiders alike.

Atlas draws its audience through social and performative programmes where outsiders watch the performance of the stars through the lens of an Astrian, and for Astrians, the theatre serves as a place of leisure and an archive of education from different parts of the canyons. By drawing its inspiration from Olafur Eliasson's 2003 Weather Project and 'On Space Time Foam' installation by Thomas Saraceno, the project exposes the use of static art to induce natural and honest reactions and the possibility of alternate realities, multiple universes, and how relationships entangle through the action and reaction of persons in its programmes. Through these programmes, Astrians and outsiders exchange conversations, building a classless society.

So, everytime you ask someone "What is your sign?", or when you respond to astrology related material, you take on the role of an Astrian, or an outsider passing through the Atlas.

"Built like a sphere, the pureness of the Atlas becomes the expression of symmetry, a social condenser, assimilating Astrians and outsiders alike. "

"Through the programmes of the theatre, Astrians and outsiders exchange conversations, building a classless society. "

Thesis

The project seeks to challenge the conventional theatre by blurring the line between what it means to be a performer and an audience and to redefine the theatre as a node to connect society

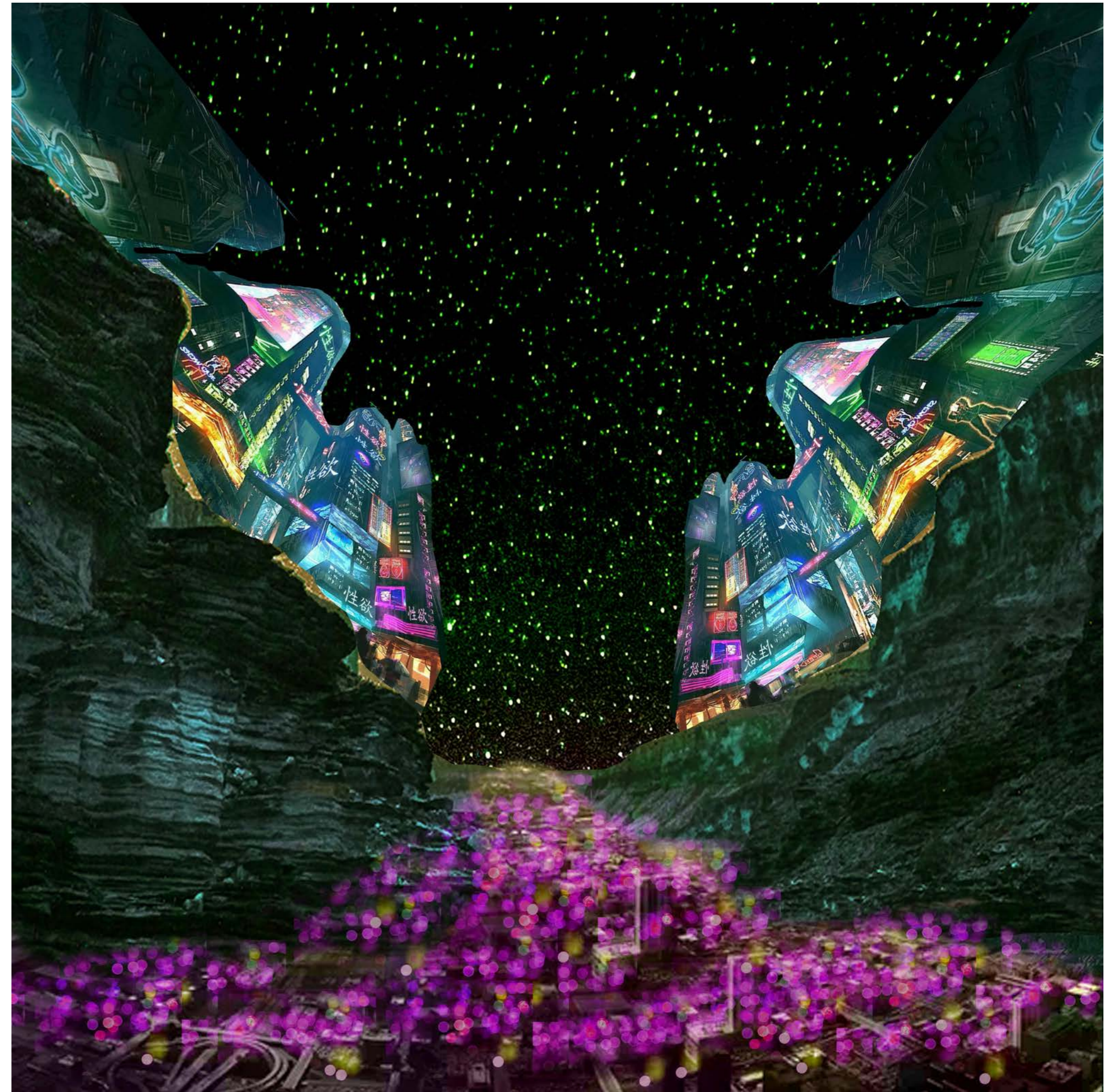
Collage 01: Cultural Practice

In the canyons, the people of astra learn to map the stars and interpreted them as mythical beings that could predict the seasons. Equipped with the knowledge and wisdom to survive, they built the most advanced city in the canyons, Astra. The city would then open its borders turning into an educational hub.



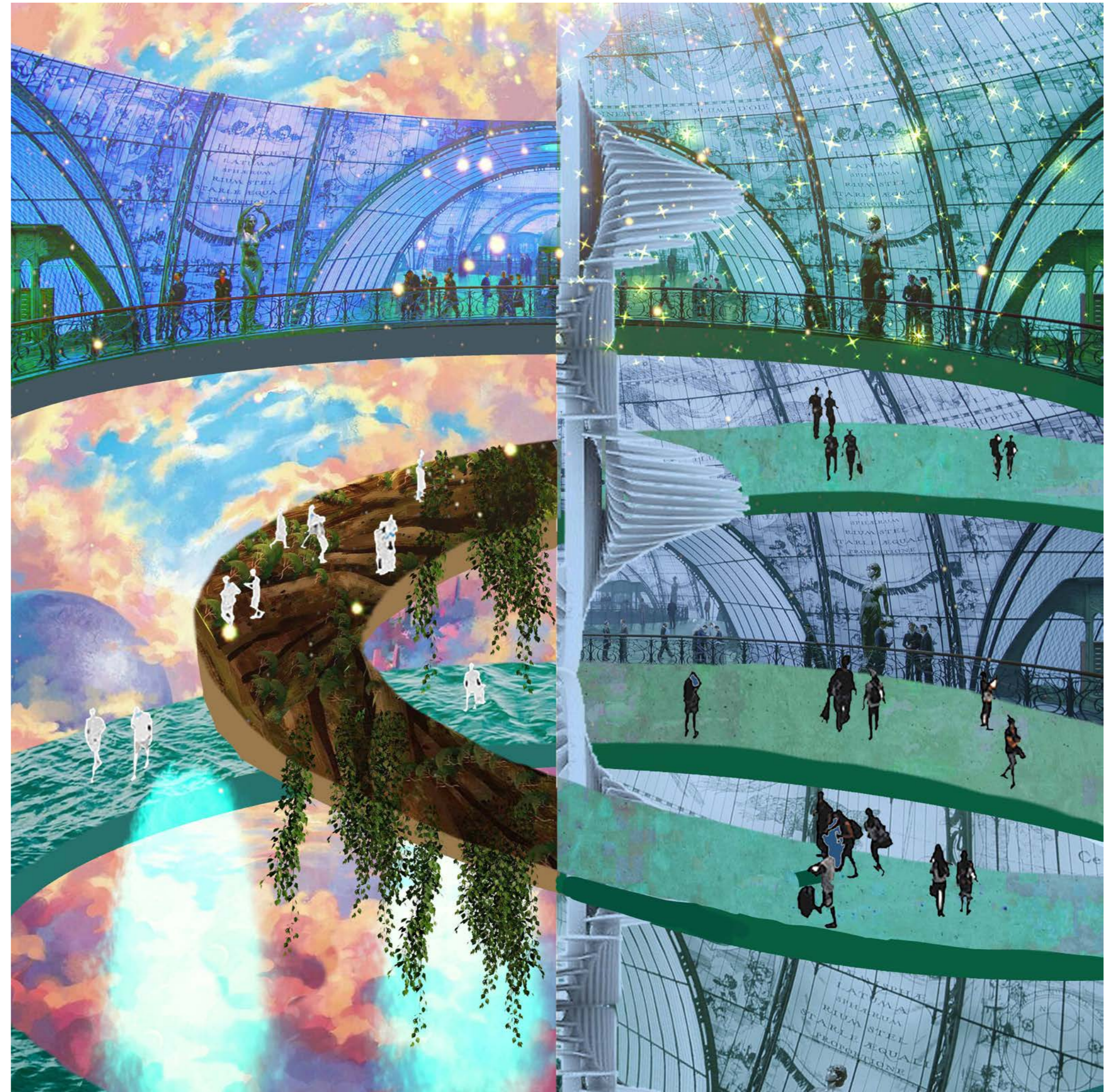
Collage 02: The City Setting

This collage showcases a first look at the cyberpunk city of Astra in the canyons.



Collage 03: First Theatre Element

This collage showcases the very first concept of a kinetic theatre element that paved the way for the spherical theatre.



Collage of the first theatre element

Collage 04: Location in the canyons

This collage showcases the first iteration of the theatre against the backdrop of Astra.



Collage of the Location of Atlas in the canyons

Collage 05: Day Scenario

This collage showcases Astra and the Atlas in the day.



Collage of Atlas during the day

Collage 06: Night Scenario

This collage showcases Astra at night
and the lack of stars in the night sky



Collage of Atlas at night

Collage 07: The Effects of Virtual Reality

This collage showcases the use of virtual reality in transforming Atlas into a 24/7 night time setting.



Collage 08: Theatre Programme

This collage showcases the first ideation of an immersive way to learn astrology.



Collage of theatre programme

Case Study: Existing Theatre Elements

- 1.Theatre
 - Similar levels multiplied along the z axis
 - The idea of heaven being in the sky
- 2.Shopping Complex
 - interchangeable events happen at the atrium that also allow visitors from other levels to watch
- 3.Zoo
 - observe animals without making physical contact
- 4.Moving structures
 - Rotation



Dubai's Rotating Sky Scrapper proposal



Gran Teatro la Fenice

Case Study 01: Theatre Elements

The case study analyses various viewing platforms at malls, zoos and theatres.



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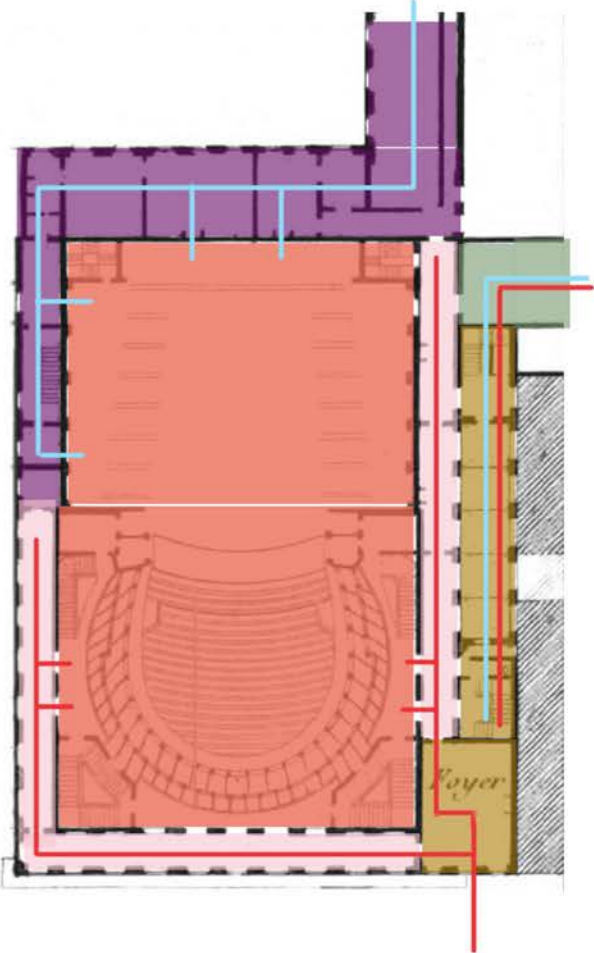


Zoological Island proposal
London Zoo Penguin Pool

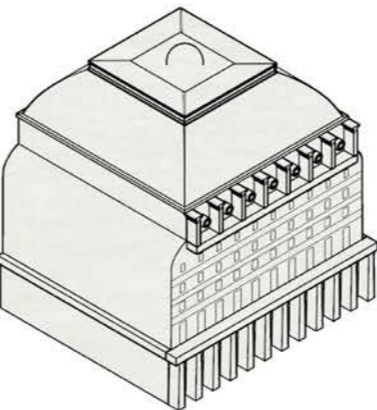


YinYang shaped panda house by BIG
Archstorming Co-exist Zoo by ASYA

Salle Richelieu



Spaces	Area	%
Entrance / Café / Shop	104.29	9.31
Restrooms / Cloak Room / Office	28.45	2.54
Performance Space (Seating Area + Stage)	635.83	58.78
Vestibule / Lobby Space	149.76	13.37
Storage / Technical Space	201.45	16.00
Total	1119.78	100

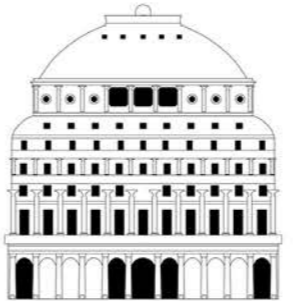
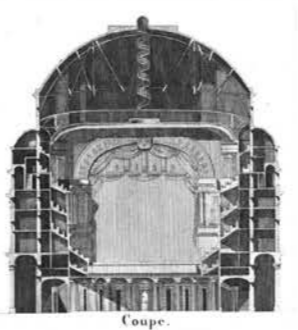


Building Name	Comédie-Française, Salle Richelieu alias Théâtre du Palais Royal, Théâtre Française de la rue Richelieu, Théâtre de la République
Location (City, Country)	Paris, France
Architect / Firm	-Victor Louis (1786-1790) -Alexandre Moreau (1798) -Pierre Fontaine (1822) -Pierre Prosper Chabrol [fr] (1860) -Julien Guadet (1900)
Year of Completion	-Opened (1790) (Variétés-Amusantes)- 1799 (Comédie-Française) -Rebuilt 1900 (after a fire)
Building Dimension (length, width, height)	27.6, 44.8, 30.6
Building Area (total sqm)	1236.48
No. of Floors (above ground, basement)	Basement -2 Above ground -4 Attic -1
Unique Features (5 points max)	--peristyle of eleven intercolumniations formed by pillars of the Doric order -range of arcades resting upon square pillars -The king's box is hung with crimson velvet fringed with gold and surmounted by the royal arms. -The first and second tiers of boxes are supported by light pillars of cast iron; but at the fourth tier a range of Doric columns, which supports the ceiling, destroys the harmony of the ordonnance. - ancient semicircle with the ellipse giving a horseshoe plan and devised open balcony boxes



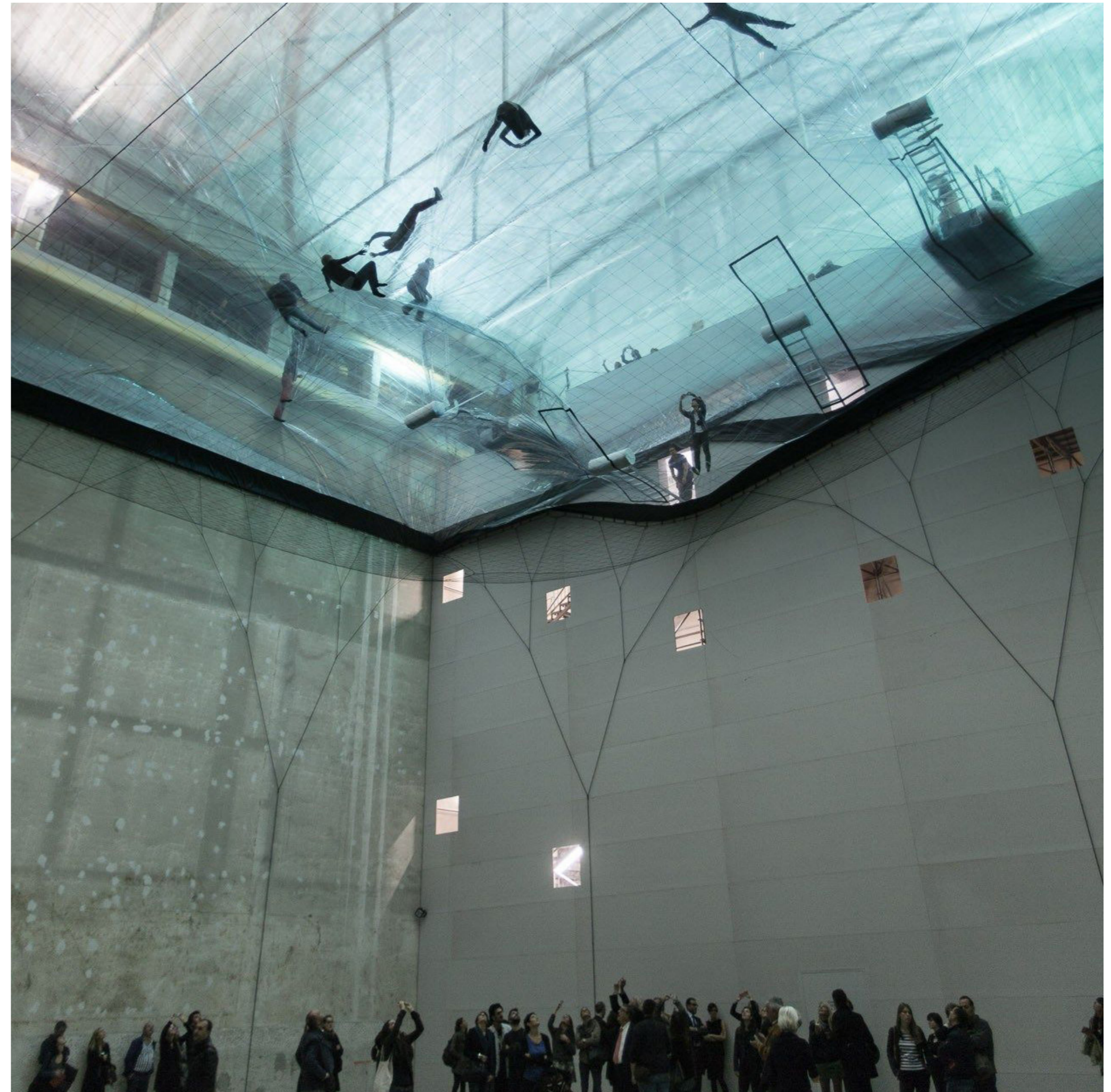
Case Study 02: Salle Richelieu

This case study analyses the theatre elements of the Salle Richelieu in France.



Case Study 03: On Space Time Foam

This is a case study 'On Space Time Foam' installation by Thomas Saraceno, exploring the possibility of alternate realities, multiple universes, and how relationships entangle through the action and reaction of persons.



Case Study 04: The Weather Project

Olafur Eliasson's 2003 Weather Project. Although entirely man-made, the weather ignites a natural and honest reaction from the visitors. The faux but very real sun is a performer to its audience.



Case Study 05: Ideas of Space from Isaac Newton to Etienne-Louis

'Ideas of Space from Isaac Newton to Etienne-Louis Boullée' by
Dr Nikolaos-Ion Terzoglou.

Ideas of space from Isaac Newton to Étienne-Louis Boullée

Nikolaos-Ion Terzoglou

Dr. Architect, Lecturer, National Technical University of Athens, Greece
E-mail: initer@central.ntua.gr

This paper aims to prove that a fertile dialogue between architectural history and the history of ideas can open interesting perspectives for the understanding of the process of design. This dialogue, offering a reconstruction of the different mental contexts of each historical period, could prove to be essential for grasping the true meaning of design outcomes that belong to the same era. As a specific case-study, the present paper investigates the cultural interactions and the conceptual correspondences between the scientific spirit of the Enlightenment, philosophy and the architectural utopian projects of Étienne-Louis Boullée, based on the examination of various ideas of space. It is argued that after the Scientific Revolution of the seventeenth century and the major works of Isaac Newton and Gottfried Wilhelm Leibniz, the notion of space assumed an increasingly important role in the philosophical and architectural discourses of the Enlightenment. In this context, a general outline of the possible affinities and divergences between those distinct domains of eighteenth-century knowledge is traced, through the analysis of various interpretations of natural and urban space from Isaac Newton and Voltaire to Étienne-Louis Boullée. This analysis is a preliminary attempt to think the complex relations between the Humanities and the natural sciences in their Modern genealogical interdependences and tensions. Moreover, it can form the conditions for a better understanding of the intellectual environment that constitutes the meaningful ground of Boullée's design intentions.

Key words: space, mental context, history of ideas.

Ιδέες του χώρου από τον Isaac Newton στον Étienne-Louis Boullée

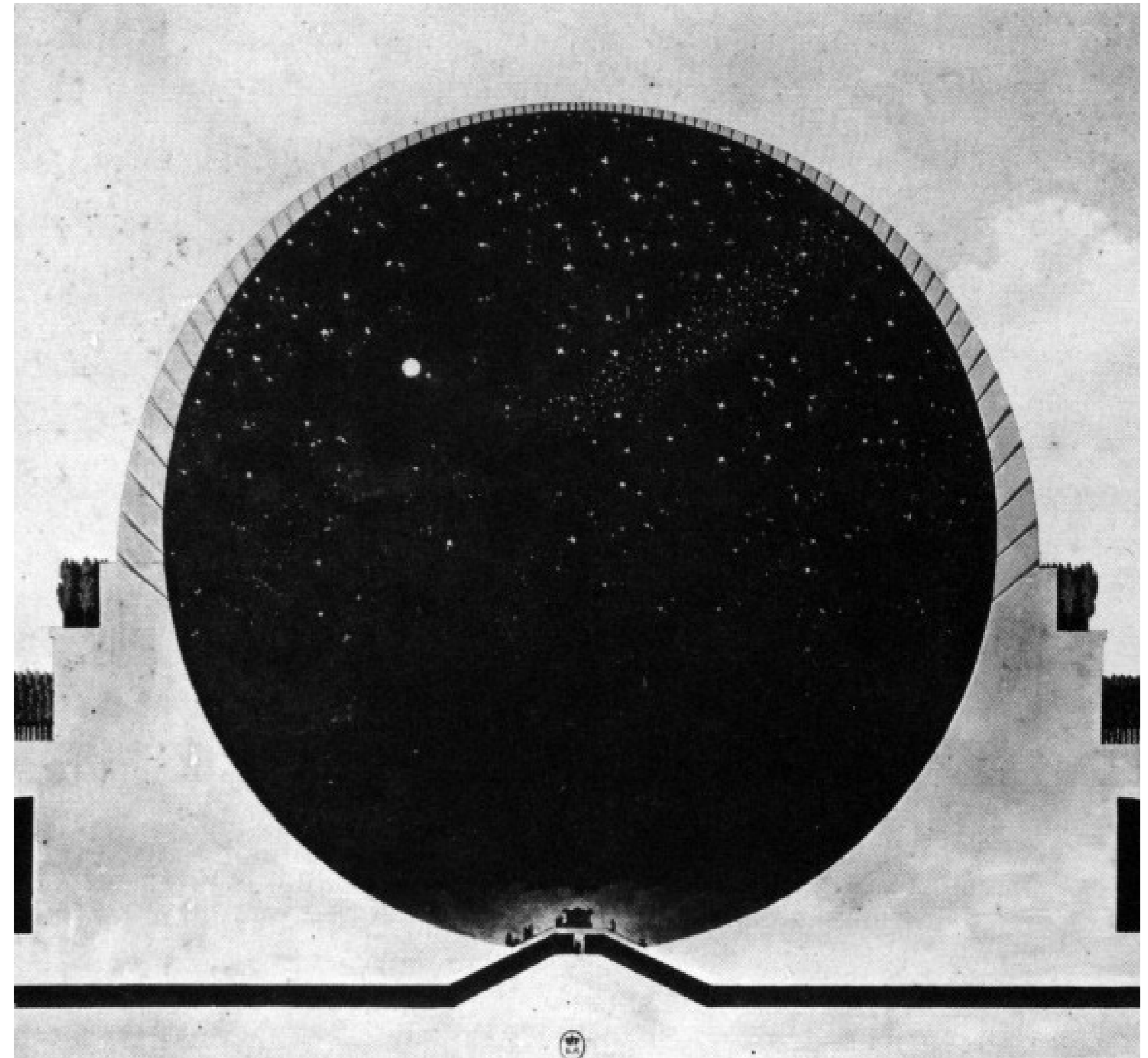
Η παρούσα μελέτη στοχεύει να αποδείξει πως ένας γόνιμος διάλογος ανάμεσα στην ιστορία της αρχιτεκτονικής και την ιστορία των ιδεών μπορεί να διανοίξει ενδιαφέρουσες προοπτικές για την κατανόηση της διαδικασίας του σχεδιασμού. Αυτός ο διάλογος, καθώς προσφέρει μια ανασυγκρότηση των διαφορετικών νοητικών πλαισίων κάθε ιστορικής περιόδου, θα μπορούσε να αποδειχθεί ουσιώδης για την σύλληψη του αληθινού νοήματος των σχεδιαστικών αποτελεσμάτων που ανήκουν σε αυτήν. Ως μία συγκεκριμένη μελέτη περίπτωσης, το παρόν άρθρο εξετάζει τις πολιτισμικές αλληλεπιδράσεις και τις εννοιολογικές ανταποκρίσεις ανάμεσα στο επιστημονικό πνεύμα του Διαφωτισμού, την φιλοσοφία και τα αρχιτεκτονικά ουτοπικά σχέδια του Étienne-Louis Boullée, βασιζόμενο στην διερεύνηση διαφόρων ιδεών του χώρου. Υποστηρίζεται πως μετά την Επιστημονική Επανάσταση του 17^{ου} αιώνα και τα μείζονα έργα του Isaac Newton και του Gottfried Wilhelm Leibniz, η έννοια του χώρου απέκτησε έναν ολοένα και πιο σημαντικό ρόλο στους φιλοσοφικούς και αρχιτεκτονικούς λόγους του Διαφωτισμού. Σε αυτό το πλαίσιο, σκιαγραφείται ένα γενικό περίγραμμα των πιθανών συγγενειών και αποκλίσεων ανάμεσα σε αυτές τις διακριτές περιοχές γνώσης του 18^{ου} αιώνα, μέσα από την ανάλυση ποικίλων ερμηνειών του φυσικού και του αστικού χώρου από τον Isaac Newton και τον Βολταίρο έως τον Étienne-Louis Boullée. Αυτή η ανάλυση αποτελεί μία προκαταρκτική απόπειρα στοχασμού των πολύπλοκων σχέσεων ανάμεσα στις επιστήμες του ανθρώπου και τις φυσικές επιστήμες στις Νεωτερικές γενεαλογικές αλληλεπιδράσεις και εντάσεις τους. Επιπλέον, μπορεί να διαμορφώσει τις συνθήκες για μία καλύτερη κατανόηση του πνευματικού περιβάλλοντος που συγκροτεί το νοηματικό θεμέλιο των σχεδιαστικών προθέσεων του Boullée.

Λέξεις-κλειδιά: χώρος, νοητικό πλαίσιο, ιστορία των ιδεών.

The importance of histories of architectural and philosophical ideas for the history of architecture

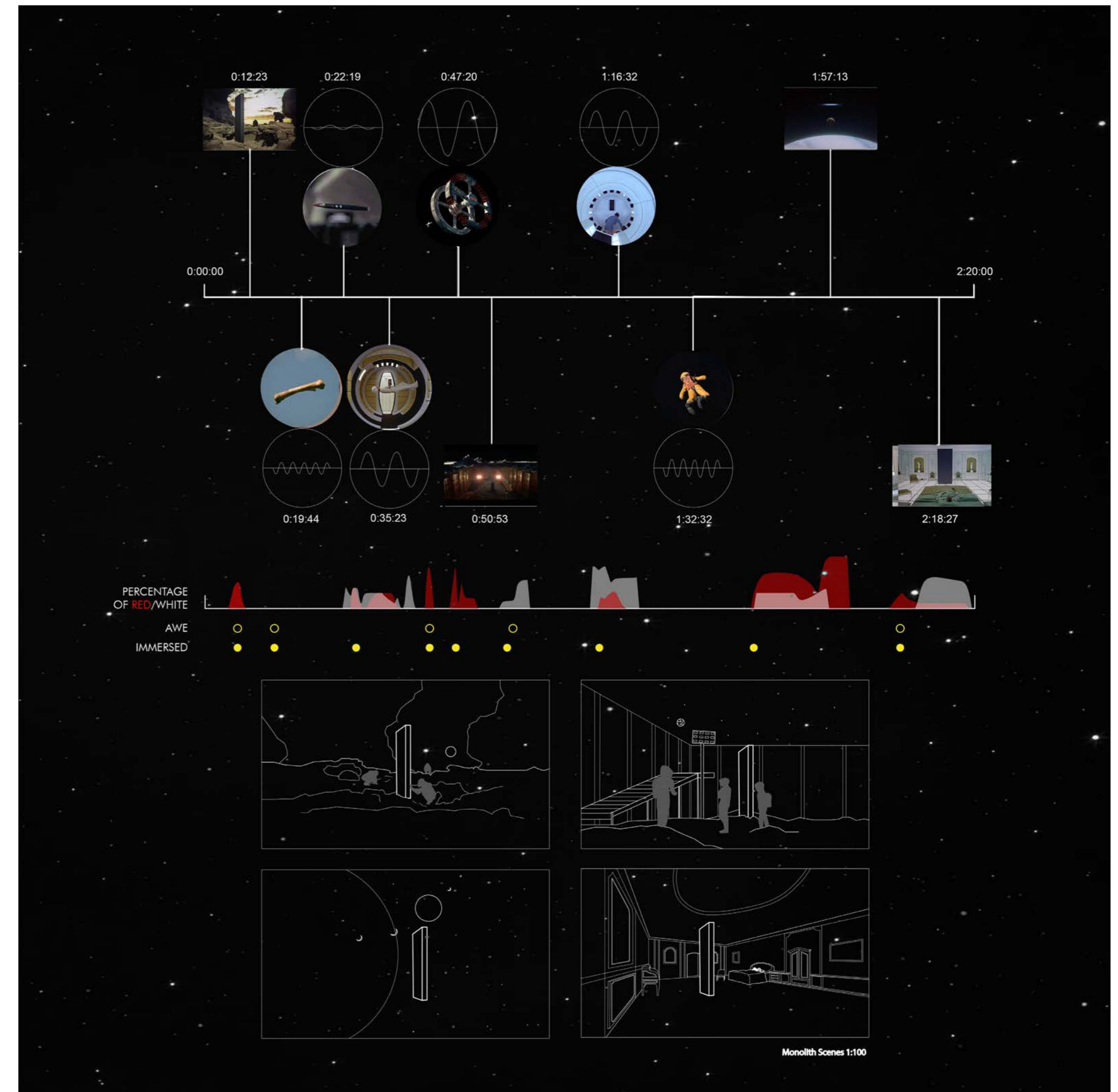
If we try to avoid a prevalent empiricism which still reigns in architectural design education, we should have to admit that architectural synthesis is immersed in a world of ideas. And this statement can and must have validity for every period of architectural creation. If we

Dr Nikolaos-Ion Terzoglou quotes, "Etienne Boullée in his spherical monument to Isaac Newton that delimits an empty, public interior space symbolising the vast cosmos."



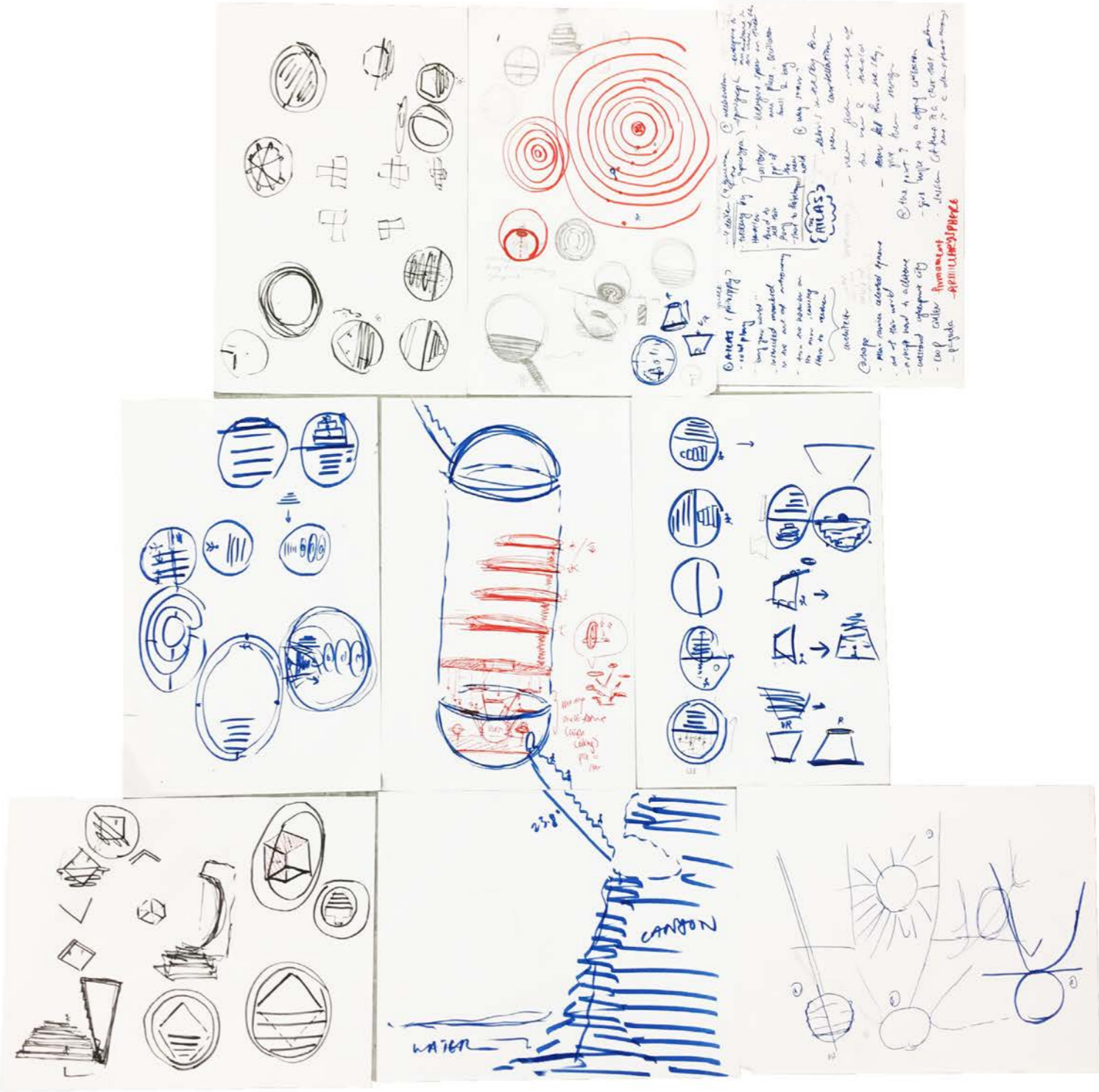
Case Study 06: 2001: A Space Odyssey

Case study on the movie 2001: A Space Odyssey to analyse the use of colours and rotating objects and how it affects the emotions of the audience.



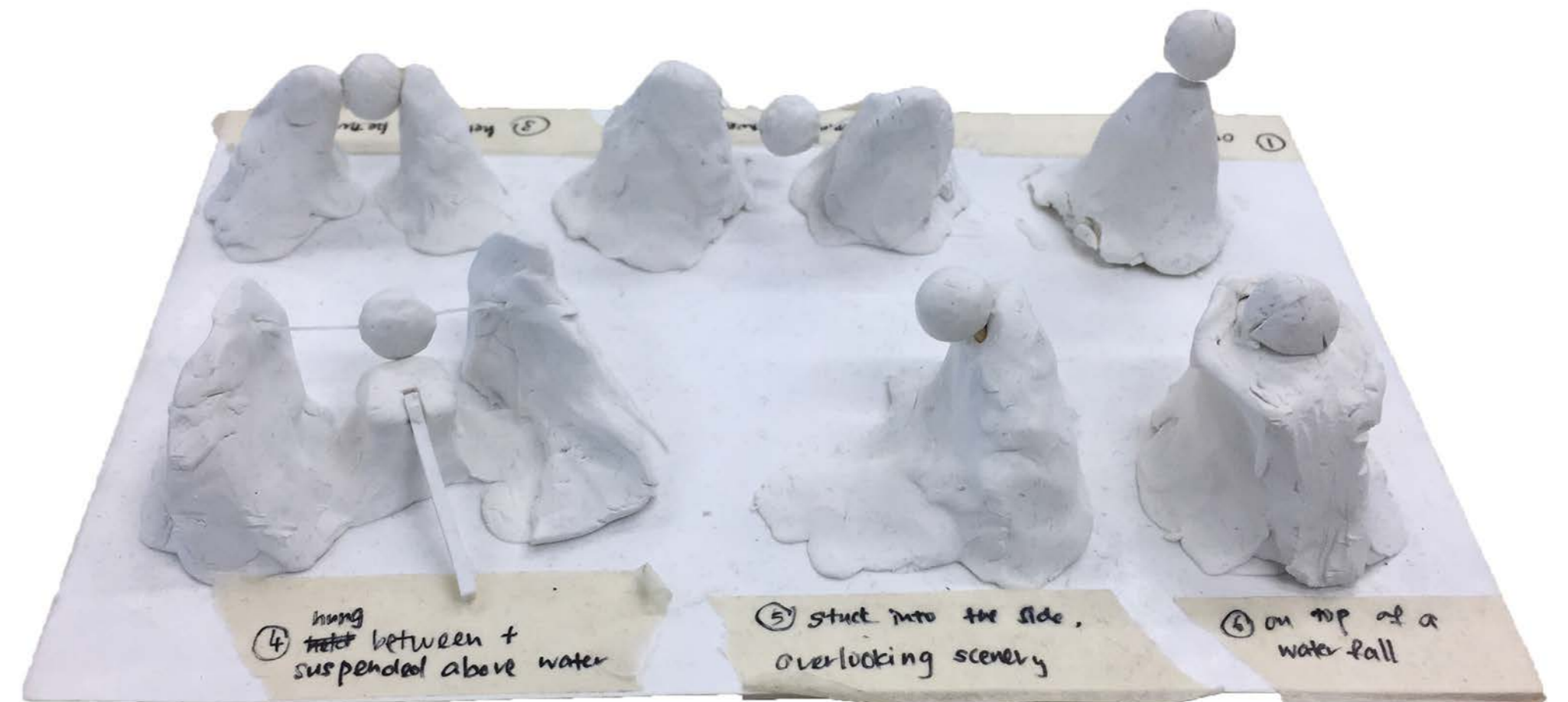
Process Drawings

These sketches show the attempts in dividing the theatre to direct people into the space.



Physical Site Model

Clay was used to mould and find the most suitable placing of the theatre in the canyons.



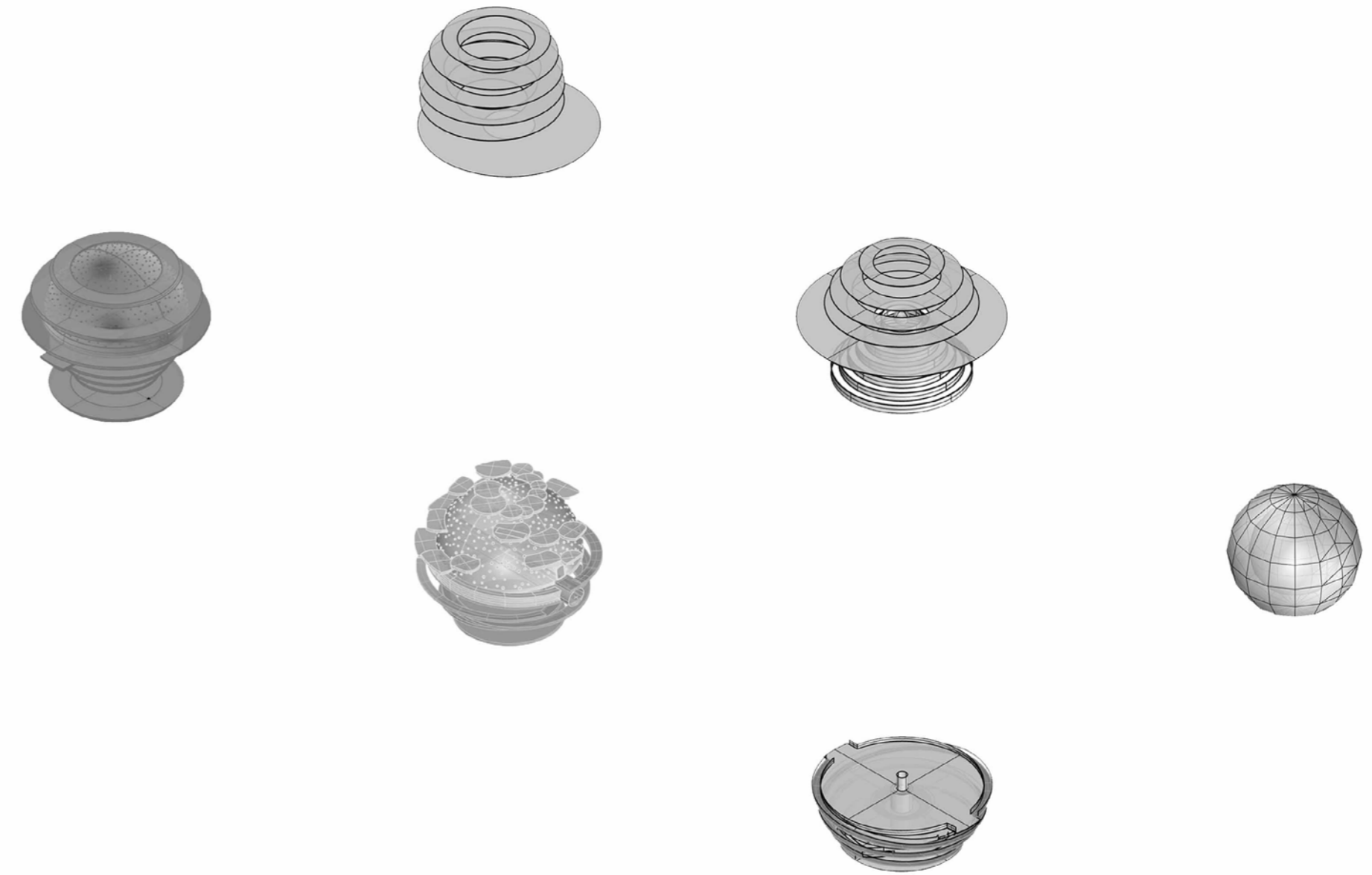
Process Model 01

This model shows the different iterations from the base geometry of the sphere.



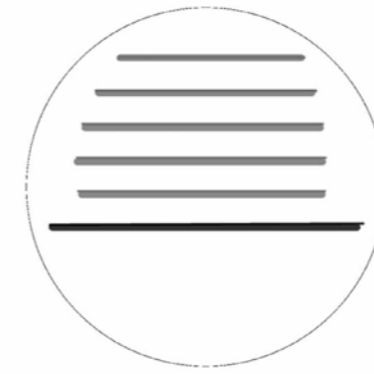
Process Model 02

This model shows the interior of the theatre throughout the weeks to the final model.

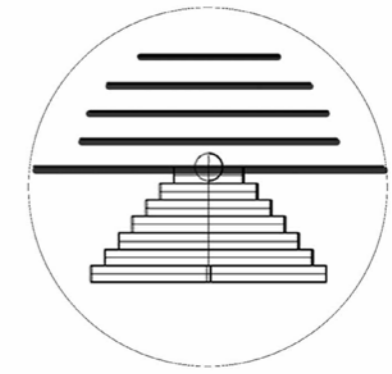


Process Model 03

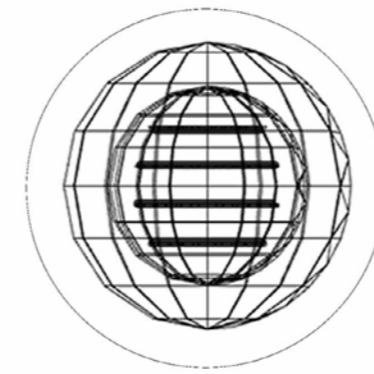
The process model shows the evolution of interior space throughout the weeks.



ITERATION 1



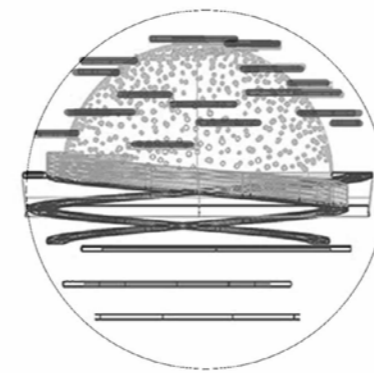
ITERATION 2



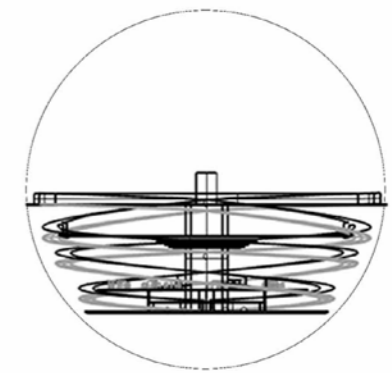
ITERATION 3



ITERATION 4



ITERATION 5



ITERATION 6

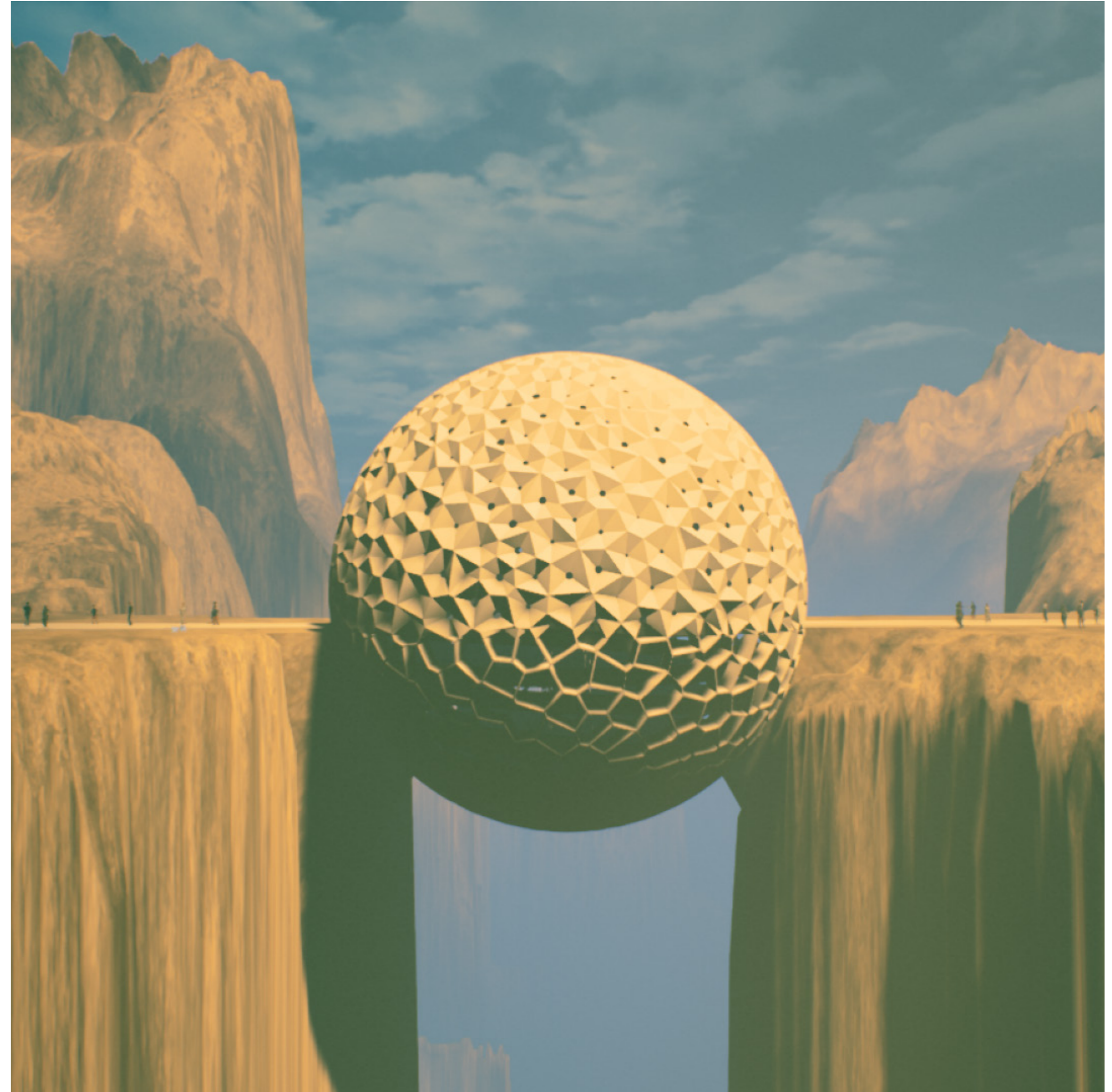
Unreal Engine Render

This render shows the first look of Atlas set against the backdrop of Astra.



VR Model 01

This image presents the Atlas in the real world, bridging a gap in the canyon.



Atlas in Real World Setting

VR Model 02

This image shows the sunlight penetrating into the space that will serve as a base setting in the virtual worlds.



Interior Space of the Real World

VR Model 03

This image shows the parallel dimension formed by the light beams entering the space in the real world.



VR Model 04

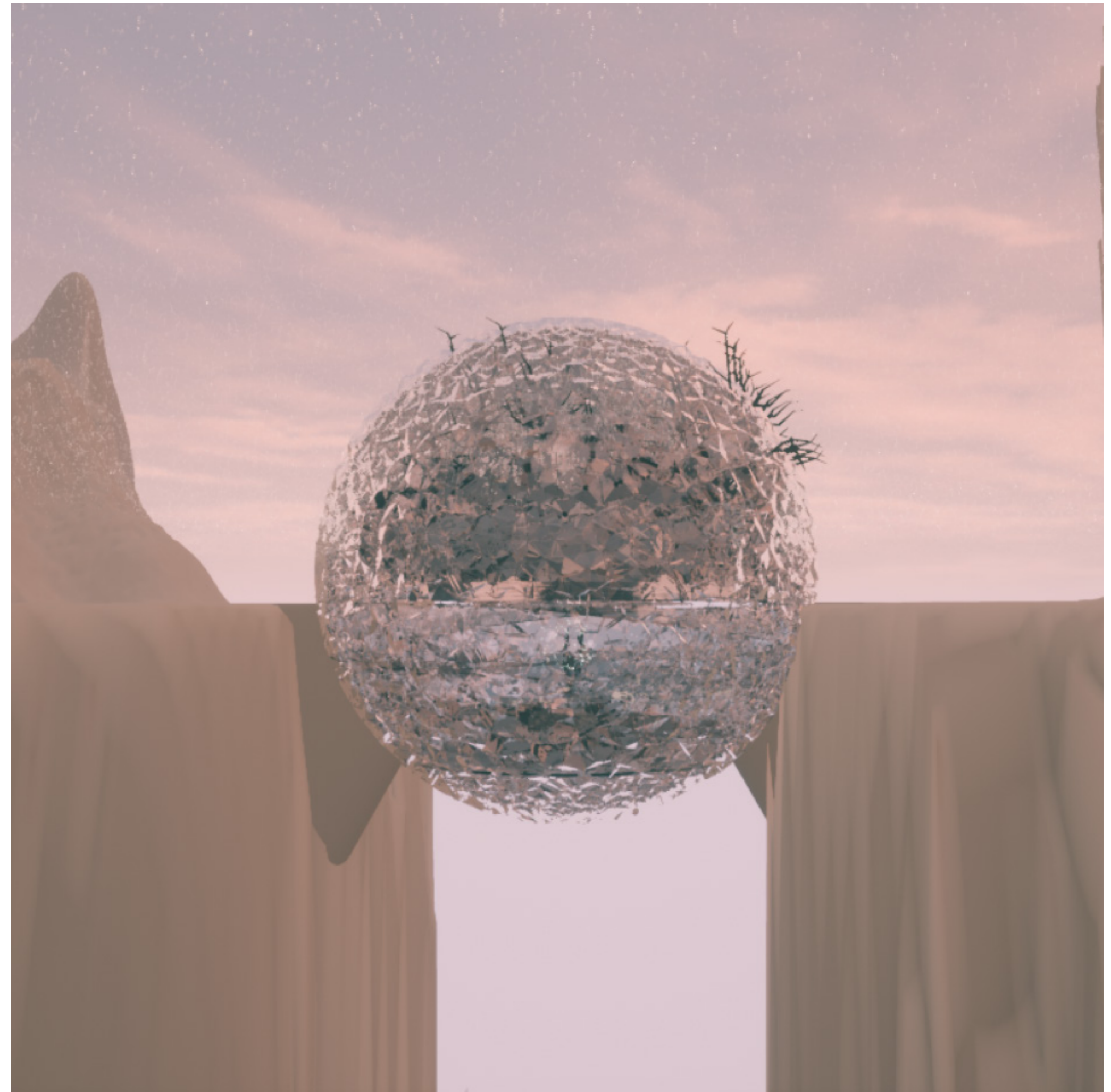
This image shows the Autumn parallel dimension.



Autumn Dimension

VR Model 05

This image shows the Winter parallel dimension.



Winter Dimension

VR Model 06

This image shows the interior space of Atlas in the Night World.



Interior Space of Night World

VR Model 07

This image shows basement 1 of Atlas in the Night World. Here, the user observes as people on the level above roam around the space, forming hypnotic and alluring views.



Basement 1 of Atlas in the Night World

VR Model 08

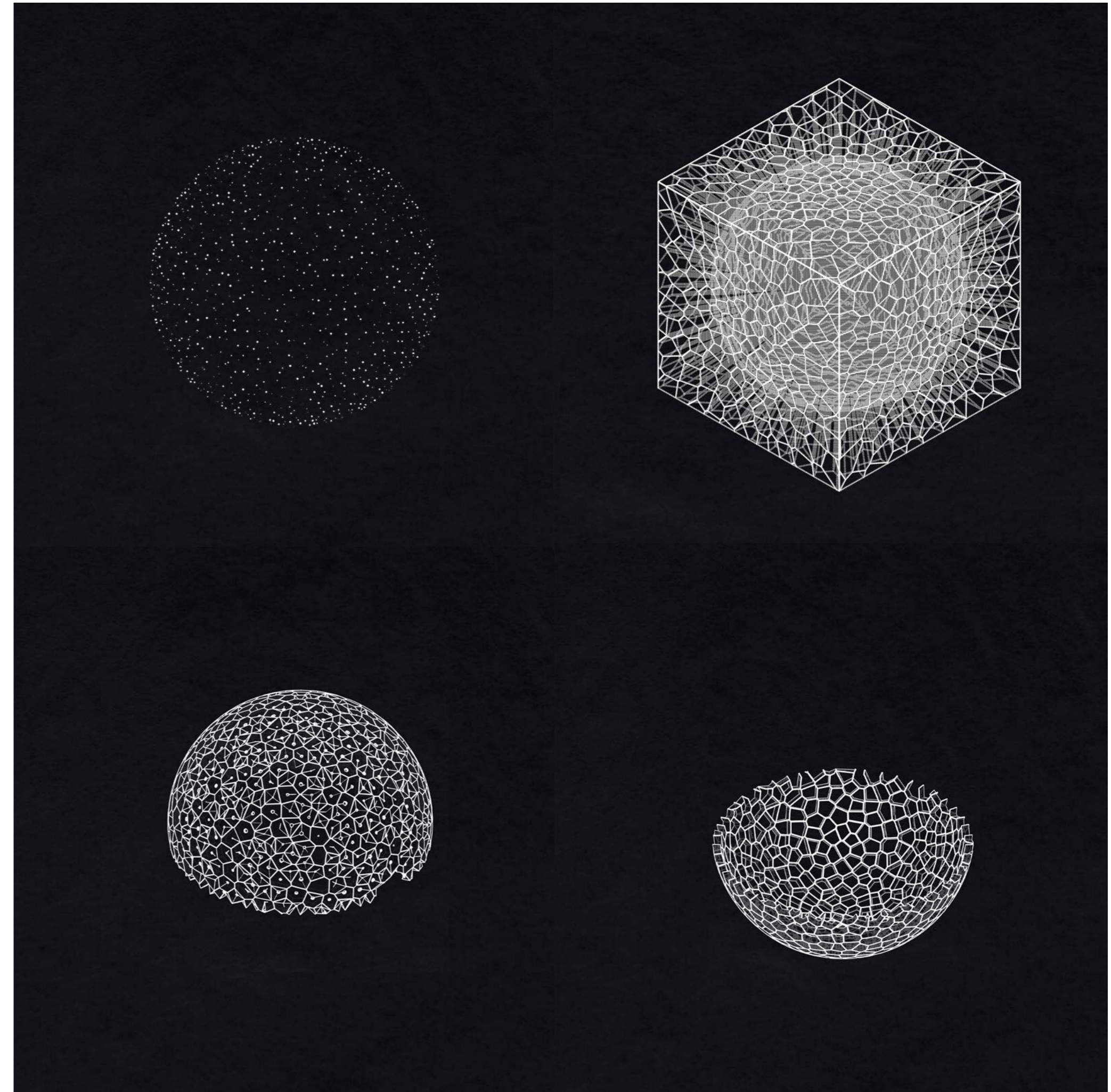
This image shows the view of the ground level from basement 1.



View of Ground Level from Basement 1

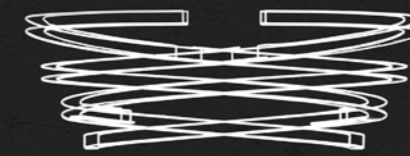
Structural Shell Concept Diagram

The structure of the sphere is made by firstly randomly populating its surface. The random points generated act as the basis to form diverging hexagonal voronoi structures. The top half is made from subtracting the elements of the hemisphere, and differencing them with varying sizes of holes while the bottom hemisphere is made by subtracting the voronoi protrusions with hemispheres of different size.

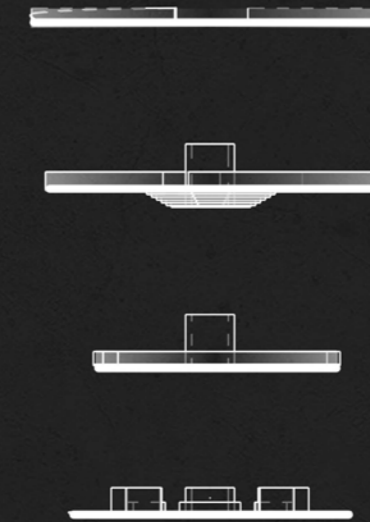


Theatre Components

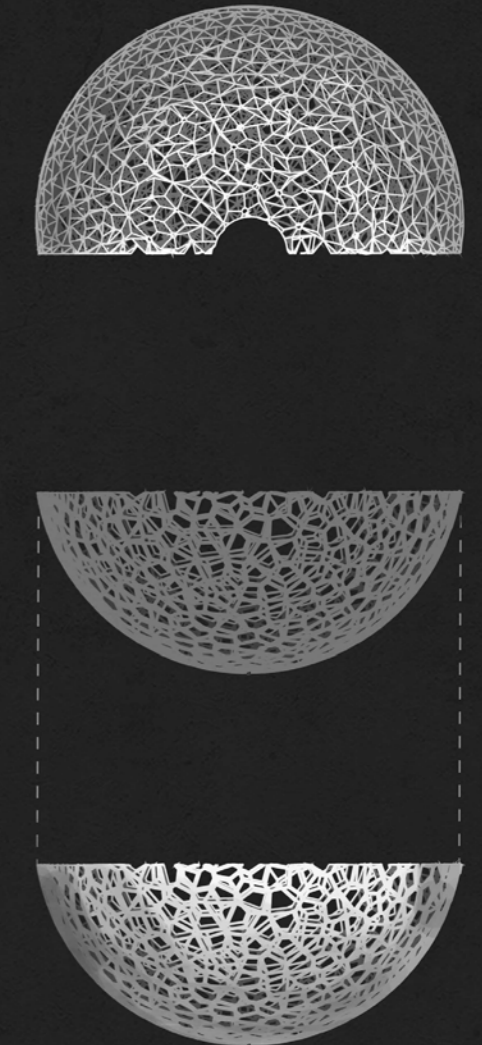
The structure is Divided and articulated with a double spiral slope for circulation. The double spiral enables people leaving the city to experience the space the same as those going to the city.



DOUBLE SPIRAL SLOPE



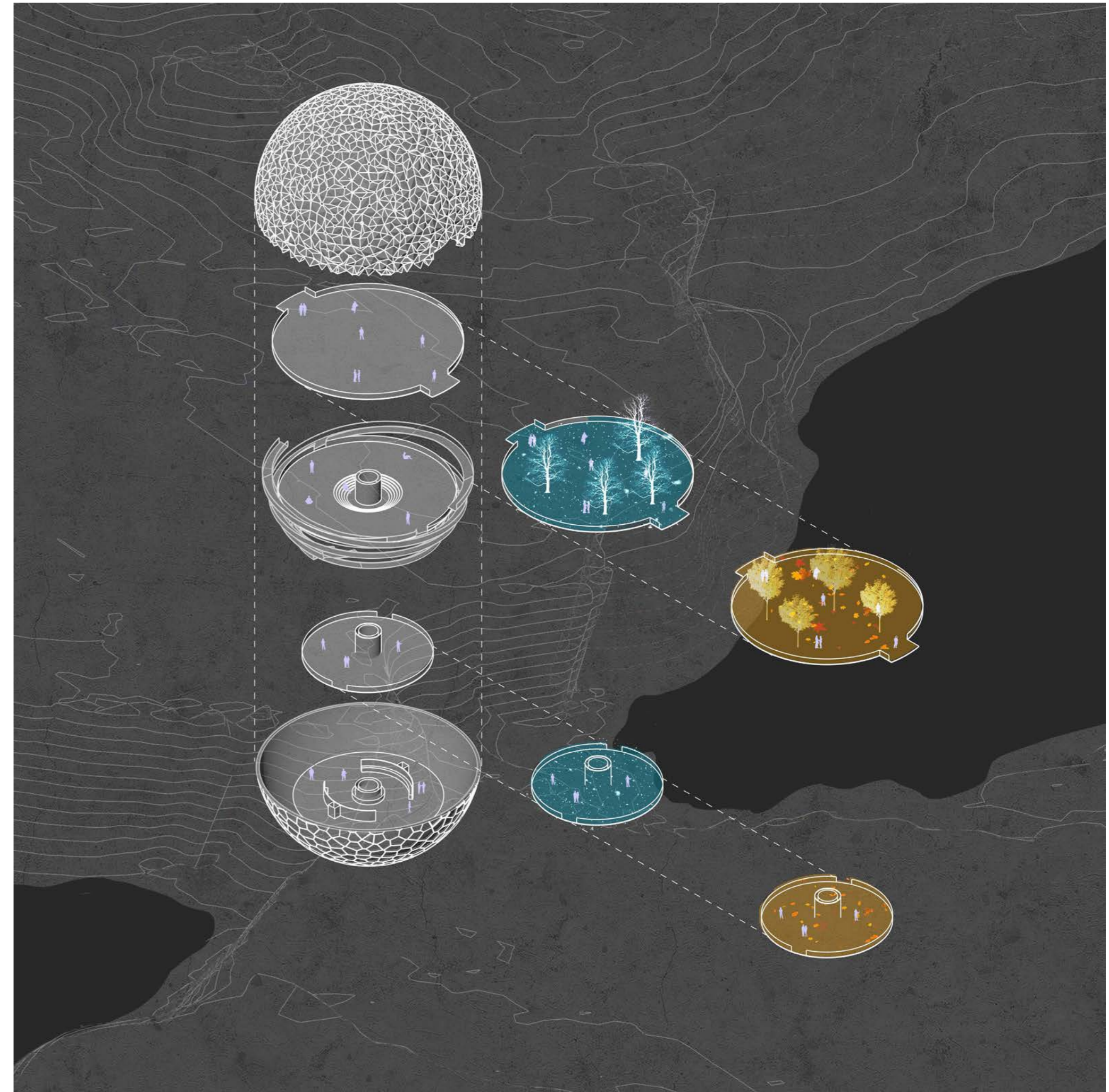
PROGRAM LEVELS



SHELLS

Circulation Diagram

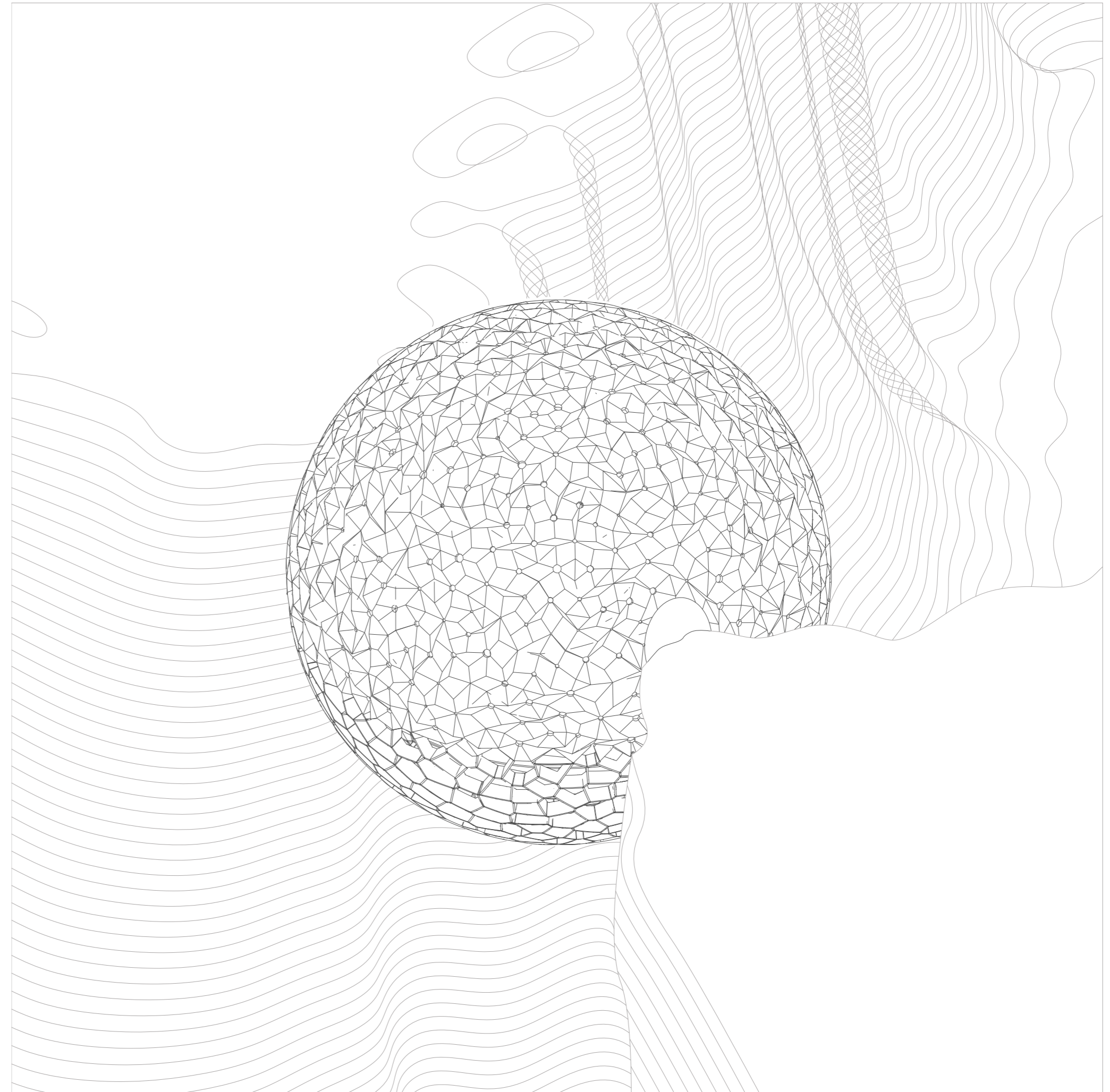
The circulation showcases the different parallel dimensions users are able to experience.



Circulation Diagram

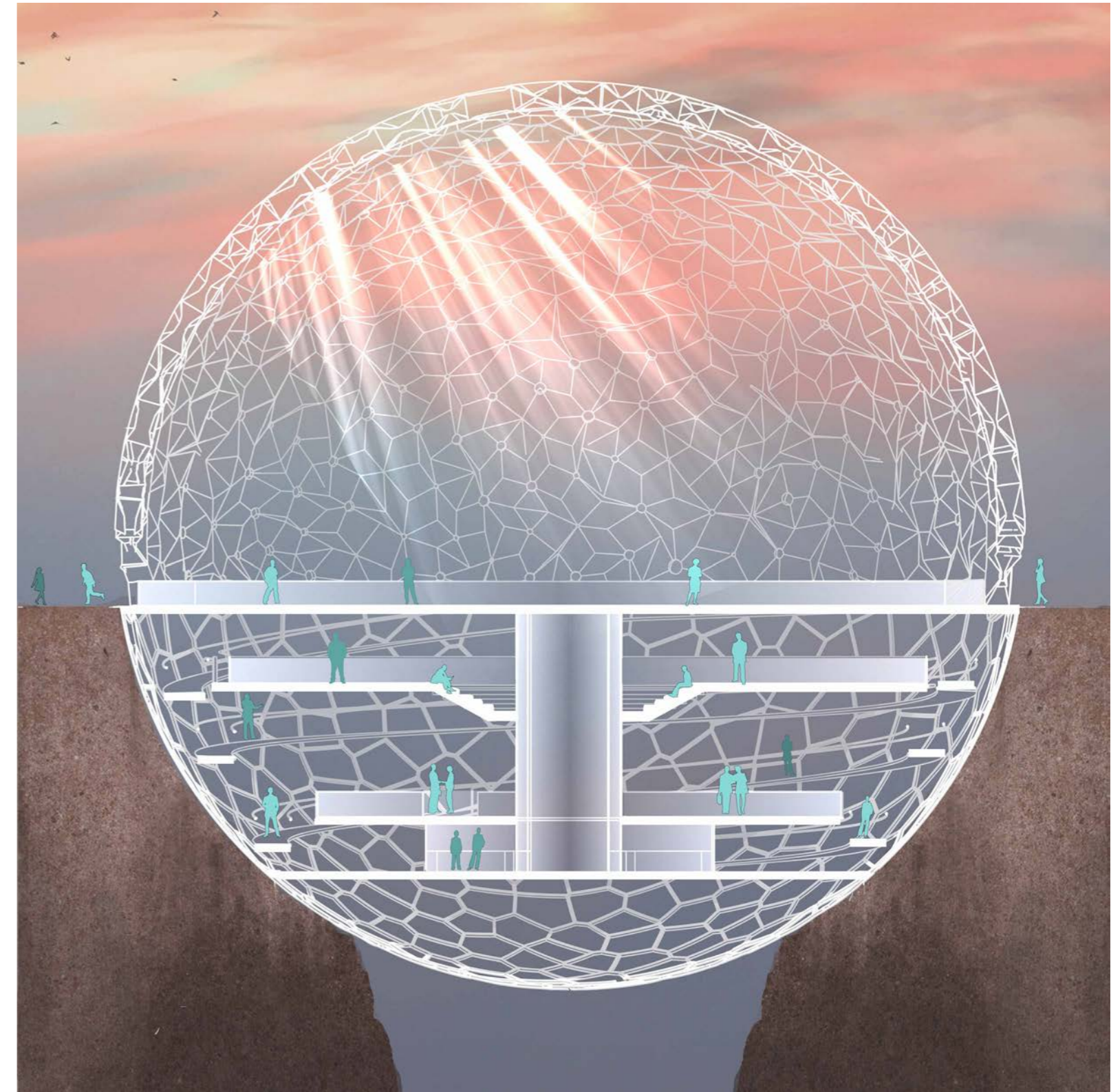
Axonometric

This axonometric showcases the theatre as a bridge between the canyon slit.



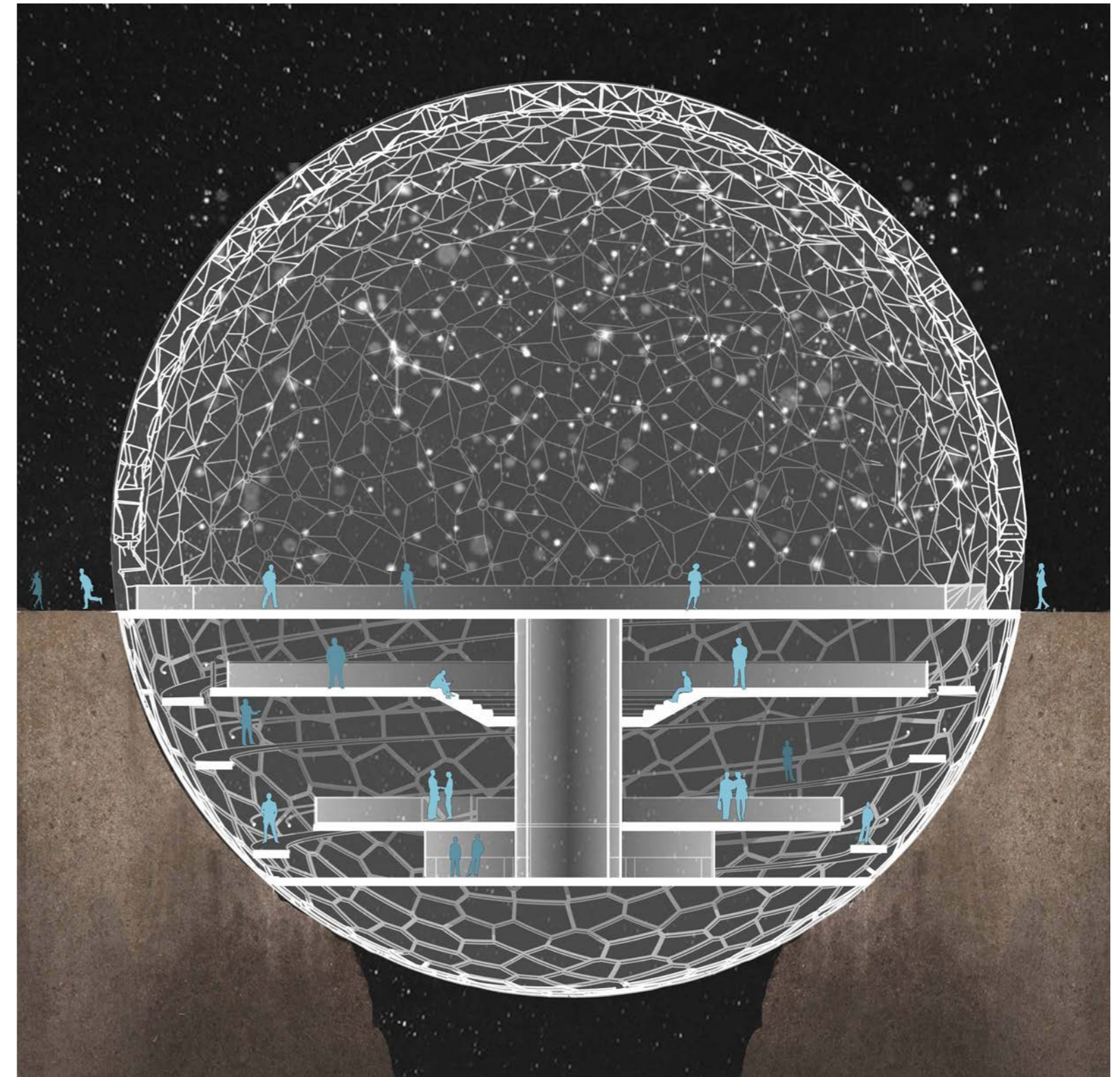
Section 01

This section showcases the theatre in the real world during the day.



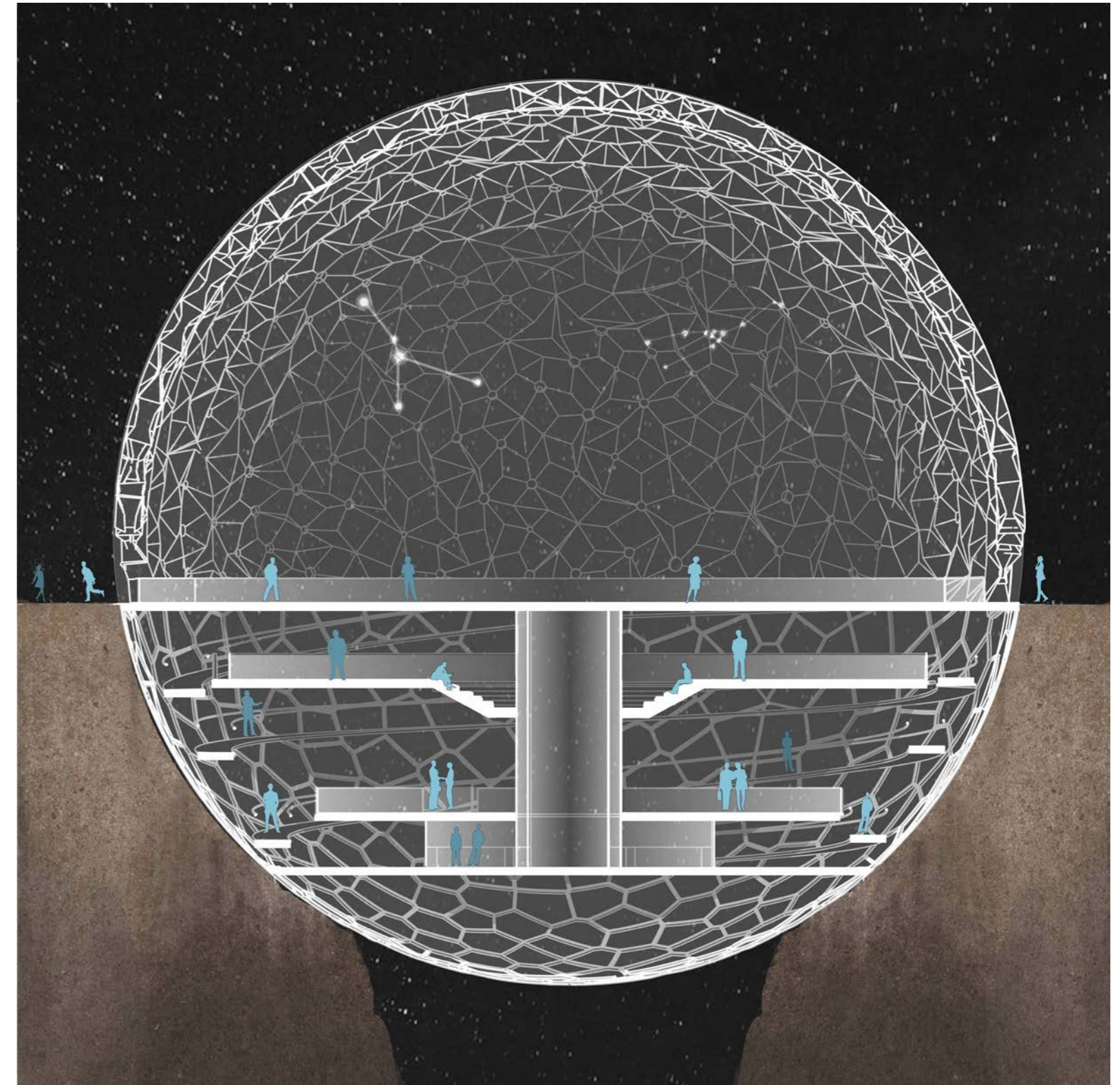
Section 02

This section showcases the virtual night world where the stars are formed by the light beams in the real world.



Section 03

This section showcases the formation of constellations depending on the time of day and position of the user.



Floorplan: Ground Level

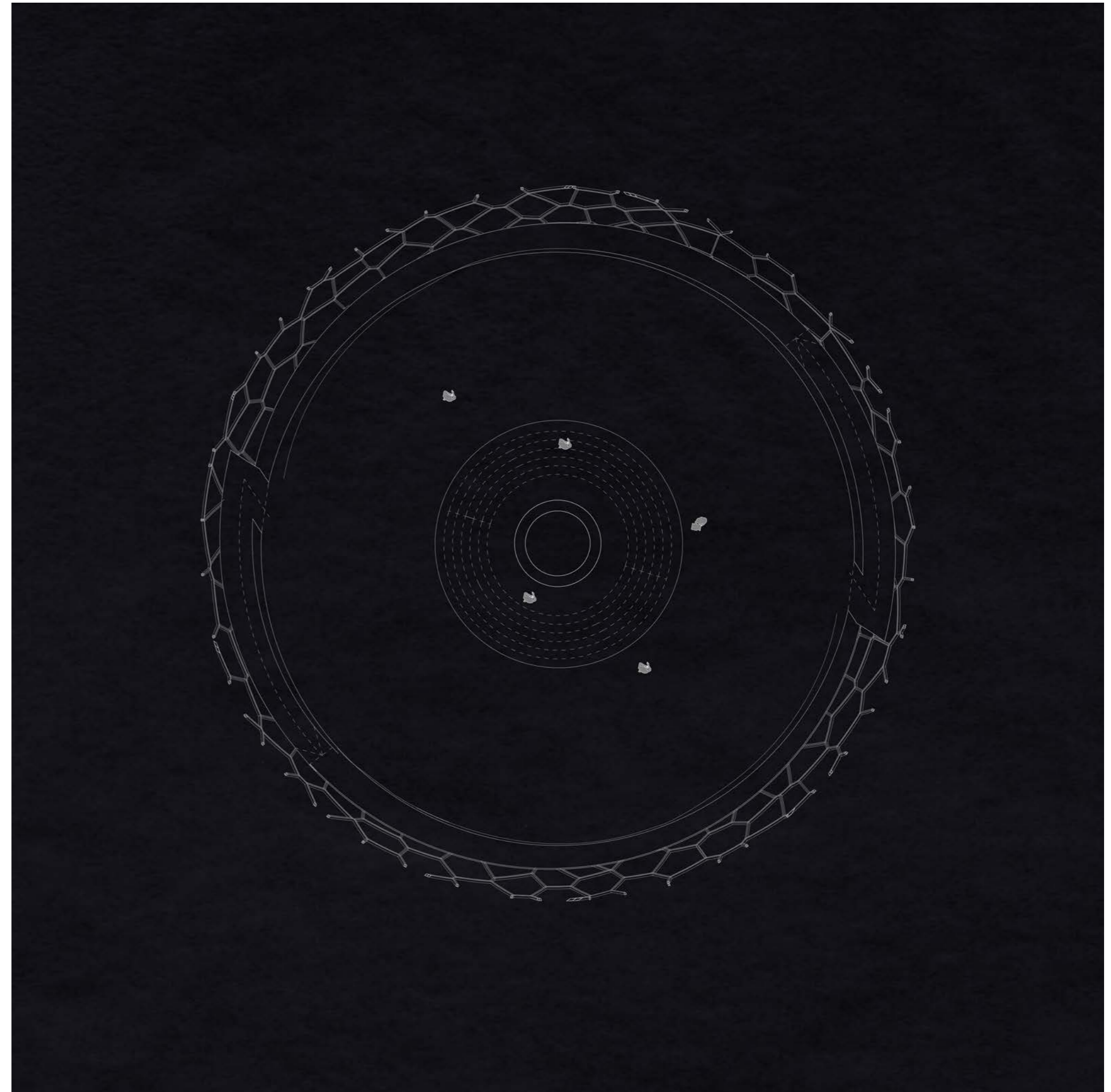
This level is the educational space for the user to watch the night sky and learn about the constellations.



Floorplan 1:200

Floorplan: Basement 1

This level provides a space
for leisure and people
watching.



Floorplan: Basement 2

This level houses the seasonal cafeteria.



Floorplan 1:200

Floorplan: Basement 3

This level houses the wash-rooms and shop.



Matrix of Real vs Virtual Effects

The table showcases the correlation between the real world and the virtual world.

REAL	VIRTUAL
Light beams	Constellations
Ground Level	Night/ Autumn/ Winter World
Cafe	Autumn/ Winter Setting Seasonal Cafe