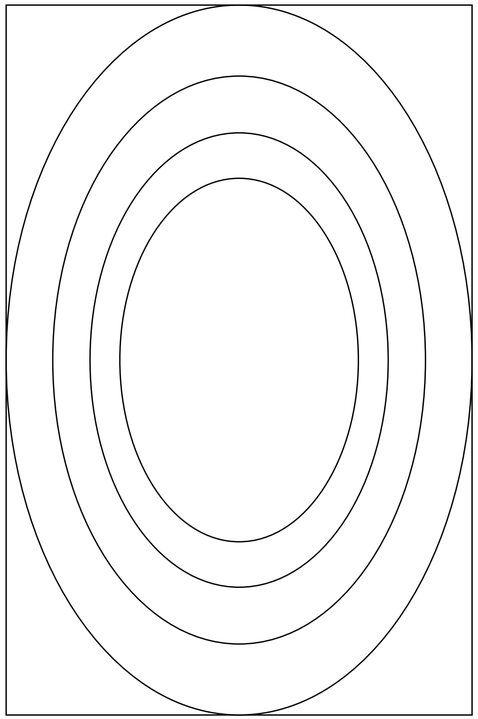

Recreate and explore James Turrell's light work with Blender.
James Turrell
-Aten Regin

Unit1-4 Methods of iterating

L.ZHAOXUAN

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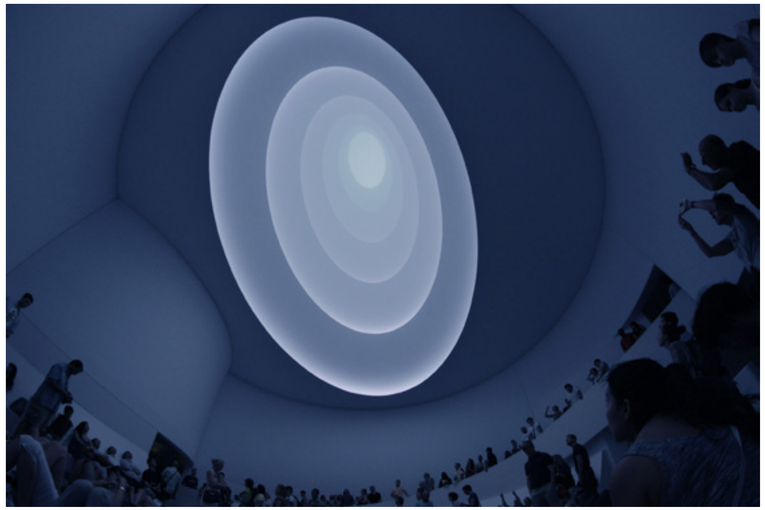
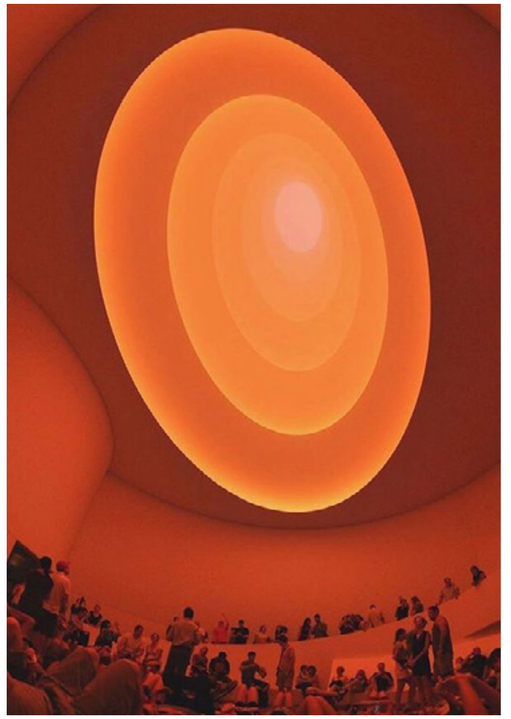
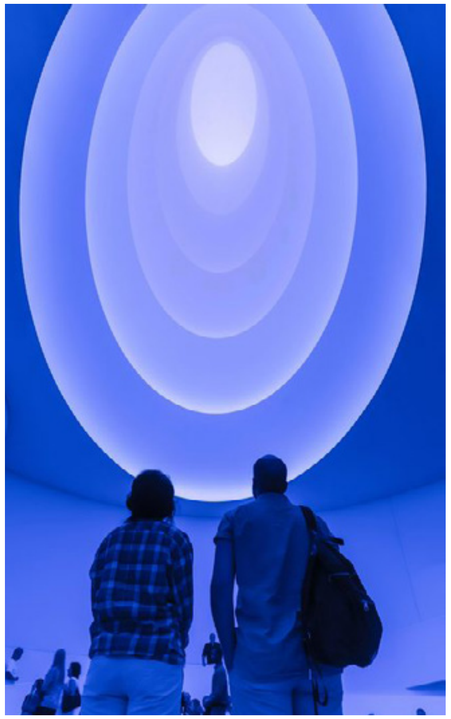
James Turrell - Aten Regin



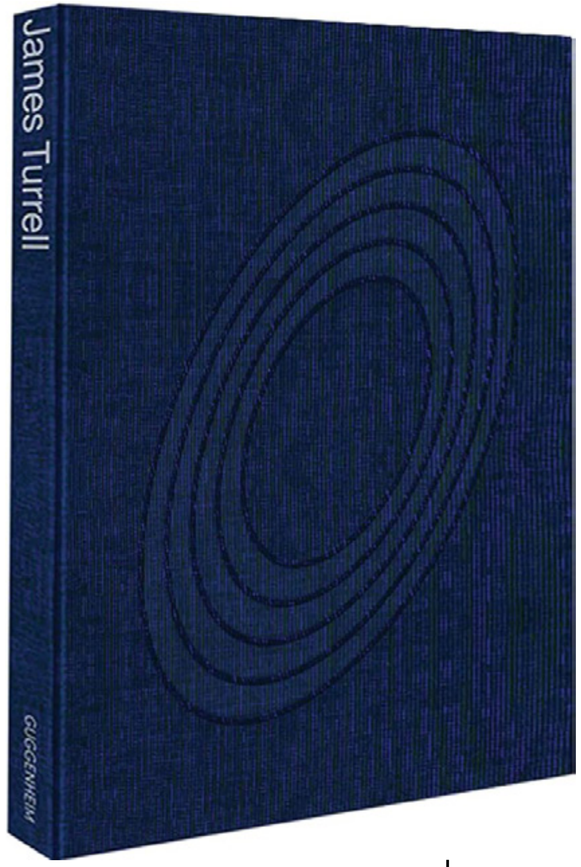




James Turrell is an American artist known for his ‘light and space’ art. His work focuses on the use of light, space and sensory experience to create immersive art environments through changes in light and shadow.

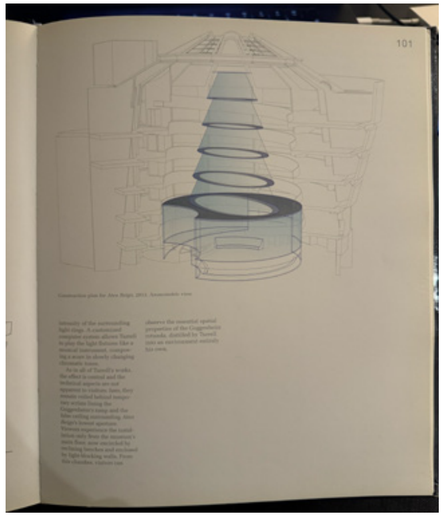
Aten Reign is a famous design by Turrell that was created in 2013 for the Guggenheim Museum in New York. The whole gallery has been changed to feel like a soft, glowing halo, with different colours of light that create a strange and exciting sensory experience.

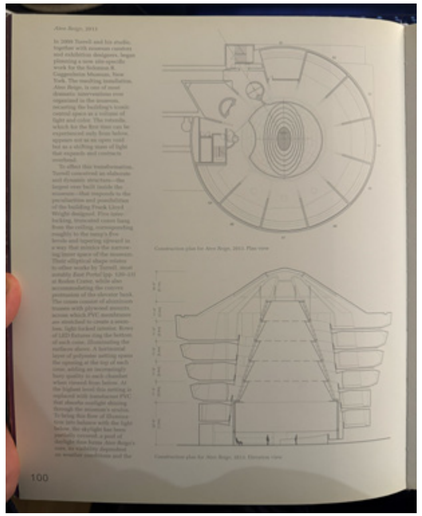
Aten Regin - Book Reference



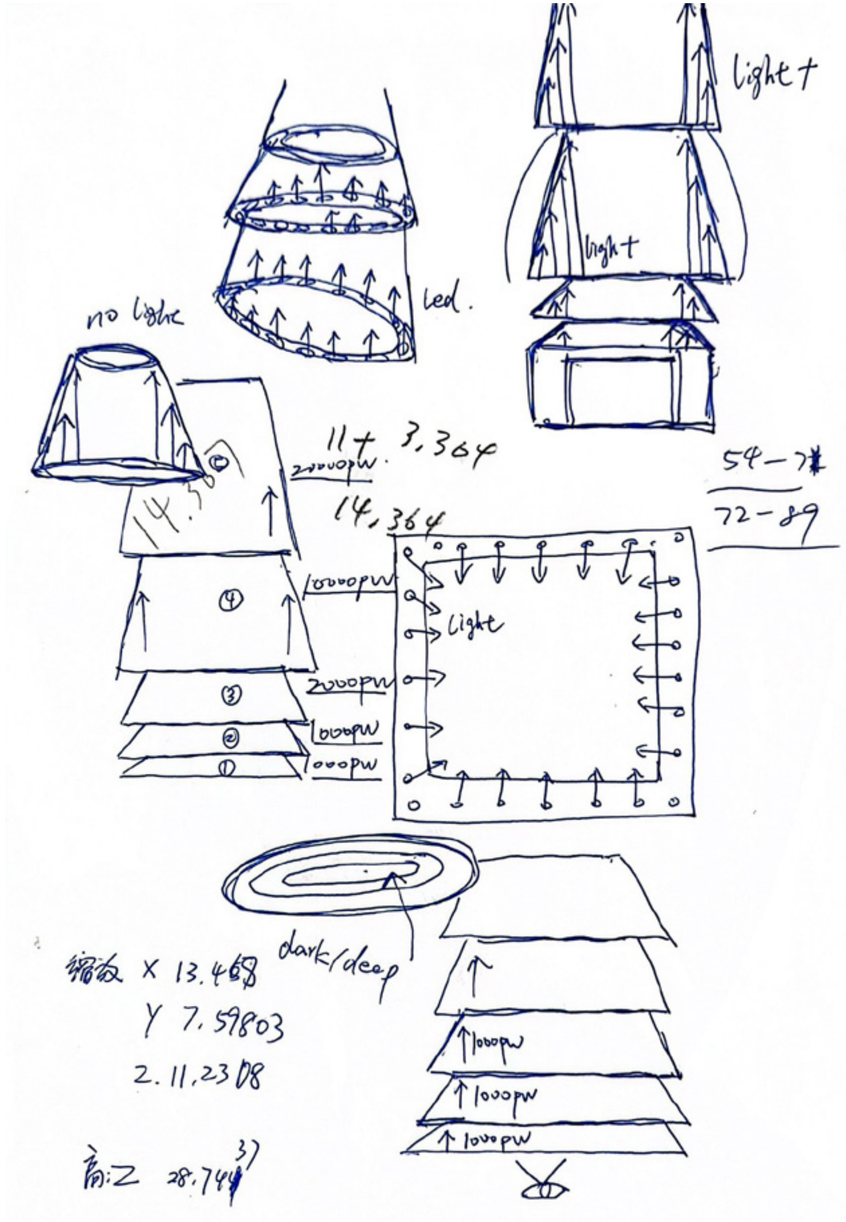
https://www.youtube.com/watch?v=MVoMJHSNyl0&t=247s

Aten Reign (2013), the installation by James Turrell that fills the Guggenheim in New York. Using this video on yotube as a reference, it shows the assembly process of Aten Regin's work, using many LED lights in its structure. Then borrow this book from the library which shows the structure of the piece in more detail.

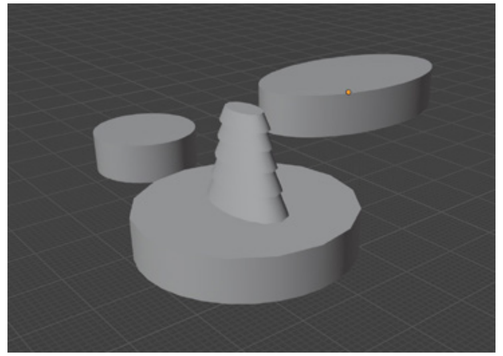




About Blender

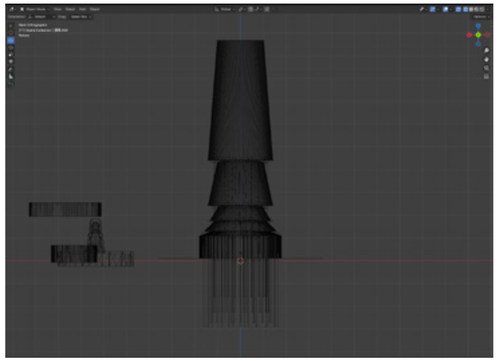


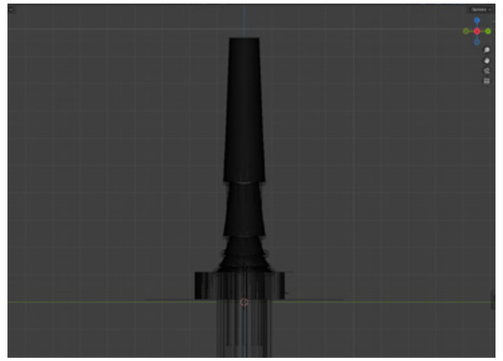
Try modelling in some shapes

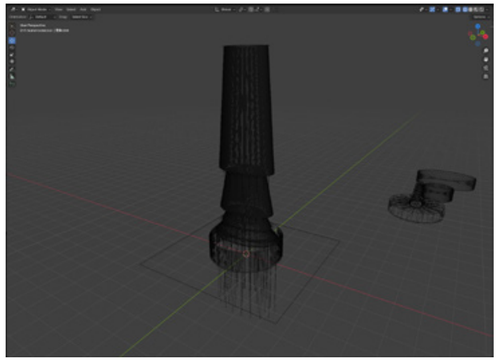


Learning to cut, dividing three-dimensional shapes

Try modelling to the design



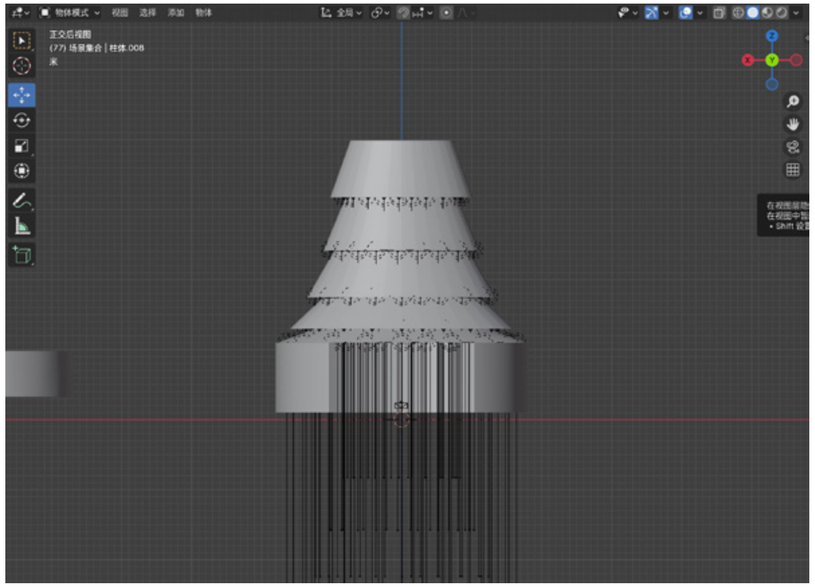


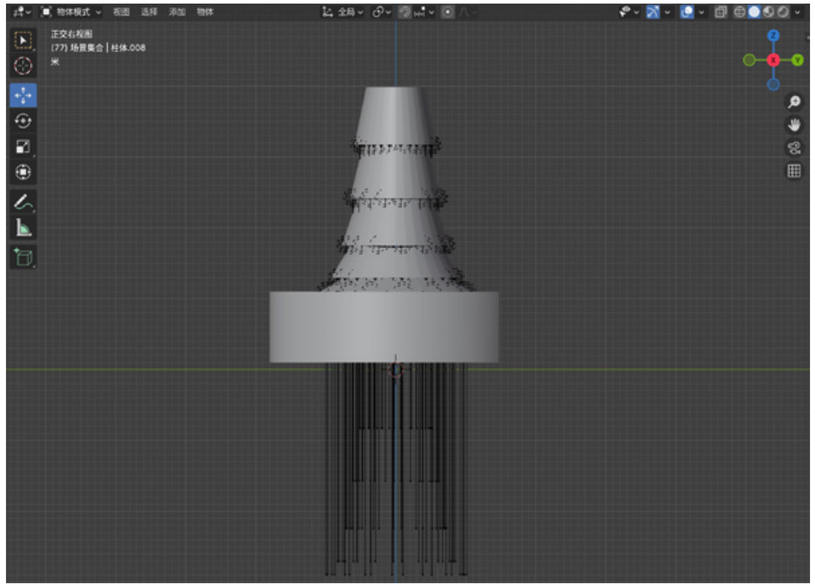


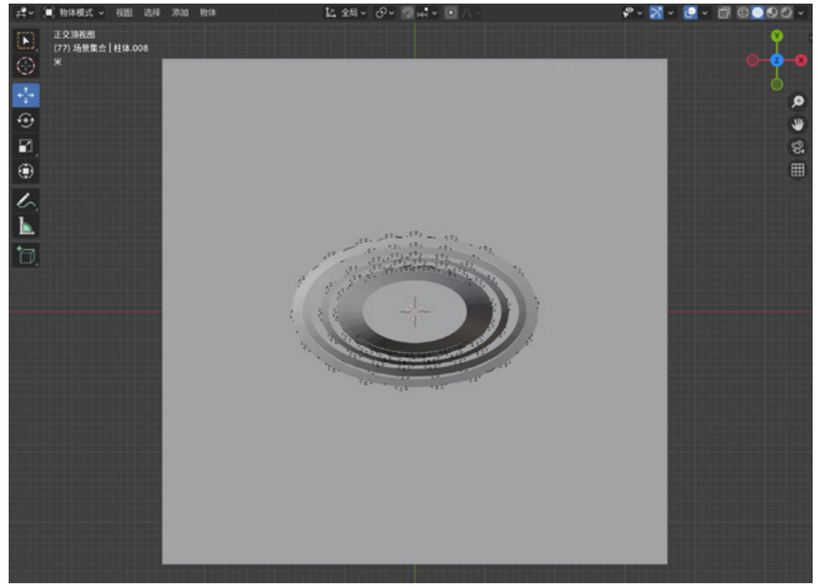
I started to try to follow the design drawings, to build the space, to think about how best to present the feeling of light, and in order to meet the final visual effect, I started to build the model a little bit more complex and think about where to put the lights.

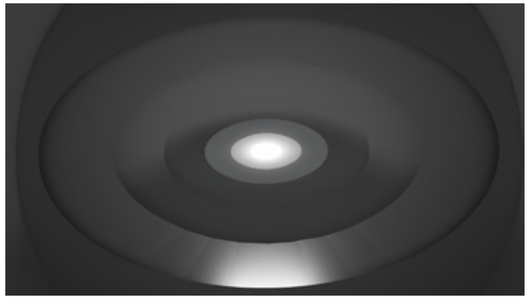
I kept trying to work out the height of each layer, how to make it look right, and kept improving the model. I made sure it was airtight, that light could be bent inside and that it wouldn't leak.

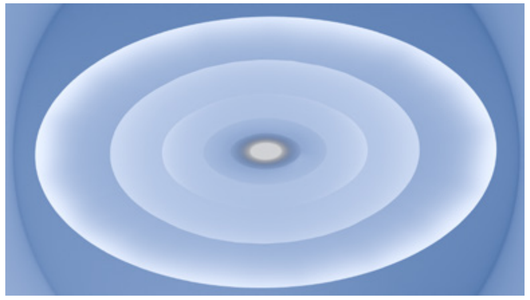
Modelling

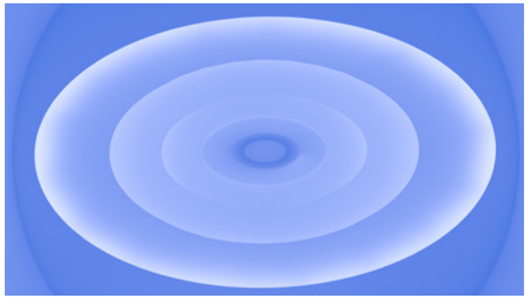








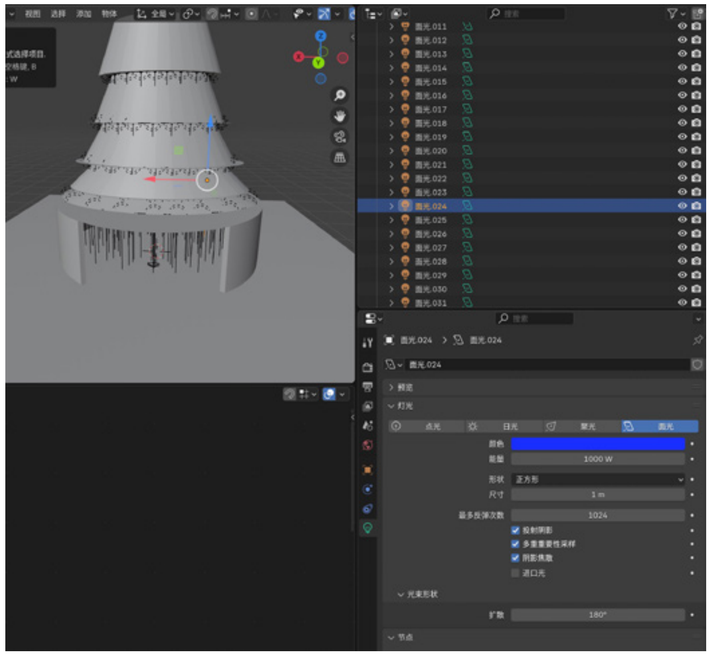


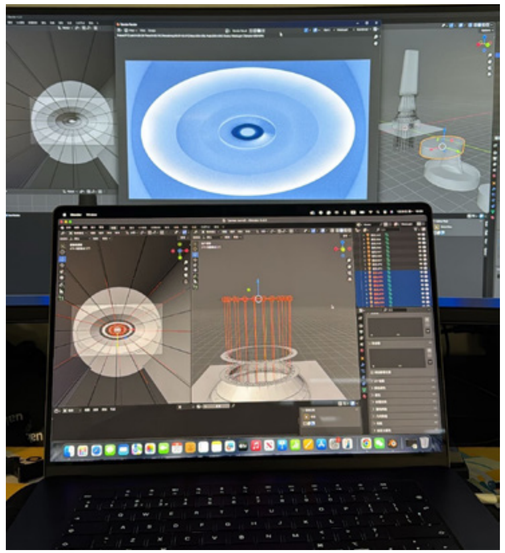


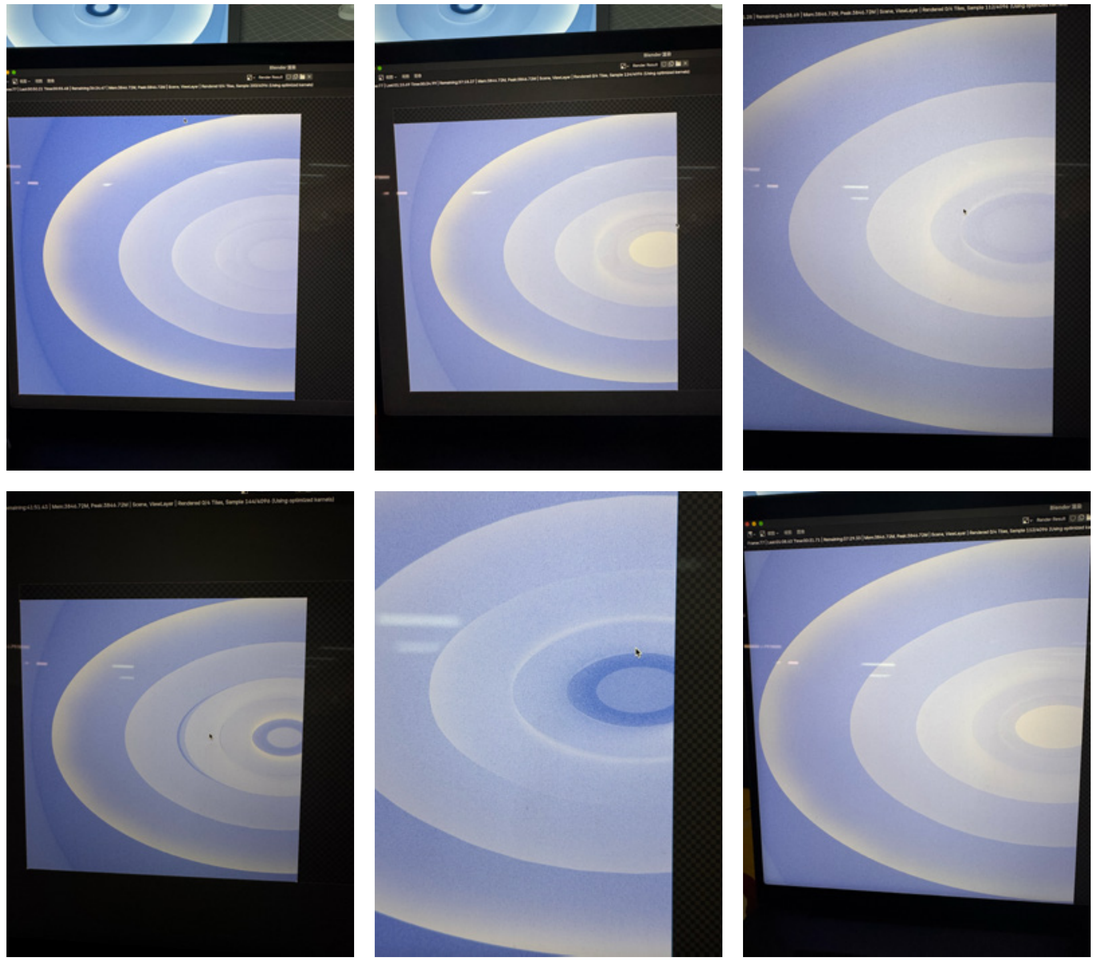
After spending some time figuring out what the model should look like, I made sure that it was well designed.

I then tried adding lighting effects and rendering it a couple of times, but I found that there were still some issues. The light wasn't refracted well, and the intensity of the light wasn’t even, which didn't give the feeling of a good transition. This meant that I needed to adjust more of the parameters.

Lighting Effects Iteration



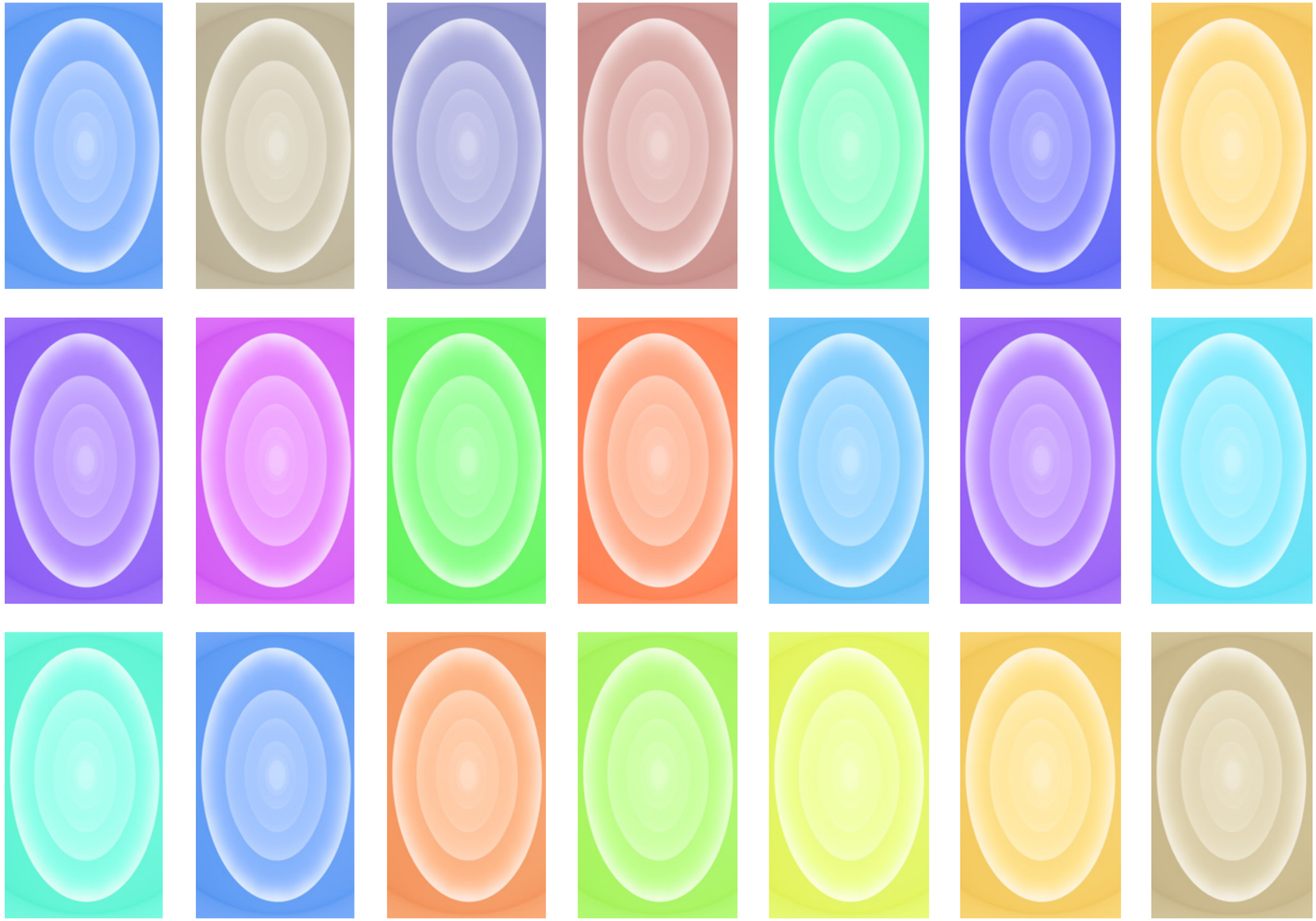




I started constantly adjusting the parameters of the lighting and started a lot of rendering attempts, then went back to tweaking and modifying the model, and so on and so forth, until I reached the ideal state.

Adjustment parameters

Color Iteration



I tried changing the color of the lighting on it and then did some different color renders to make iterative attempts at color.

The interesting point is that when you look at the environment from a certain angle, it doesn't look like a three-dimensional model, but has some flat visual effects.

This is one of the characteristics of James Turrell's work, but it also inspires me, do you have to use PS, AI, and other flat software to make flat visual works? Maybe can try to start from the direction of 3D software, 3D to 2D, maybe there will be a different new things.

Firstly to answer the question.

When I finished the reproduction of this work, what surprised me was that I didn't expect Blender to reproduce the scene analog. Light-related works have to be structurally rigorous, light is a very soft and easily changeable medium and usually requires a clear framework to show the effects of light.

In the case of not having enough venues, I think Blender is the best choice to restore James Turrell's work, it provides a large number of parameters to assist the effect of light, I think if there is a chance to show the conceptual design drawings in a blender, it is a good choice.

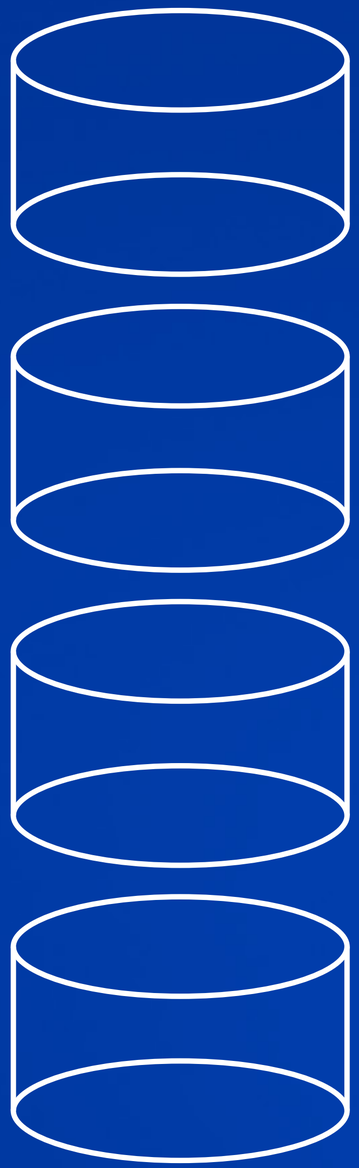
The technical challenges that come with it are almost all, I started to learn from cutting the model to adding light effects, and finally modifying the model and parameters, it's a lot of work but a lot of rewarding.

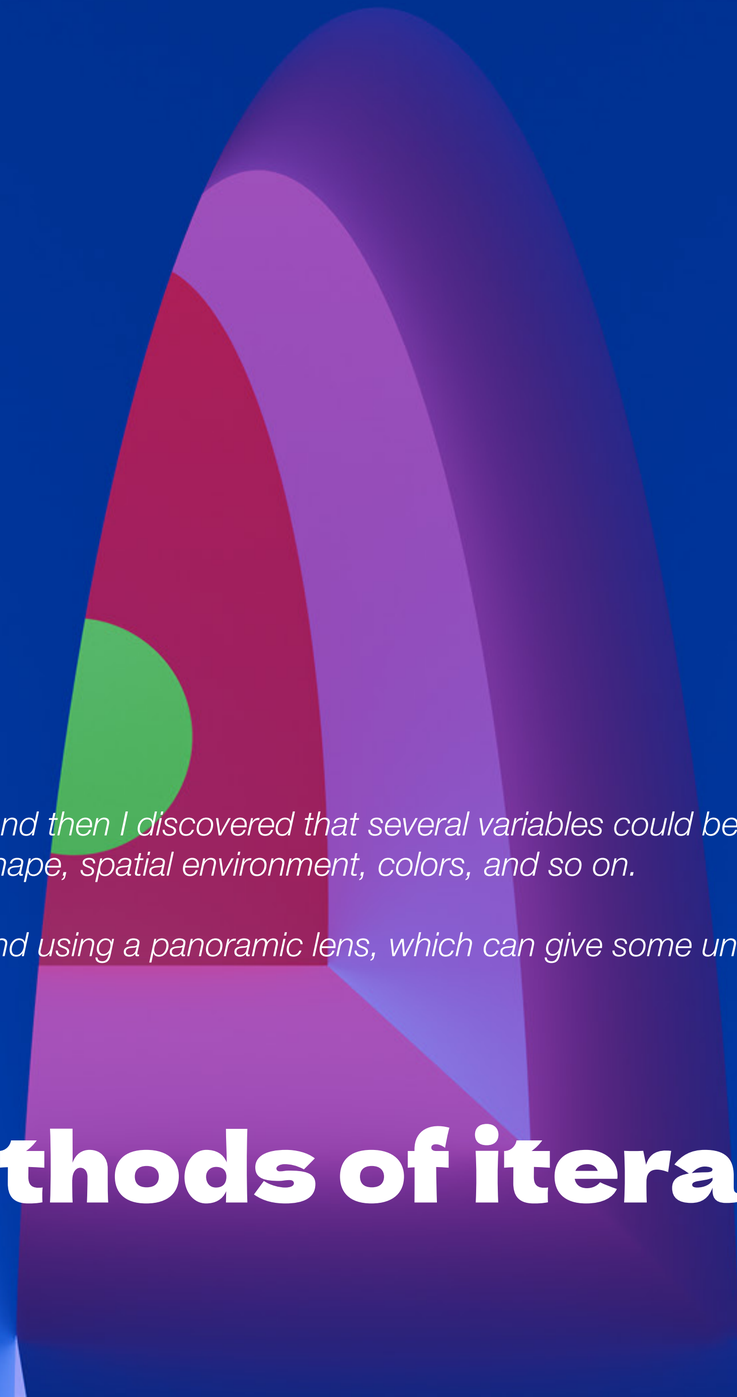
I think a blender is more suited for working with 3D models, but after this experiment, it can also come in handy to aid conceptual design.

Its relation to graphic design is my biggest takeaway this time, this Aten Regin by James Turrell, can be completely restored in AI or PS, and it is the fastest. But it would have lacked a sense of immersion, a spatial narrative effect, and would have thinned the piece out. The final visual presentation looks like a flat work, which inspired me about the possibility of using 3D software to try to make flat works, as well as to broaden the connection between the two and enrich the boundaries of graphic design.

Week-2

28/JAN/2025





Last week, I copied James Turrell's work, and then I discovered that several variables could be changed regarding the production of such a piece: lighting, lens shape, spatial environment, colors, and so on.

So I tried changing the shape of the lens and using a panoramic lens, which can give some unexpected results.

Unit1-4 Methods of iterating

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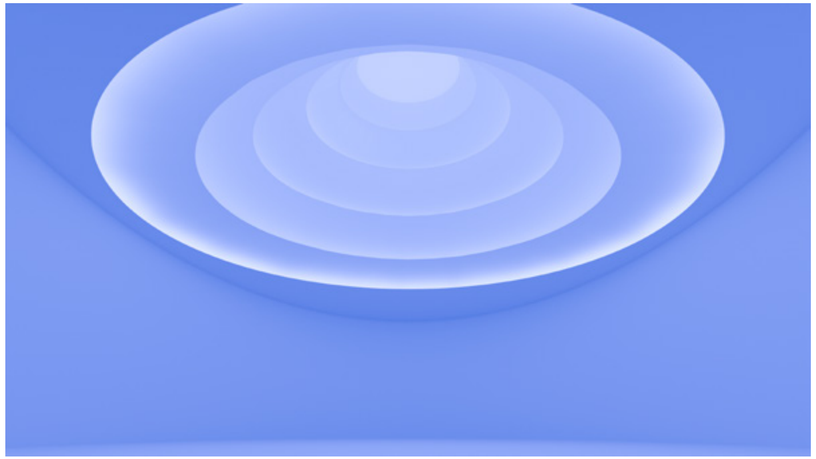
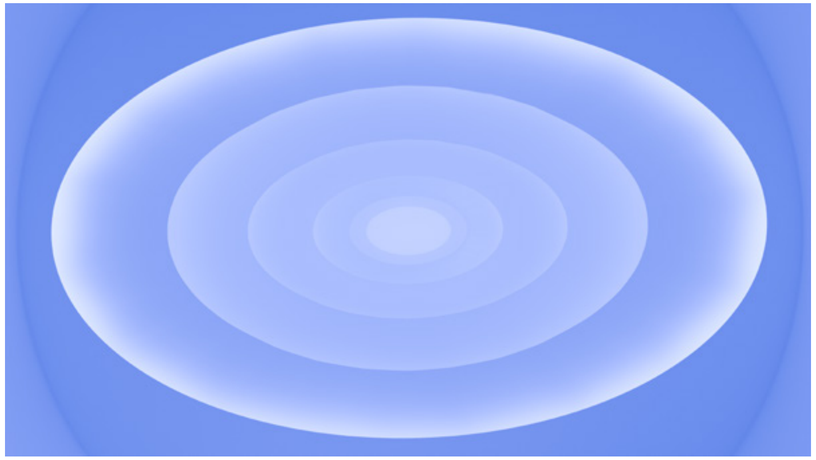
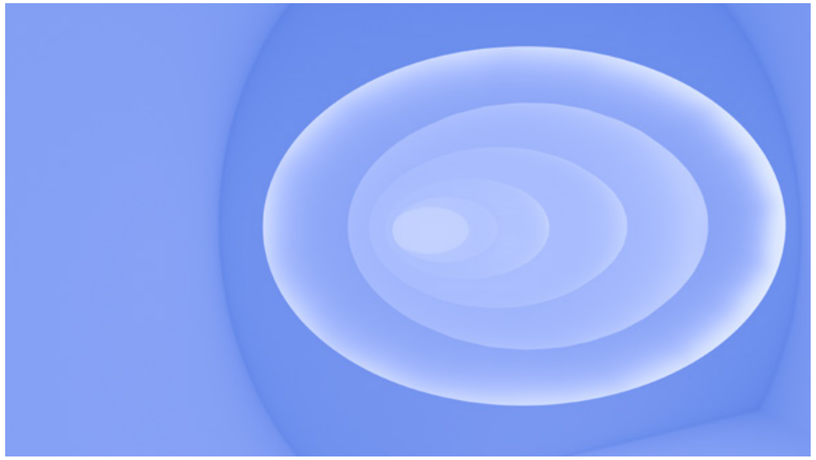
From last week



Upward view



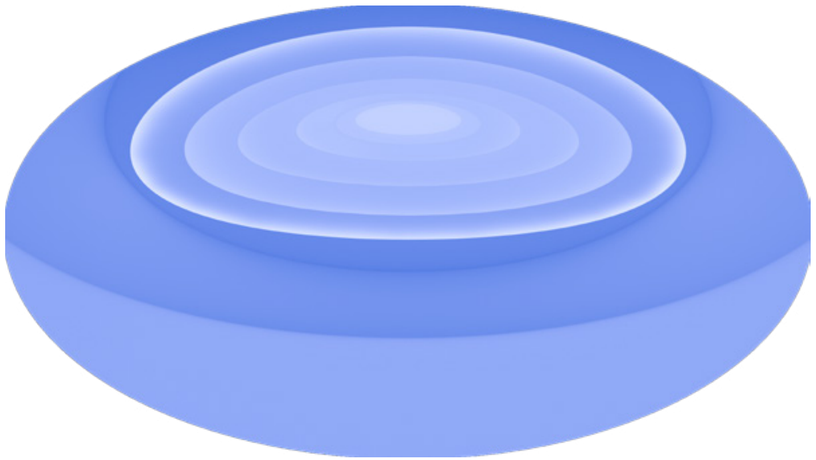
Direct view



Side view

Last week, I copied James Turrell's work, and then I discovered that several variables could be changed regarding the production of such a piece: lighting, lens shape, spatial environment, colors, and so on.

So I tried changing the shape of the lens and using a panoramic lens, which can give some unexpected results.



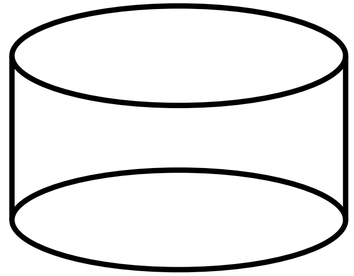
Artists Reference - Richard Serra

Richard Serra's work (2024)

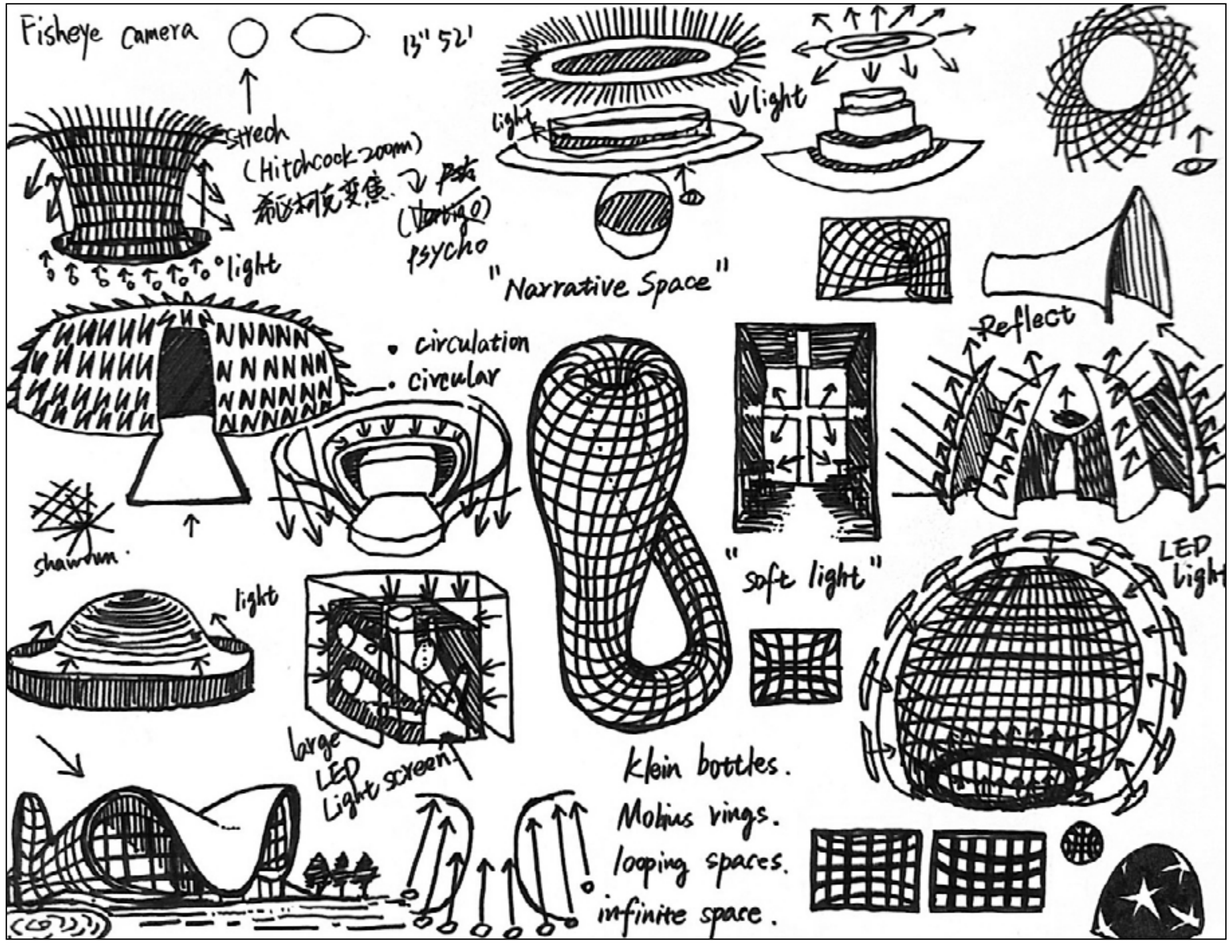
Richard Serra's work2 (2024)

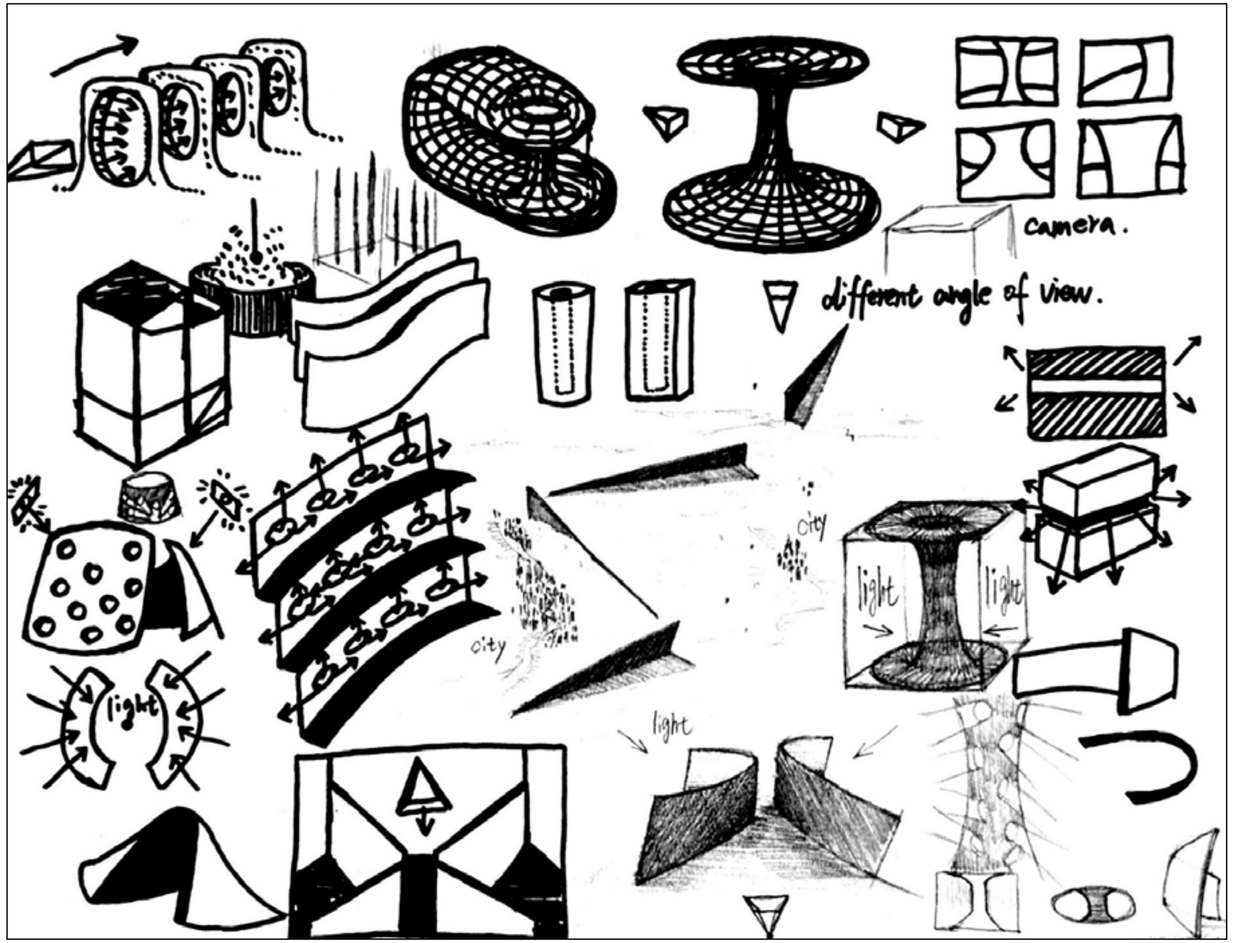
To make the rendered image more flat, rather than having a strong sense of space or three-dimensionality, I chose to make the overall structure have as few right angles as possible, and use curved lines, as it allows for a better and smoother transition throughout the space.

So I refer to this artist Richard Serra's sculptures to a certain extent and try to make more use of circles and arcs to design the space.



Some Sketches

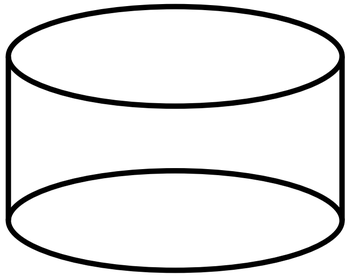




First of all, I drew some sketches, some random ideas about how to set up the space, and how to use the light, and then thought about some of the shapes, some of the effects of the light reflecting off of it, and how it would end up looking in the shot.

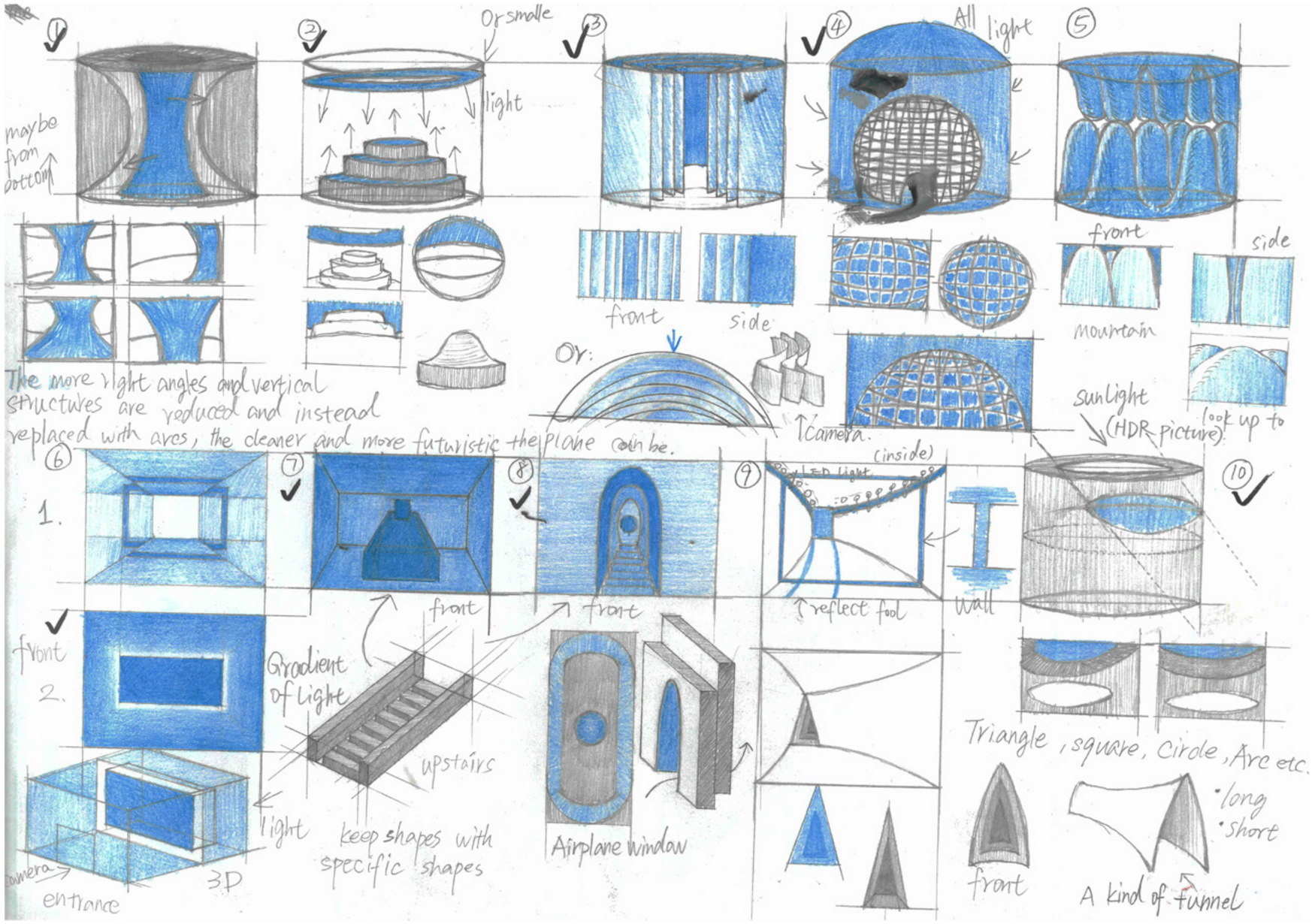
Final Ideas

1 2 3 4 5 6 7 8 9 10

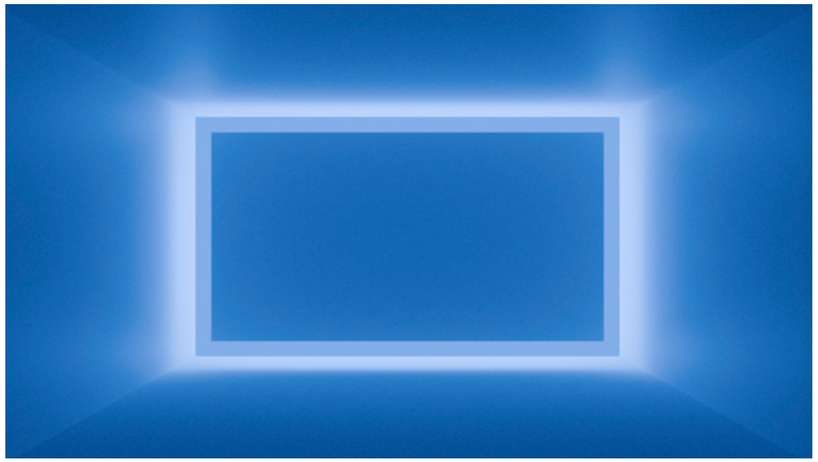
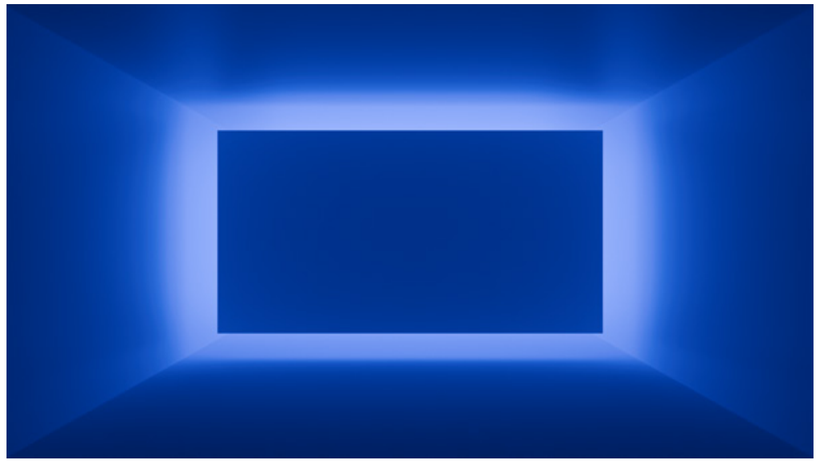
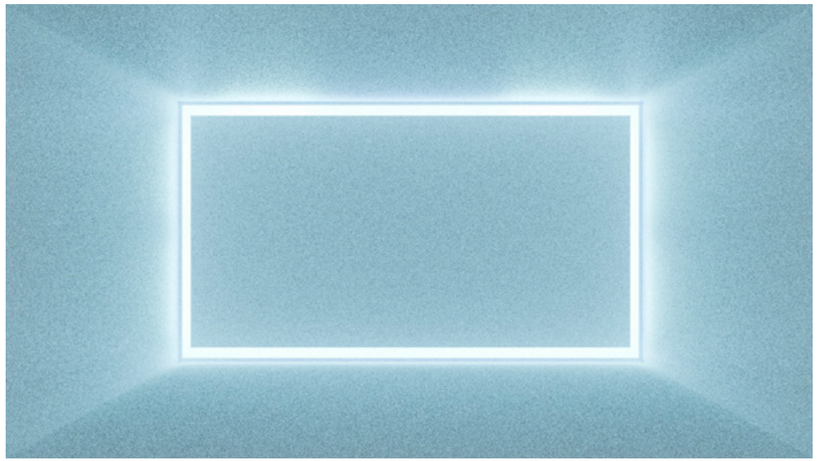


In the end I summarised 10 ideas, which also meant 10 iterations, each of which was a different spatial design that influenced the subsequent graphic visual output.

However, time constraints got in the way and modelling and rendering would have taken a lot of time, so I decided to go with a few of them and continue iterating on top of that.



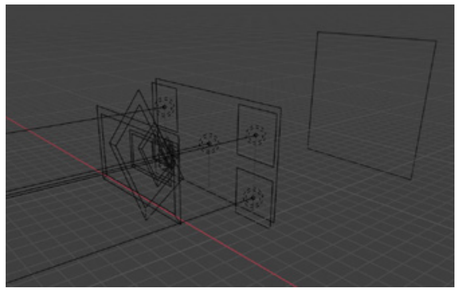
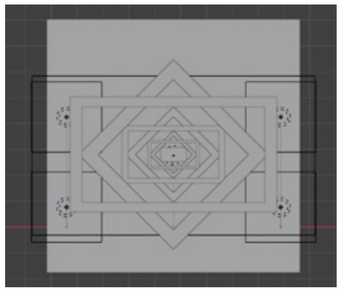
Iteration-1

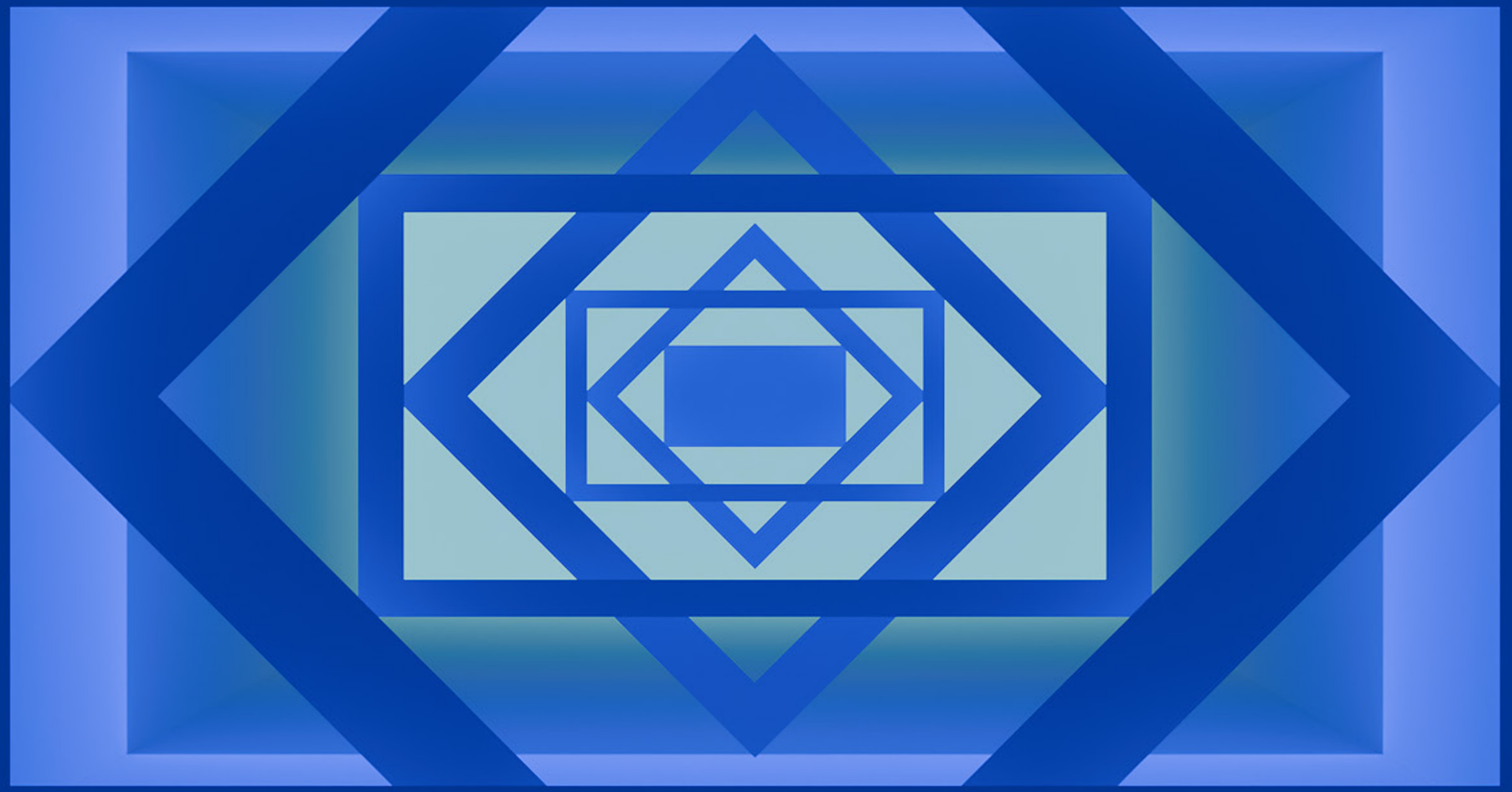




The first thing that comes to mind about what kind of pattern to create is to start with a shape; rectangle, square, circle, oval, triangle, etc. Utilizing the features of each shape and combining them with space.

From what you can see now all is the result of a 3D model rendered with lighting, I'll try to show it as 2D as possible.

After first envisioning the rectangle and considering how it looks in light, I adjusted the parameters and iterated to get three shapes. Then I started to imagine adding some decoration to it to look more complex.

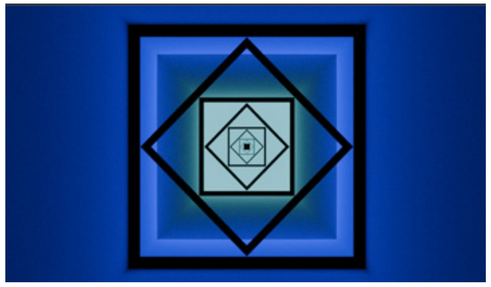



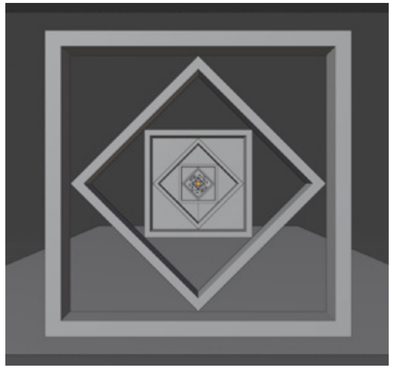


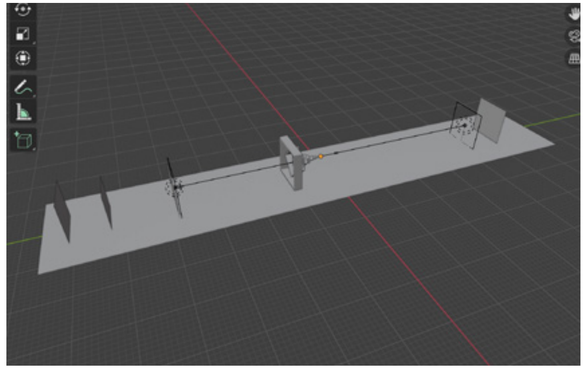
Iteration-1

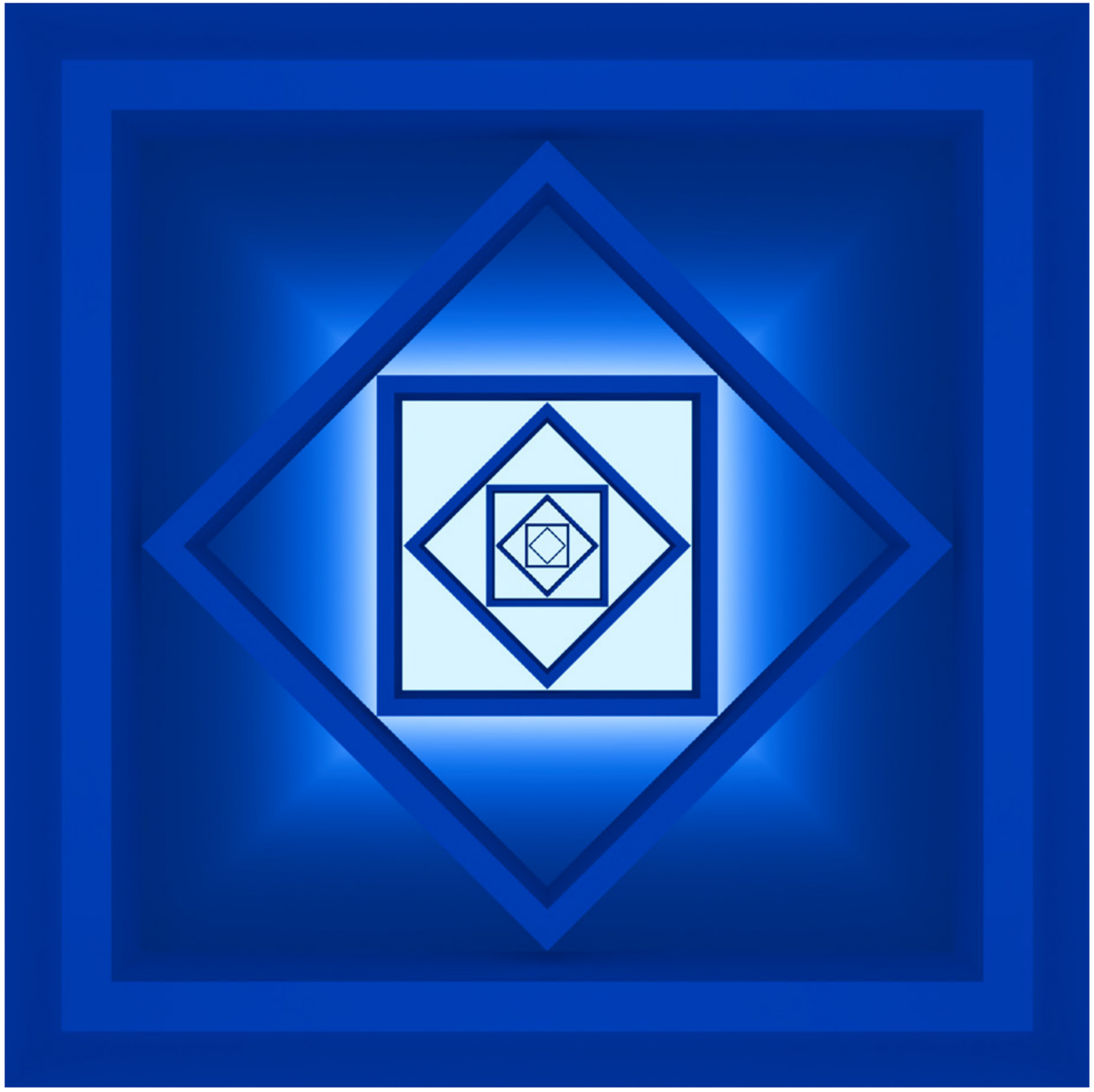
I then adjusted the parameters further, changing from rectangles to squares, tweaked the lighting, and settled on the final visual.

In blender I lay everything out in a row and look at them through the camera, the 3D objects become flat which is part of the fun.



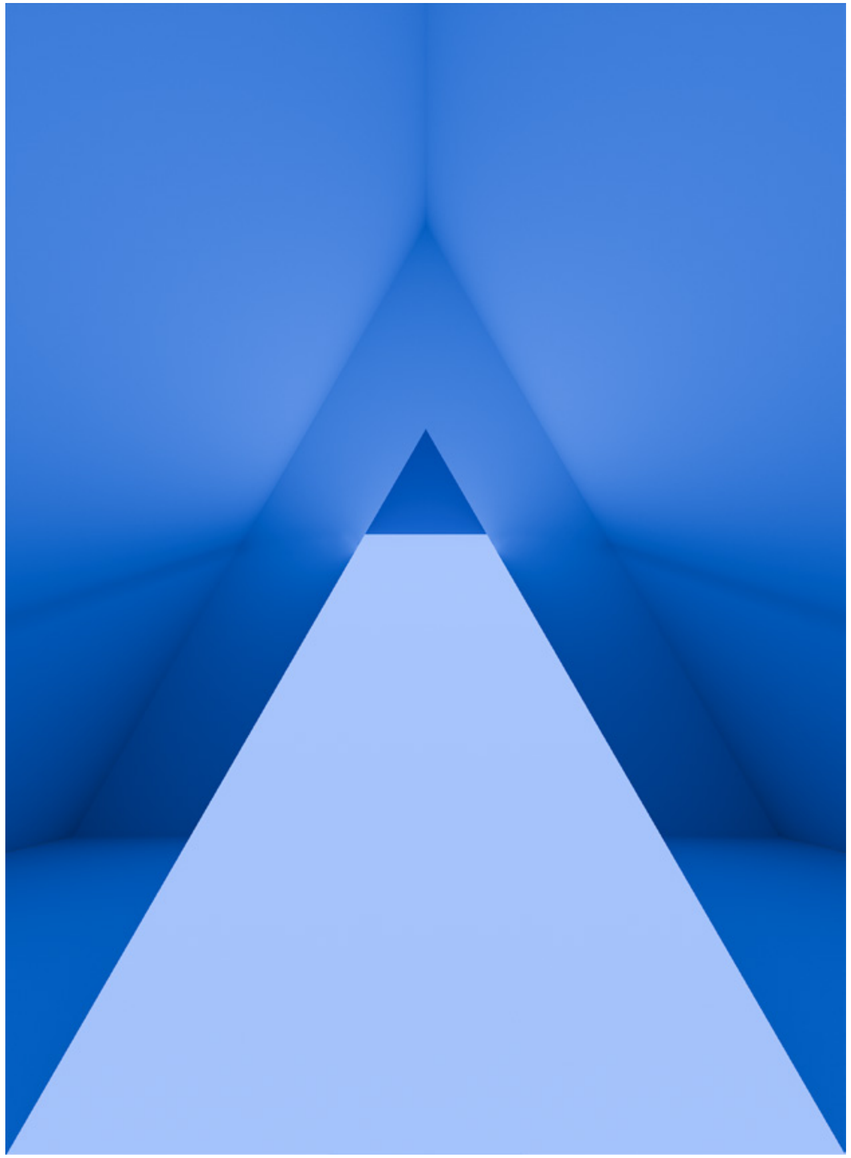


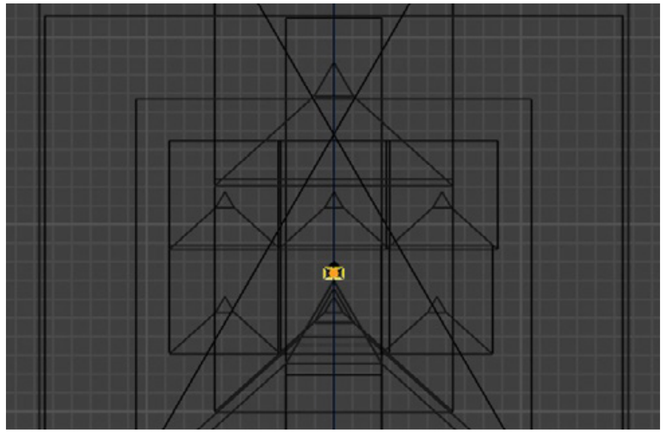


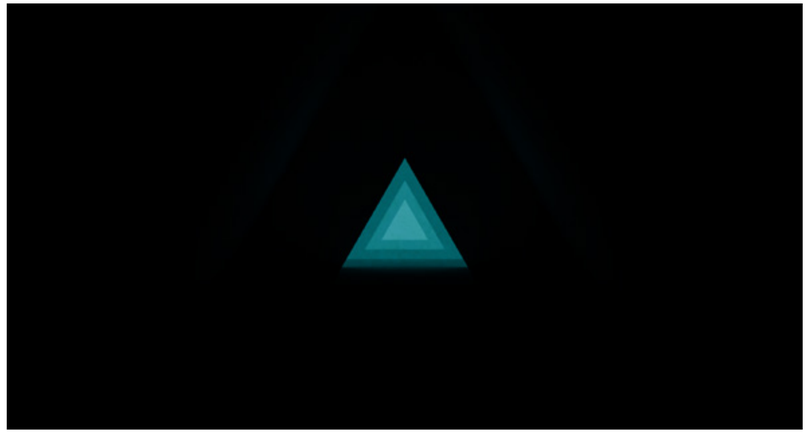


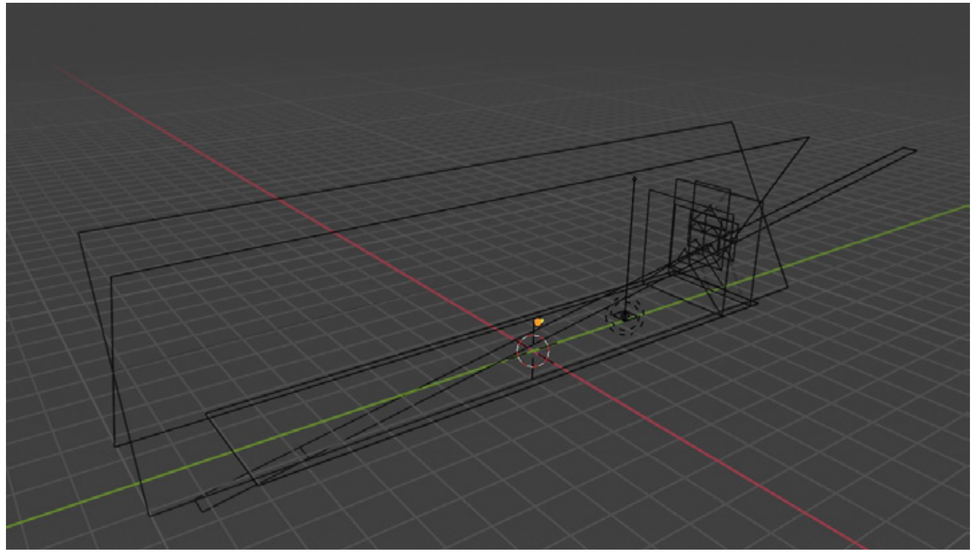
Iteration-2

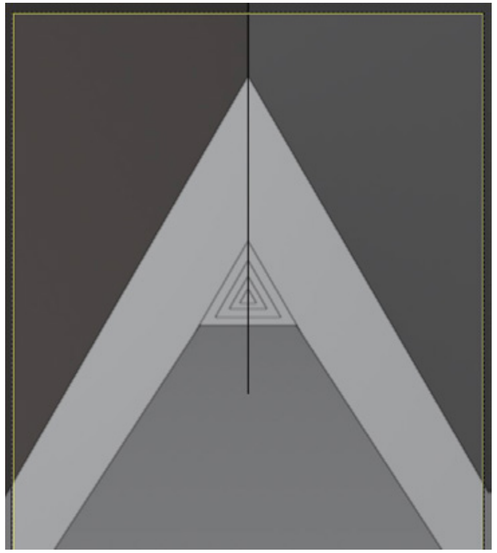
This time with triangles, I designed a triangular space where I tried to make sure that every part of the space was a triangle, and then I started to commission the lights, I wanted the colors to be predominantly blue and then thought about how I could maximize their flatness.



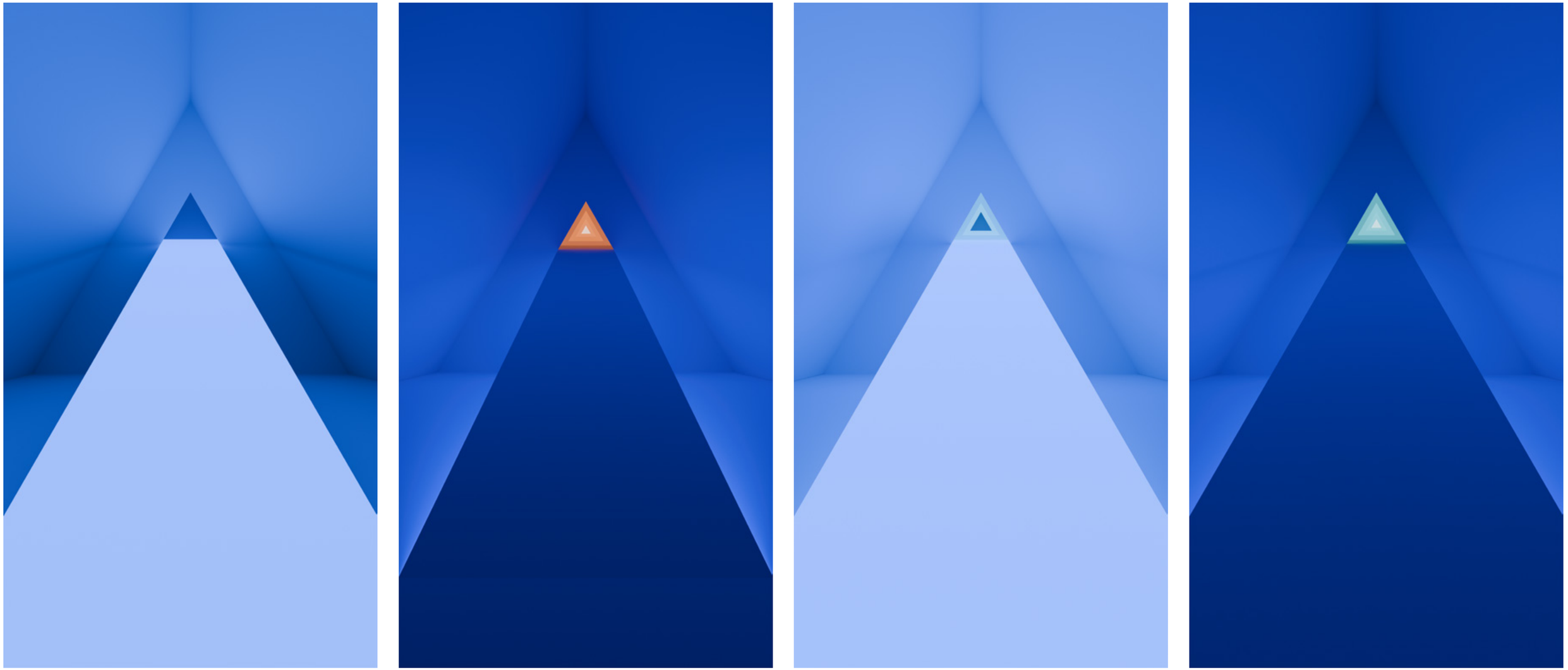






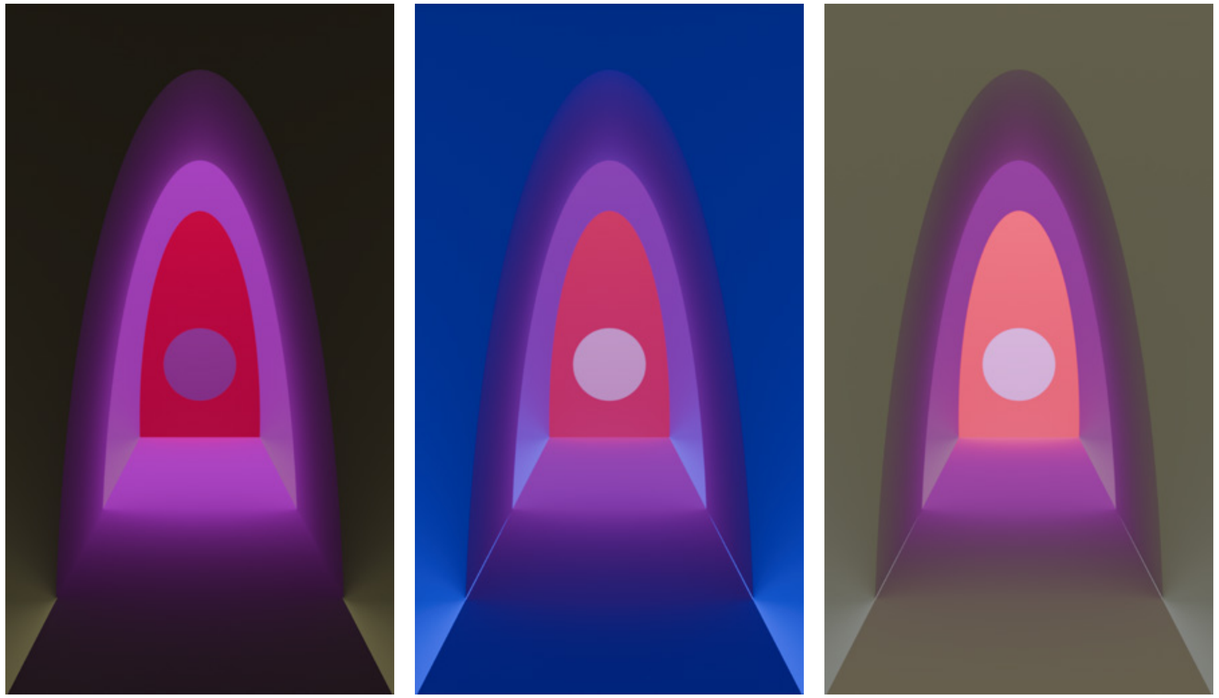


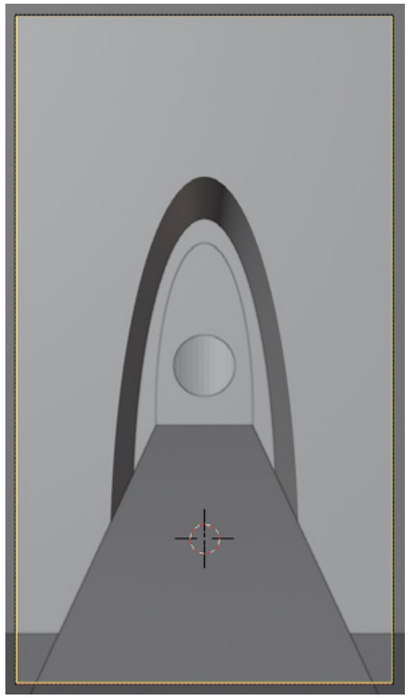
Iteration-2

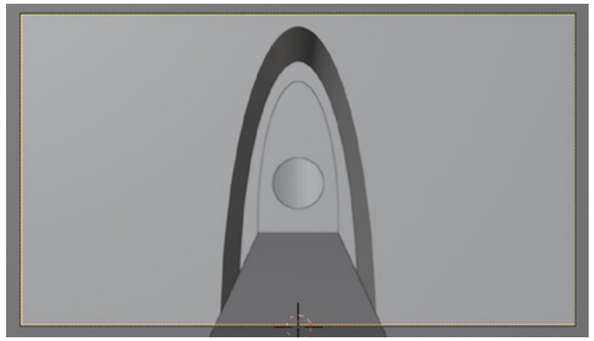


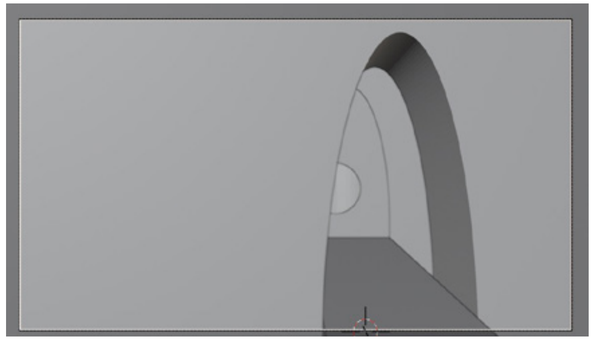
I tweaked some of the lighting parameters and iterated out four different flat shapes in the same angle of view.

Iteration-3



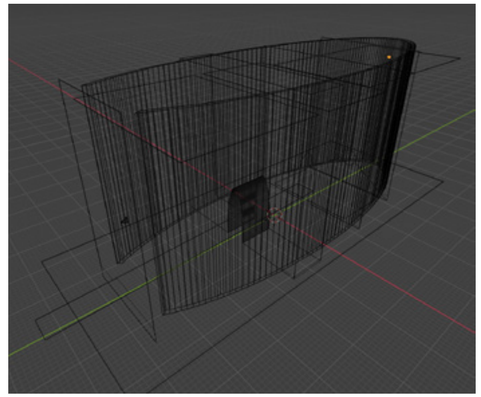


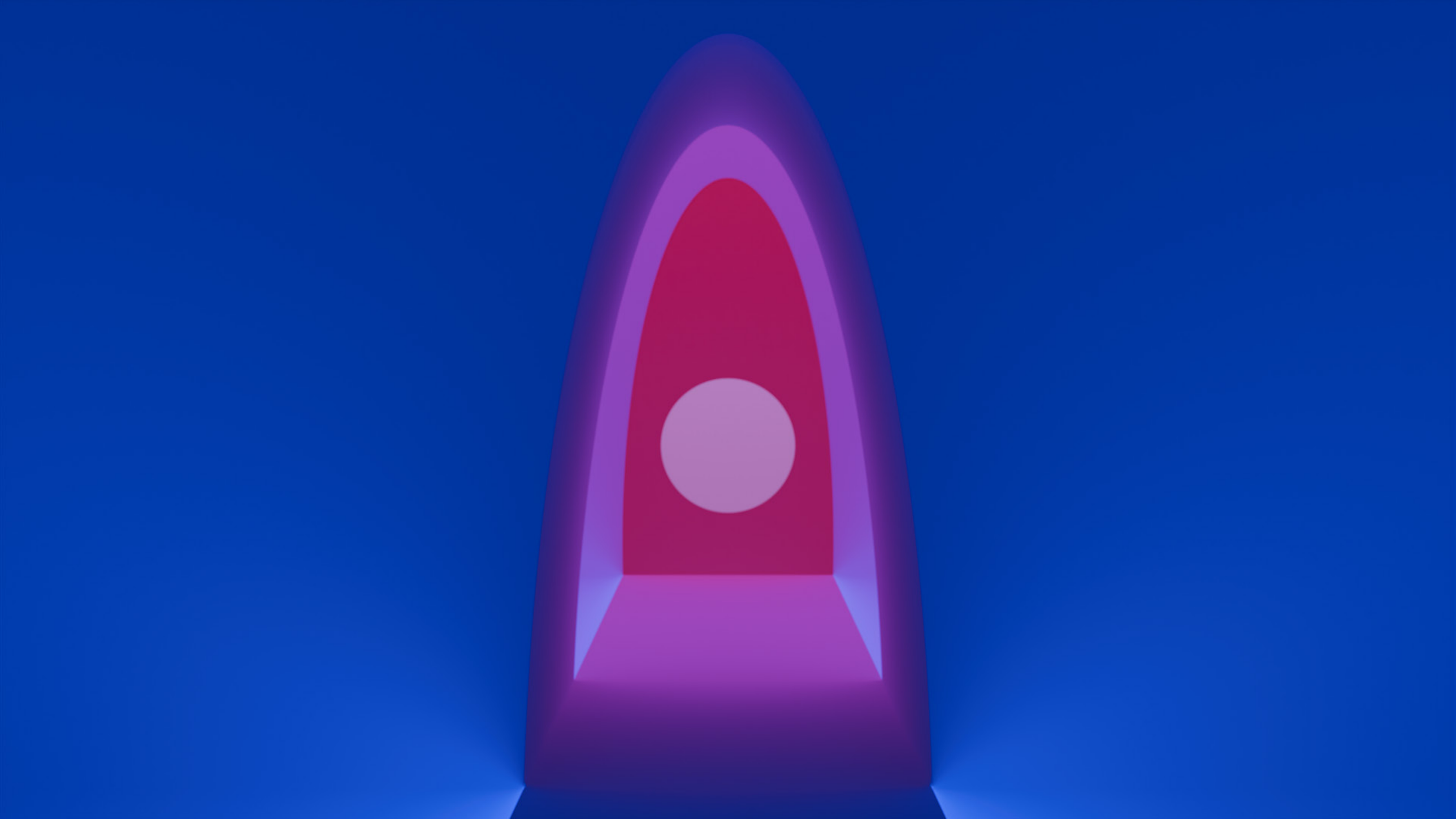


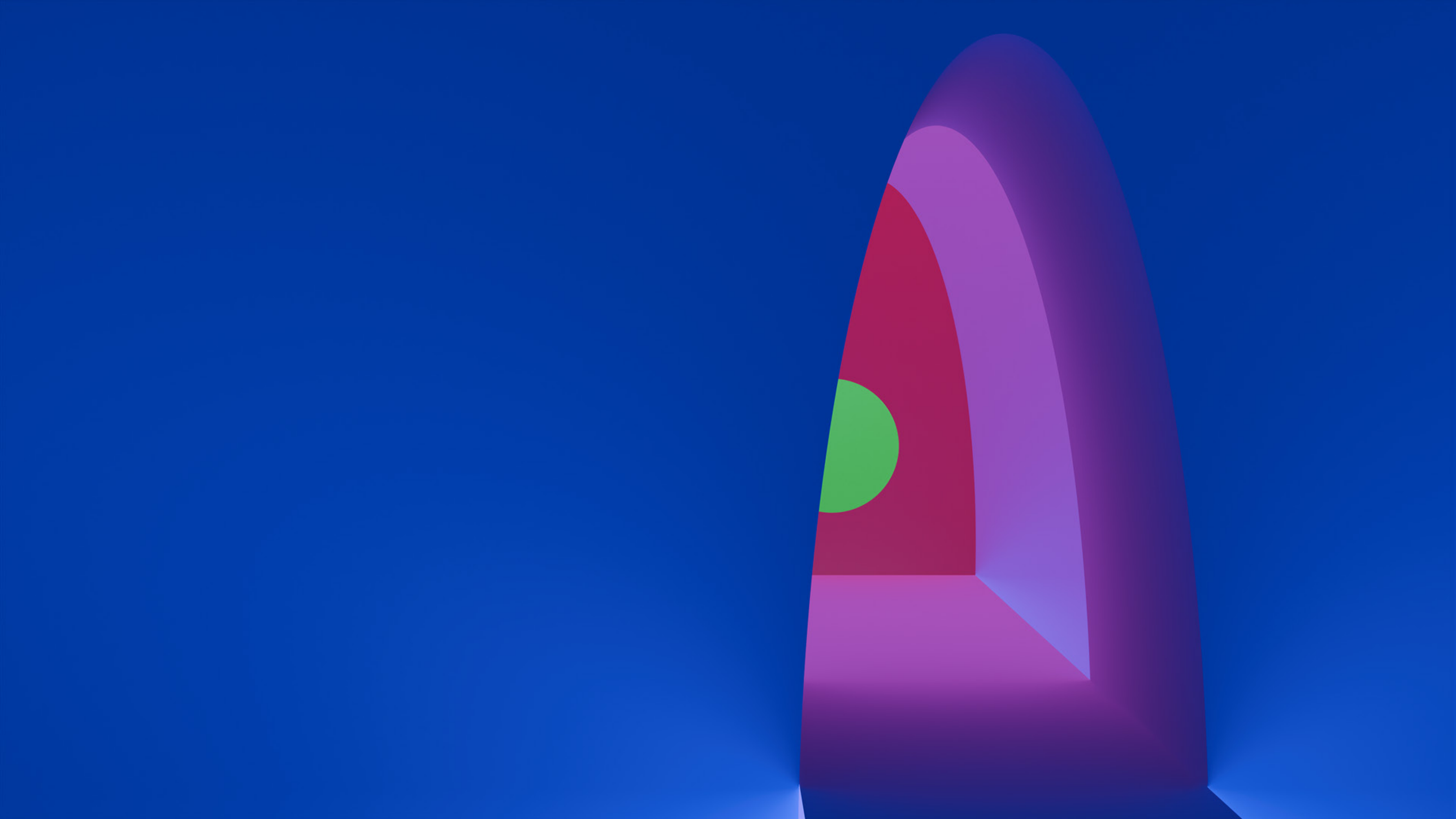


This time the space was designed on the theme of ellipses and circles, where each colour block in the graphic can be understood as a separate area, and instead of painting or sticking coloured blocks on, a space was created to colour the graphic with light.

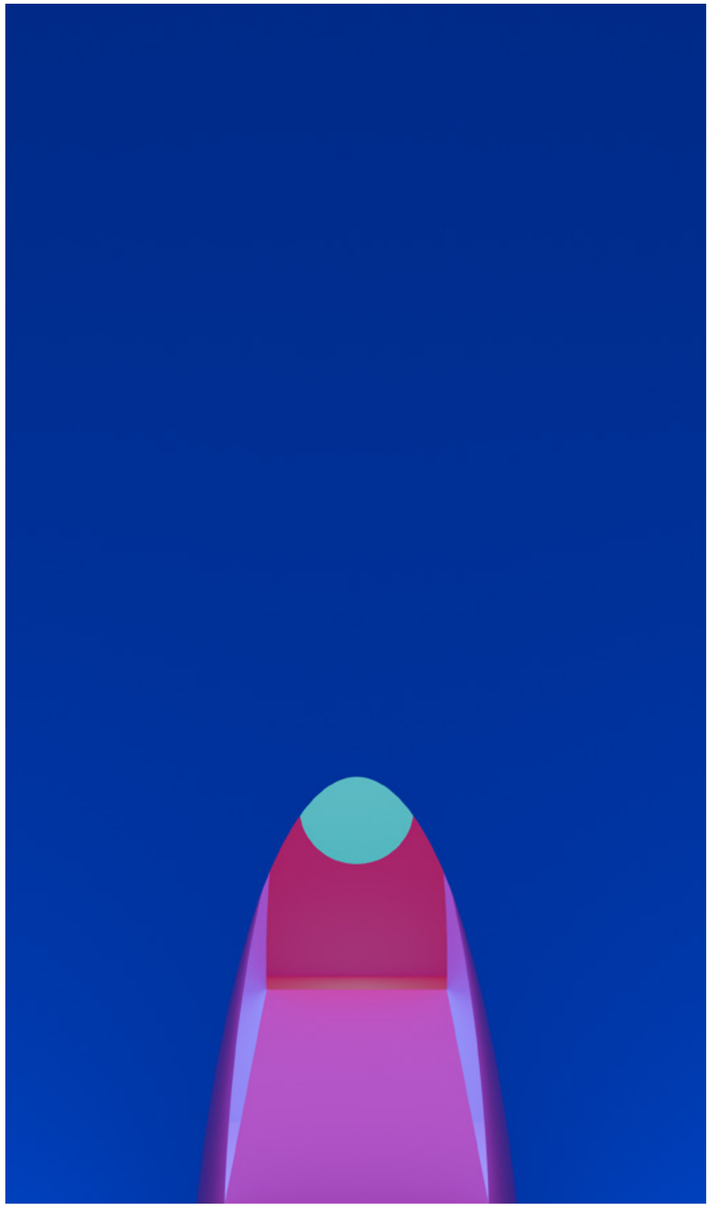
The result is one that follows the laws of physics, harmonious, even and transitional.

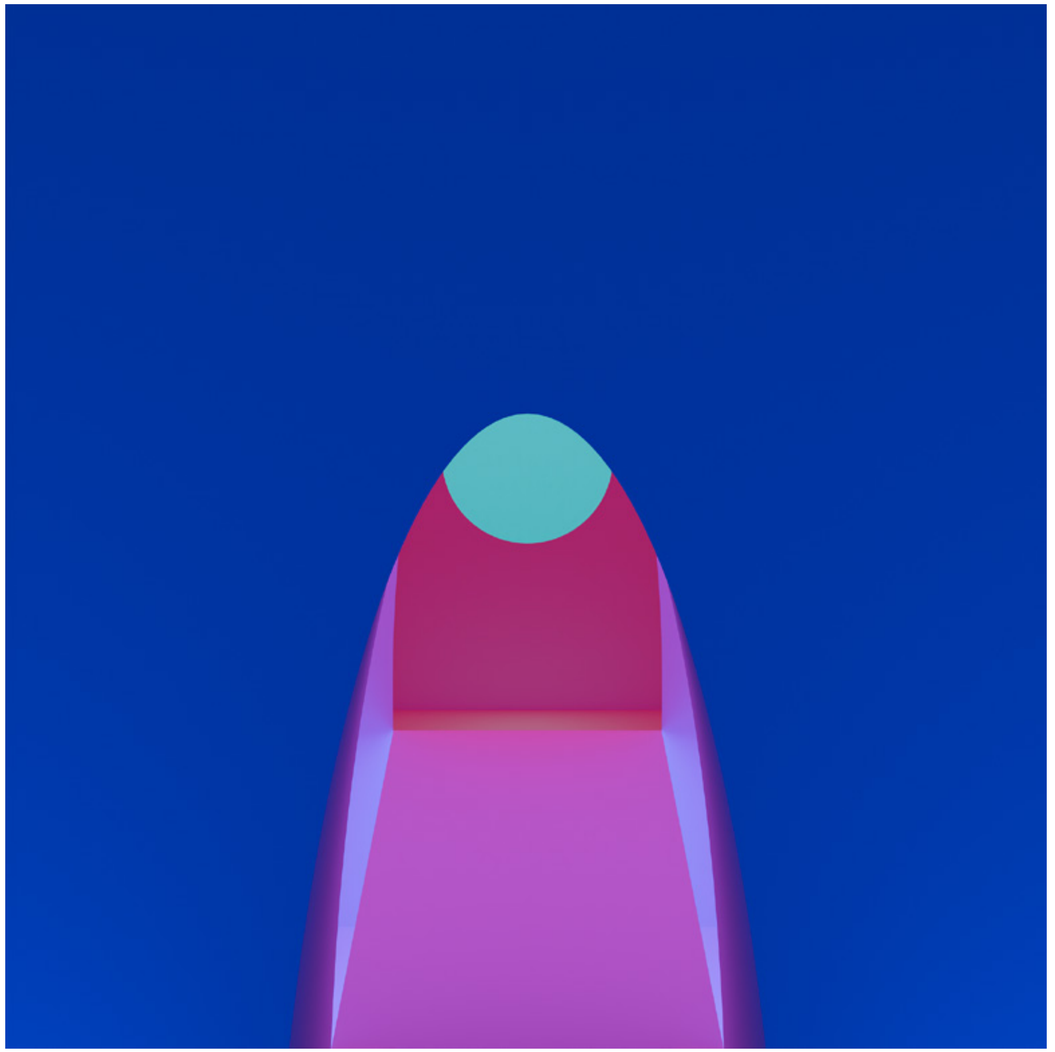


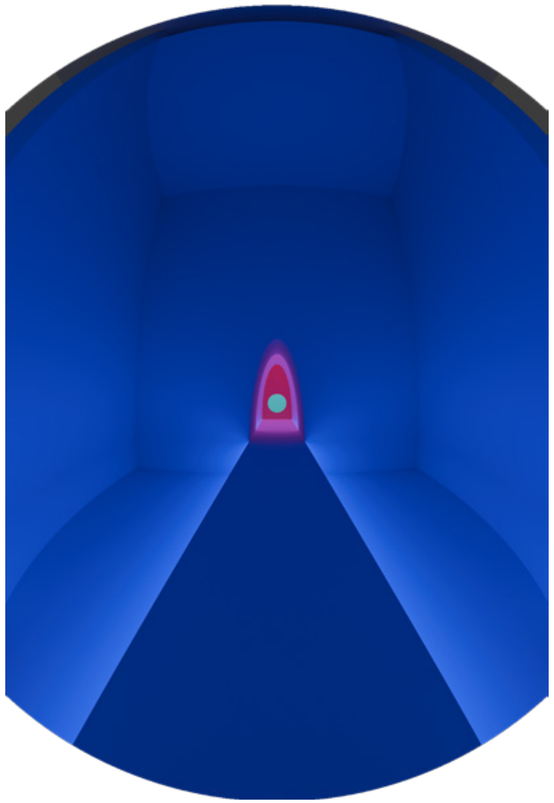




Iteration-3



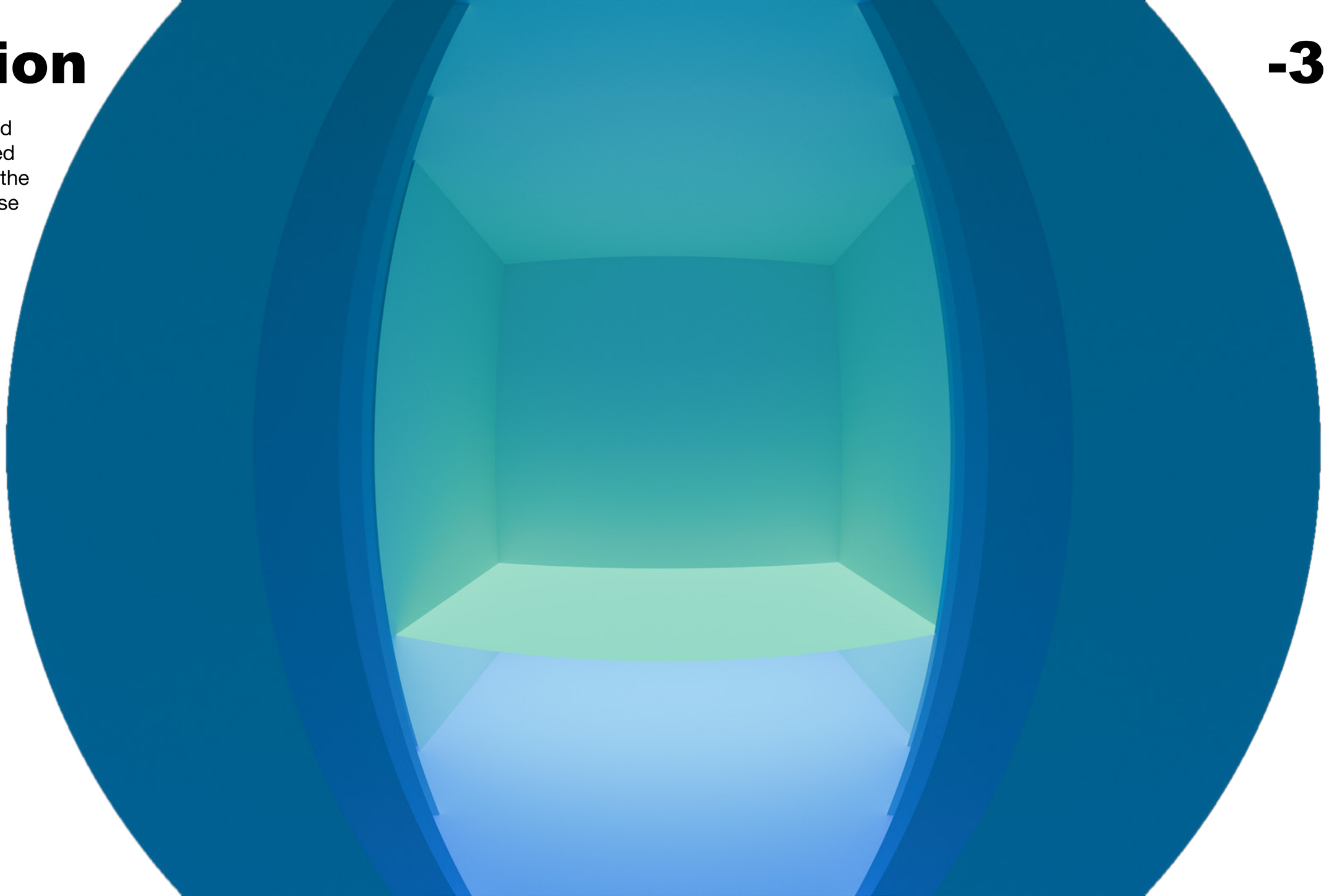




Iteration -3

In this iteration I used cylinders and lassoed them together, then the camera I chose to use panoramic photography, a fisheye lens would capture more detail and would be graphically more vibrant and interesting.

Lighting I learned a variety of adjustments as well as showing transitions with a cross-over of lights.



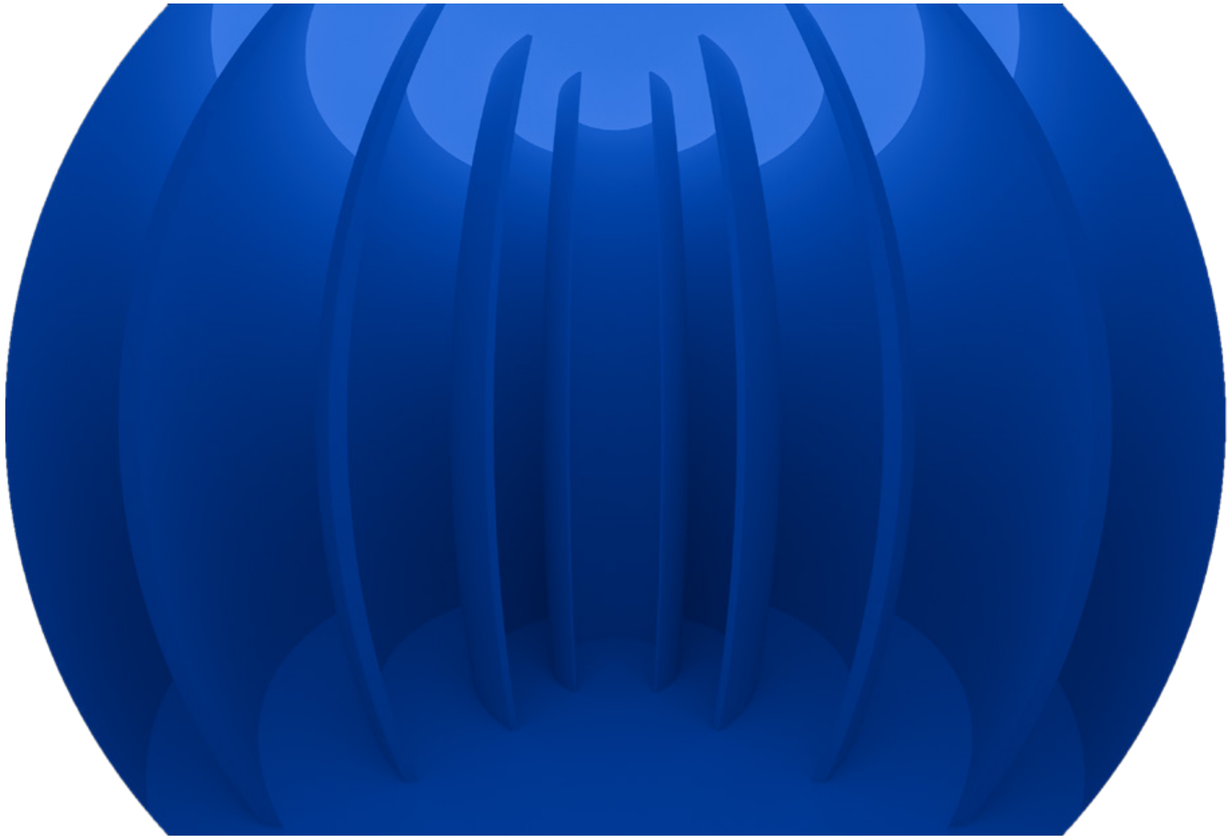
Panoramic lens/ Fisheye lens-1

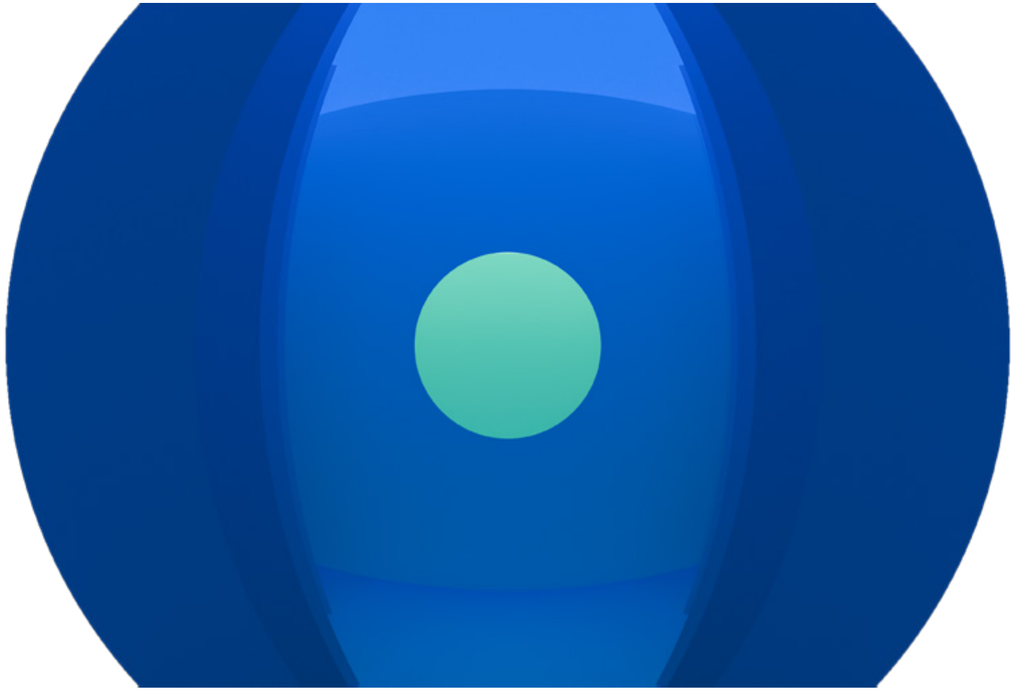
Iteration

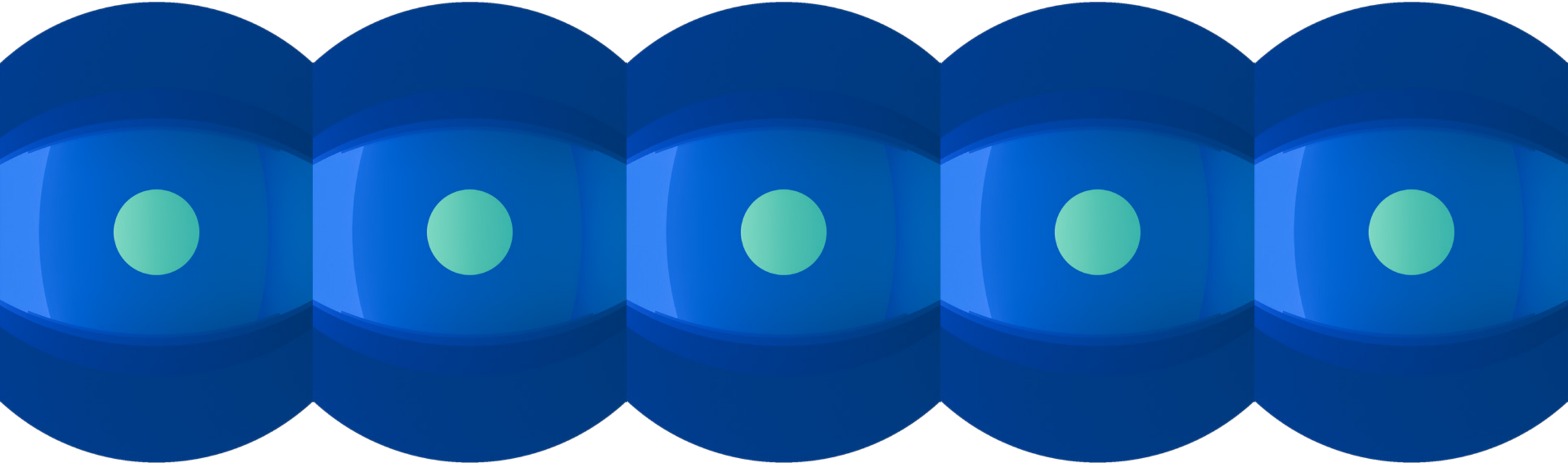
-4

I used a loop-by-loop effect, trying to show a sense of transition, in conjunction with the use of special lenses to see if I could produce an interesting visual effect.

Each attempt at structure required going back and re-adjusting the parameters of the lighting, which was both challenging and fun.





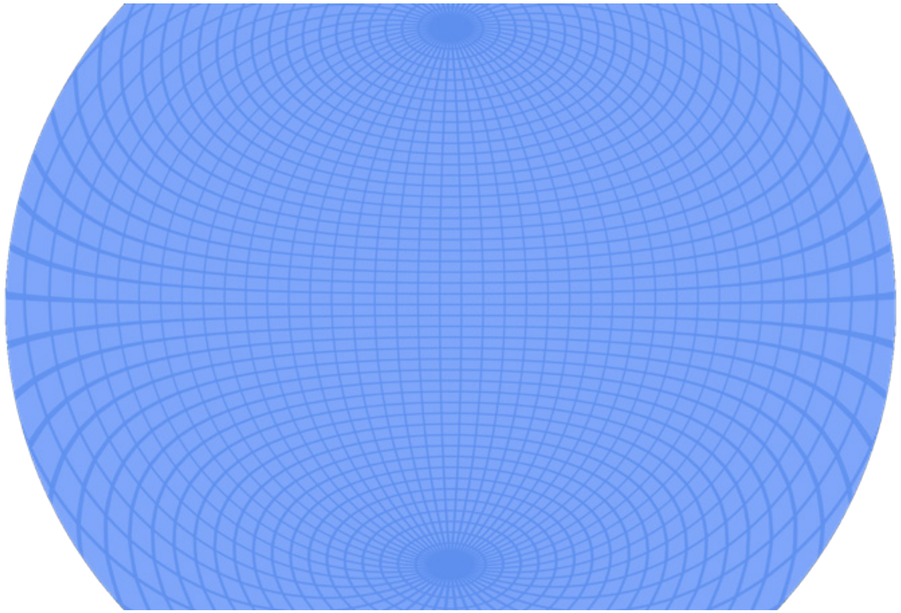


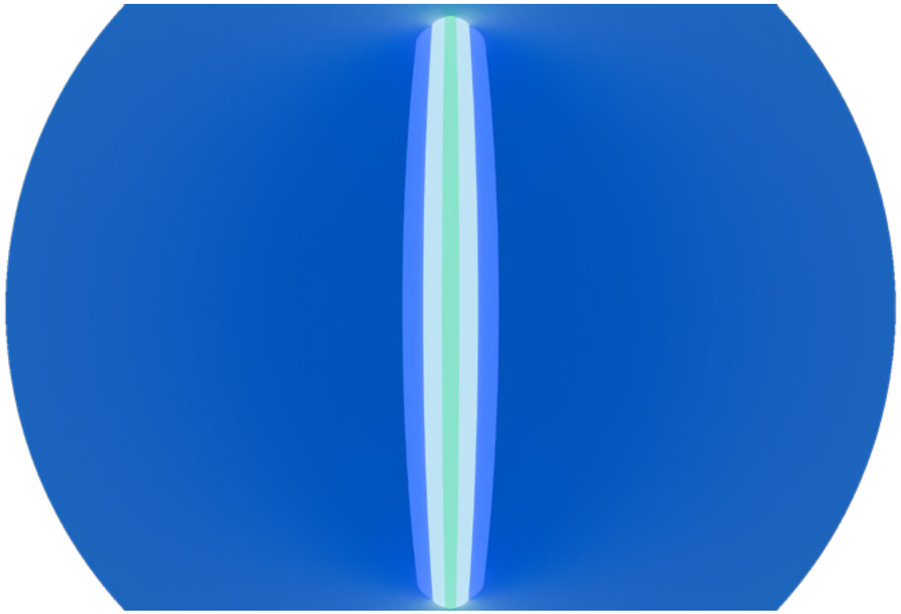
New graphics can be obtained again by arranging and combining the graphics obtained after rendering, which is another iteration that can make sense of the graphics obtained from rendering.

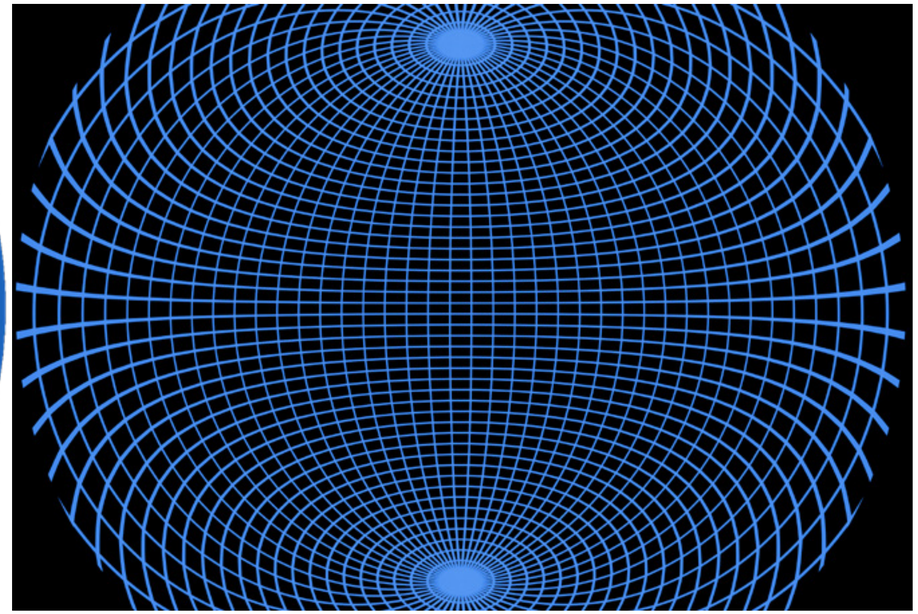
Iteration -4

Iteration -5

Finally, the sphere is used as an object, and he is cut and divided into a mesh structure, together with a special lens to show a feeling of latitude and longitude, like a world map, which is a kind of attempt.







Panoramic lens/
Fisheye lens-2

3 Mechanical, Natural and Critical Evolution

Contrary to some theories, both design and nature are radically traditional; they work with subsystems which have existed in the past. All creations are initially *ad hoc* combinations of past subsystems: "nothing can be created out of nothing."

The first bicycle and automobile were made up from *ad hoc* parts: after their subsystems were refined and highly interrelated, these vehicles reached a relatively stabilized norm and the end of an evolutionary series. They became non-*ad hoc* or totalistic.

Organic evolution proceeds by combining and modifying subsystems through the medium of genetic material. By these combinations the subsystems exert a certain restraining force—a "multivise"—which allows only several evolutionary possibilities.

However, natural evolution and its few possibilities are not necessarily beneficial for men. We must project forward many possible trends, not just mechanical and natural ones, and then dissect apart their positive and negative consequences, recombining *ad hoc* those totalities we desire. Dissectibility is the essence of adhocism and critical evolution; contrary to the Romantic poets, we murder not to dissect.

(31) *Human prefab house* bring [illegible] to a new size. When cut at the proper joints, the environment, like a chicken, falls into edible pieces.

(32) *Roosevelt Field Shopping Center.* Monolithic developments carry positive and negative consequences without distinction. The economic advantage of mass shopping has not been dissected from the disadvantage of ecological overspecialization.

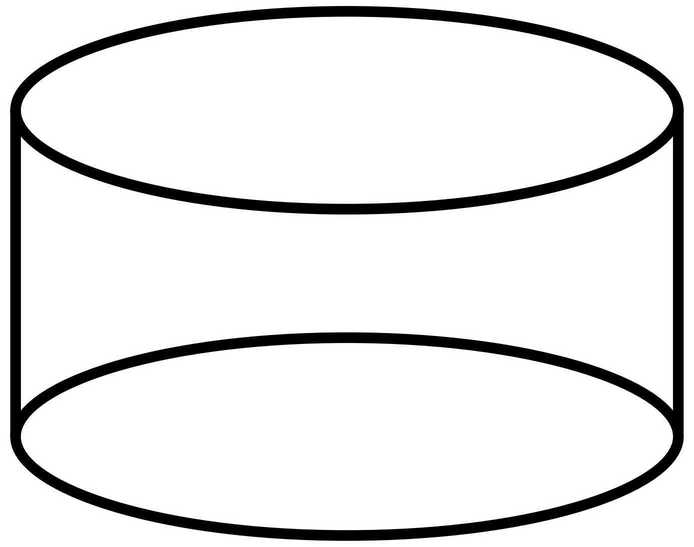
39

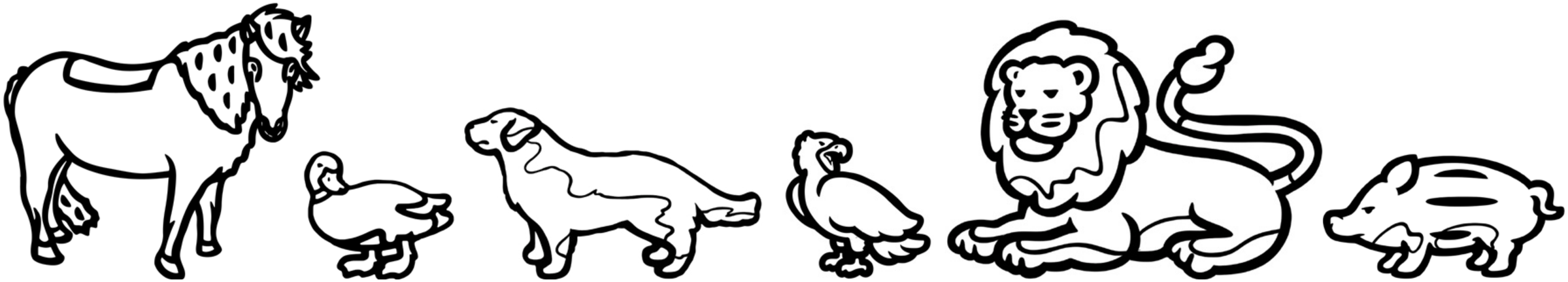
For reading material, I chose the book Adhocism: The Case for Improvisation, in which the main discussion is about the use of Adhocism in design, and I guess to a certain extent my experimentation with lighting, is also a form of improvisation. Building a model without knowing the result, then rendering it to get the result. But from the beginning, I didn't know what the result would look like.

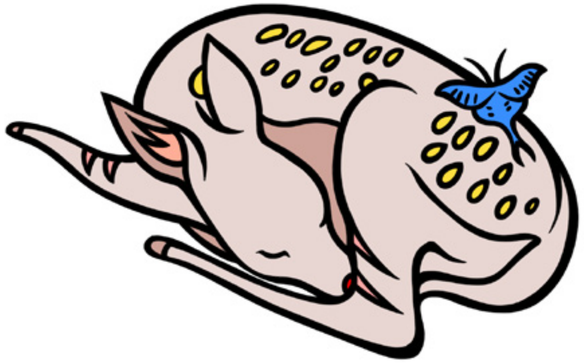
Iteration is a method of design and a means of rapid renewal, focusing on the process of the designer's behavior rather than the result. In this week's iterative experiment, I tried to first choose different shapes and then discuss them separately, such as triangles, rectangles, squares, and so on. Then try the lights separately and keep adjusting the parameters and iterating. The advantage of this is that one never knows what the result will be, and there seems to be no end to it.

And improvisation emphasizes the concept of 'collage' and 'combination'. Laying out different panels for editing in Blender, and using the shader editor to adjust their parameters, is essentially doing this process of improvisationism.

By modeling in 3D and translating into 2D visuals, I draw on James Turrell's approach to light. This process is not only a simulation of physical space, but also an improvisational experiment - a constant tweaking in modeling, rendering, and post-processing to find the best visual effect. The improvisationist mindset helps me to construct spatial and emotional images with minimal design language, given the limited technical conditions. This approach provides a new way of thinking about the transition from 3D design to 2D visual expression and expands the possibilities of graphic design.







I've spent the last week experimenting and iterating from 3D to 2D. During this time, I learned how to adjust the lighting in Blender and achieve my desired effect.

This week I don't want to do a lot of experimenting, I'm going to make some very, very simple things and then use the same 3D to 2D method to make them.

Unit1-4 Methods of iterating

L.ZHAOXUAN

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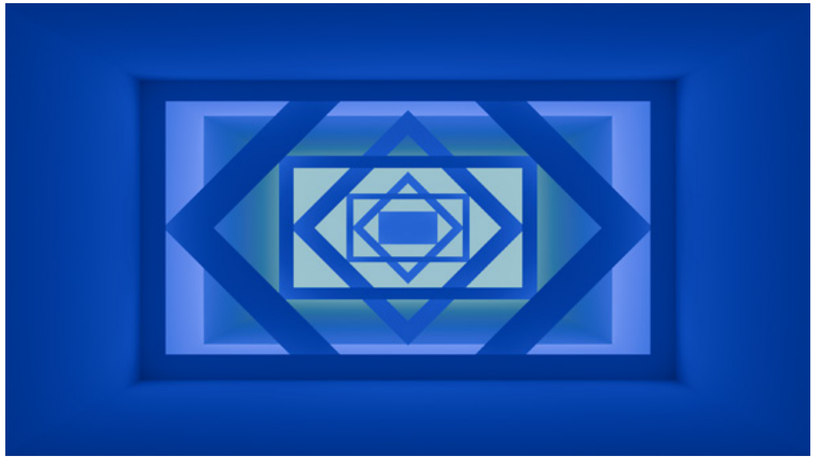
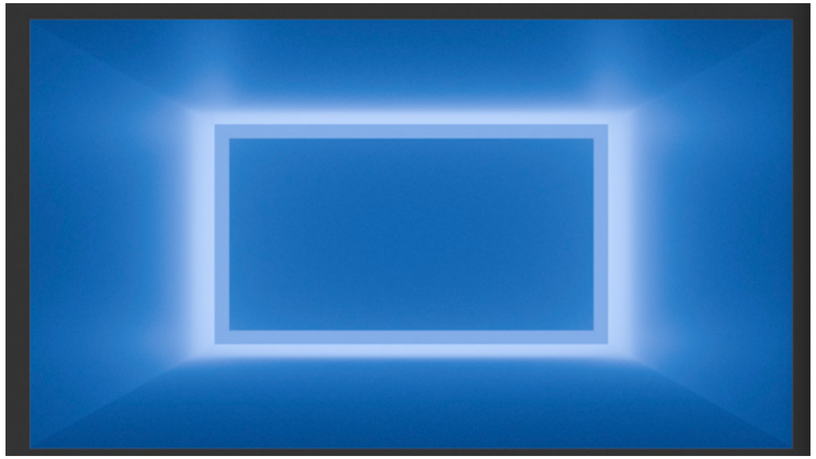
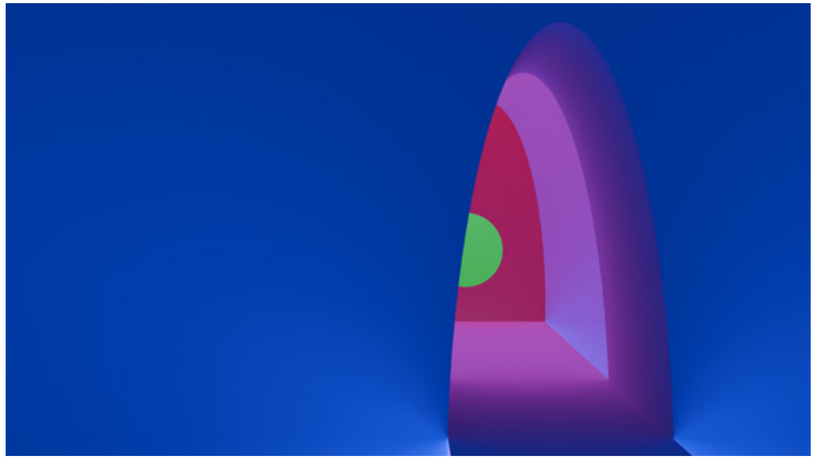
From last week







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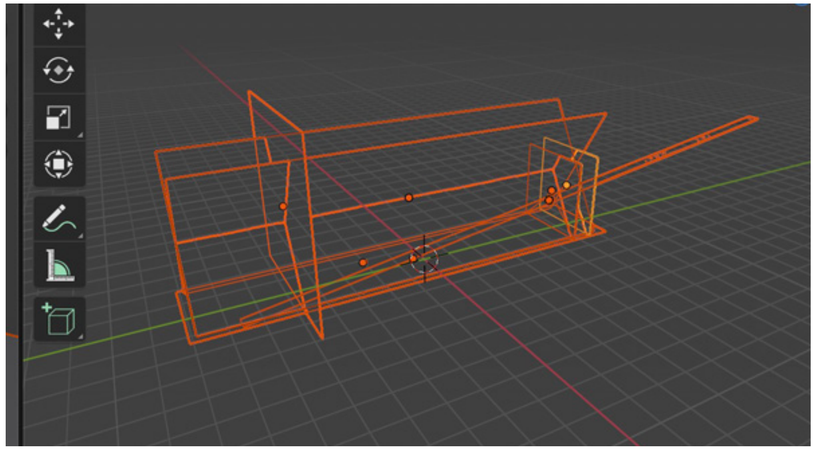
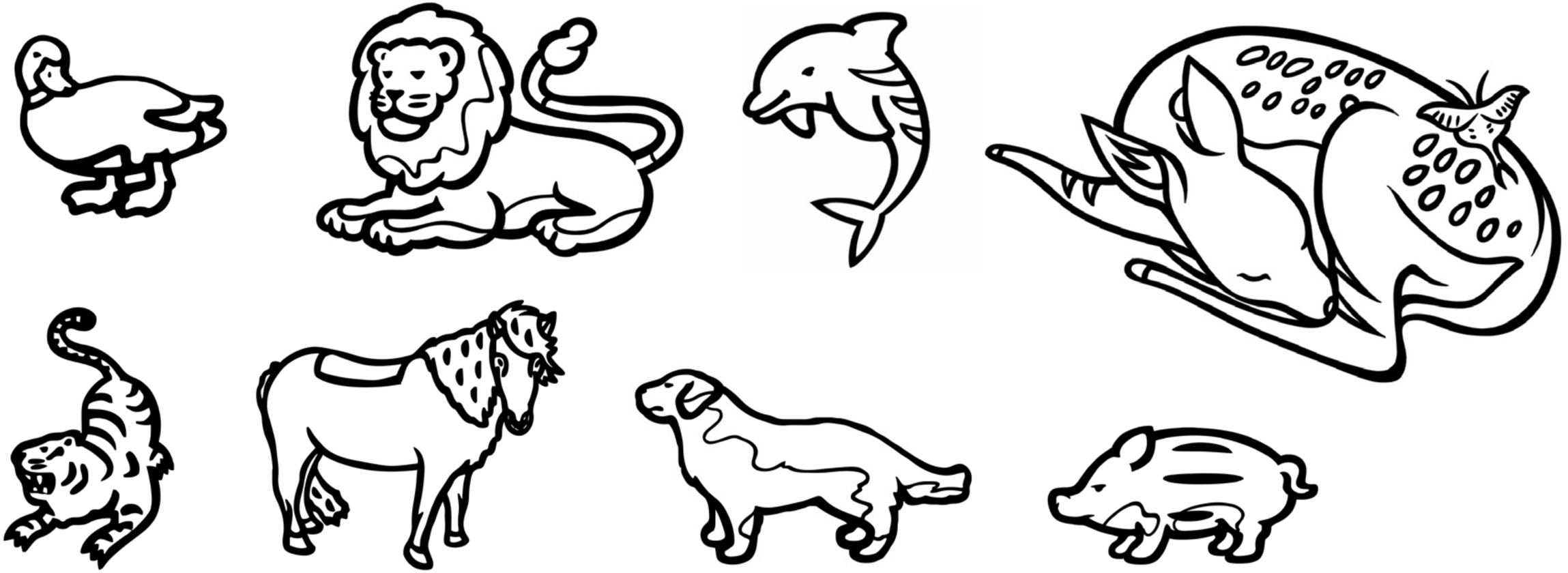
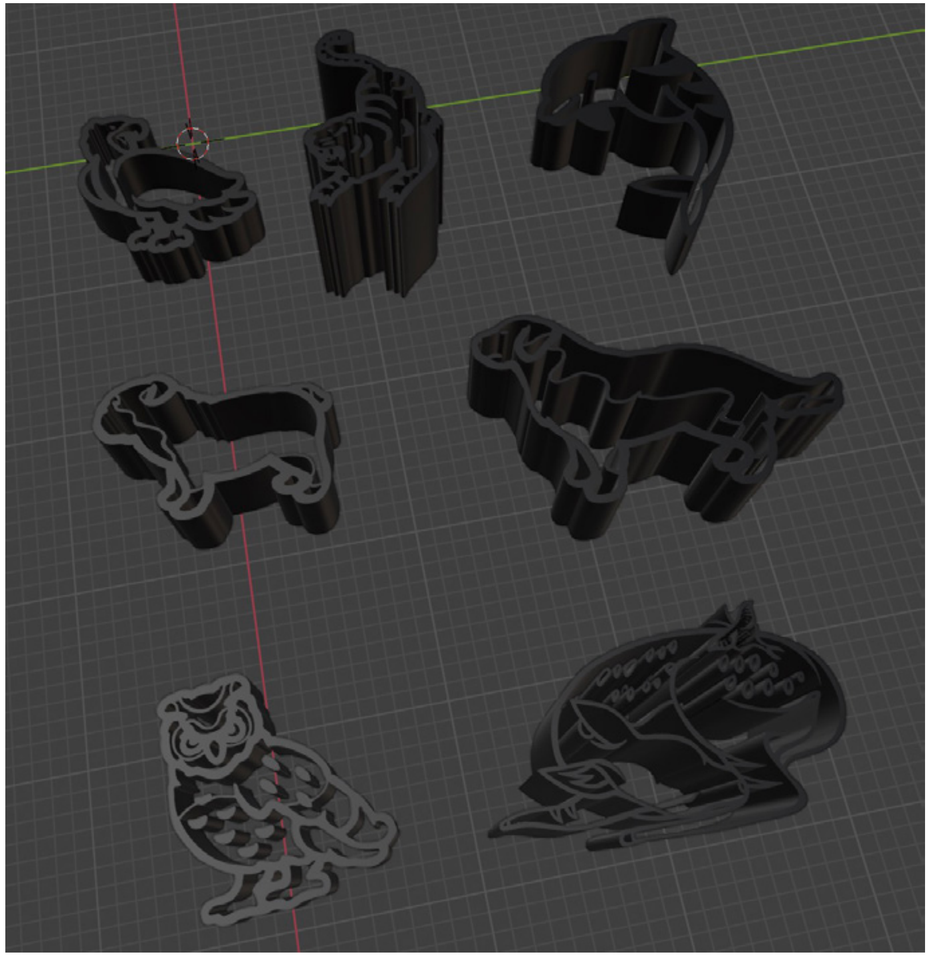


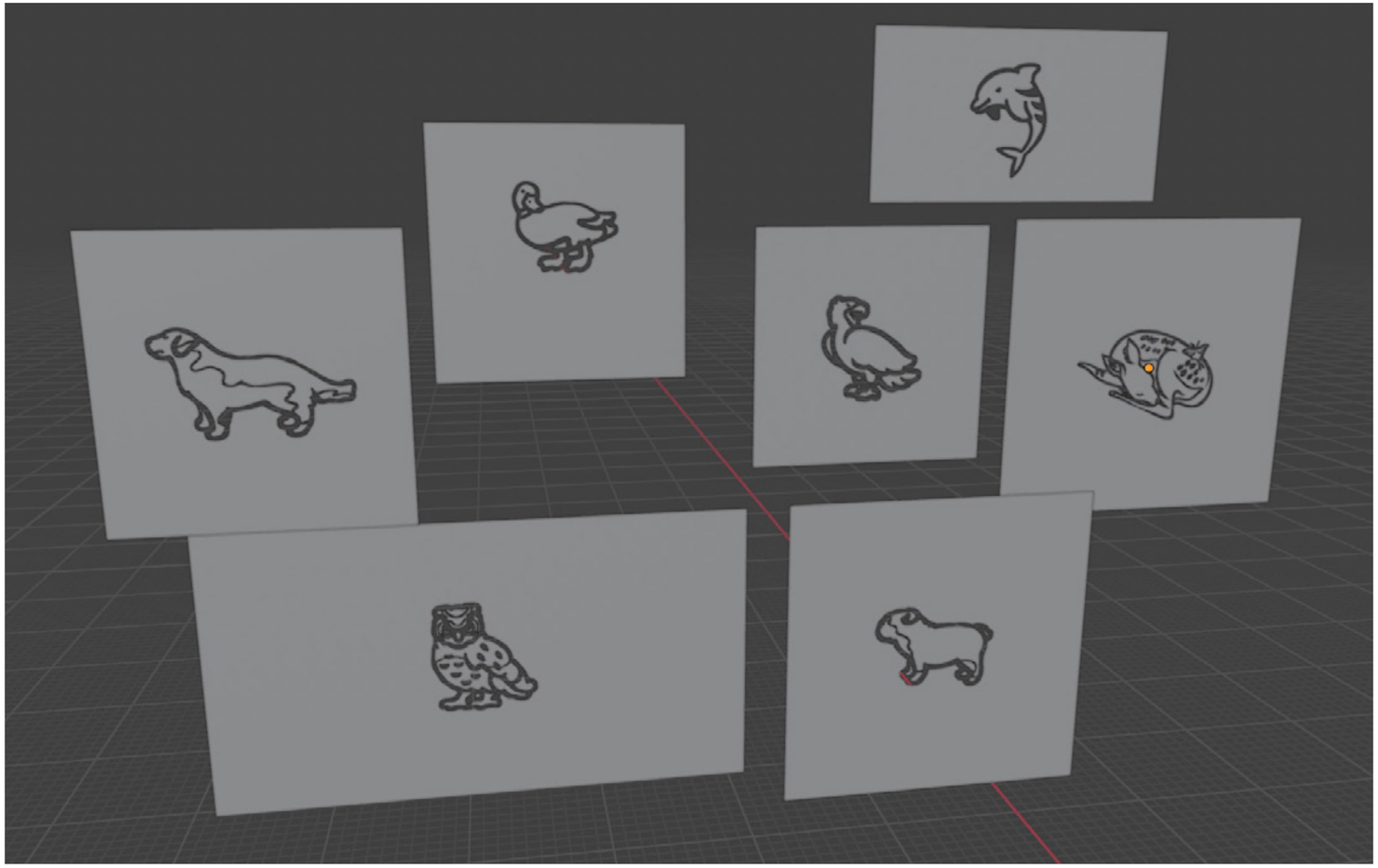
Illustration Design



I drew some simple illustrations of animals and then I plan to color them in a blender using the 3D to the 2D method I invented. This step is to verify that the method I invented works, as well as iterating backwards for continuation, rather than waiting for a result to happen.

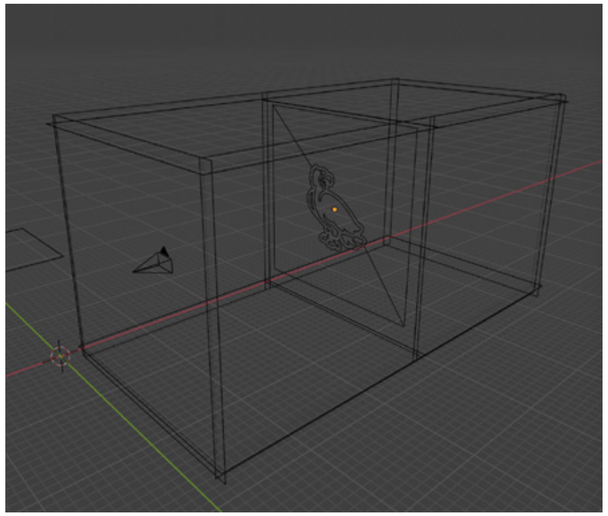
Blender - 3D

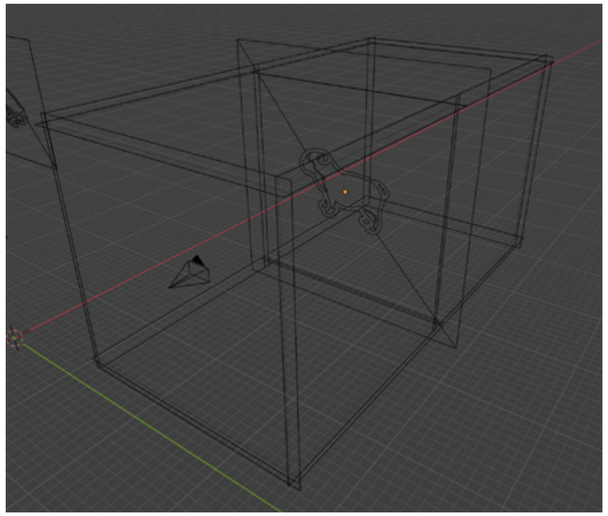


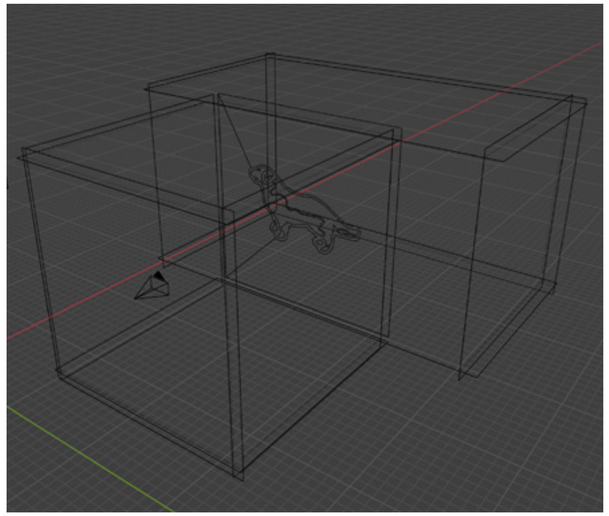


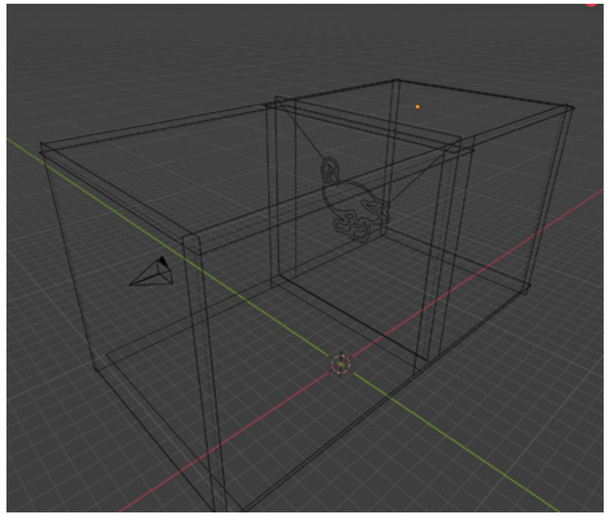
I then took these drawn shapes in a blender, modeled them, and combined them with some graphic cutting techniques to cut out the skeleton parts to look like the picture on the right.

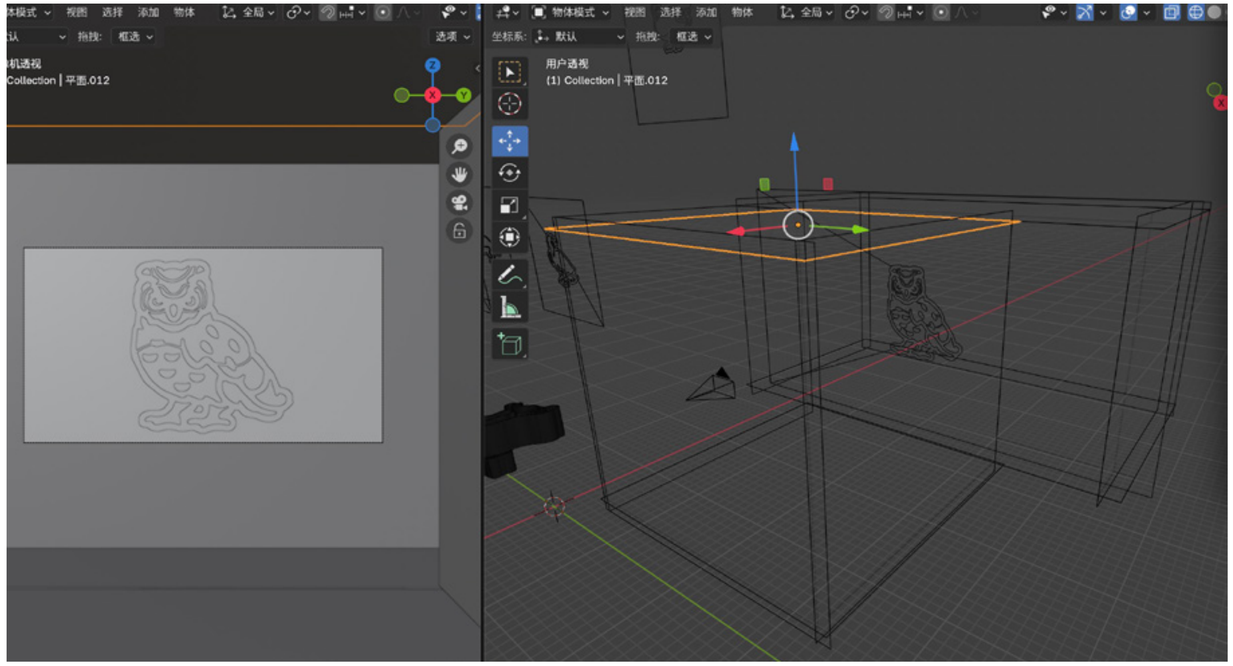
Process







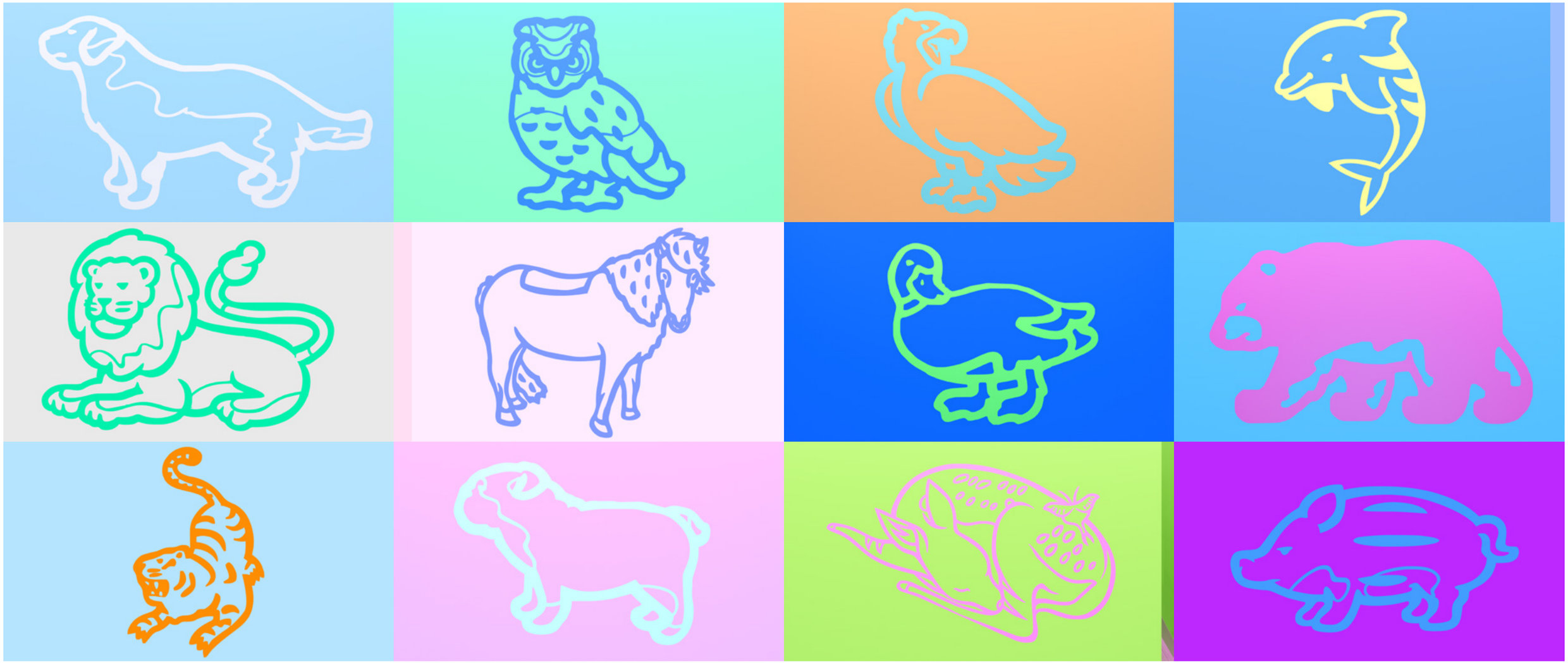




I created two empty box-like objects and placed flat surfaces that could be illuminated on them, then placed the hollowed-out object in the middle so that the front and back of the illustration each had a color.

From the camera's point of view, this is no different from a flat illustration, it's the colors that matter, not the graphics.

Final Outcome



The result can then be seen as some very flat 2D shapes, which is like doing a screen print, and could conceivably be iterated infinitely by adding more layers to make it look like a painting. This will never lead to a result, so I'm going to let it end as a process.

WRITTEN RESPONSE

Draft 3

From 3D to 2D:
Firstly to answer some questions
When I go to create text with Blender, basically the content doesn't change, but to some extent, its visual experience is changedw.

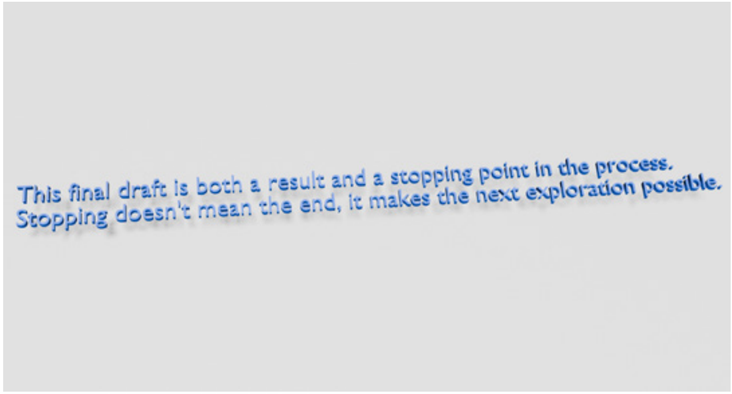
In this week's iteration, I didn't want to make some very complicated tweaks or attempts because I found that there is no end to iteration, so I wanted to identify a method or process and then go for a lot of replication to prove the reliability of the process and then let it end as a process.

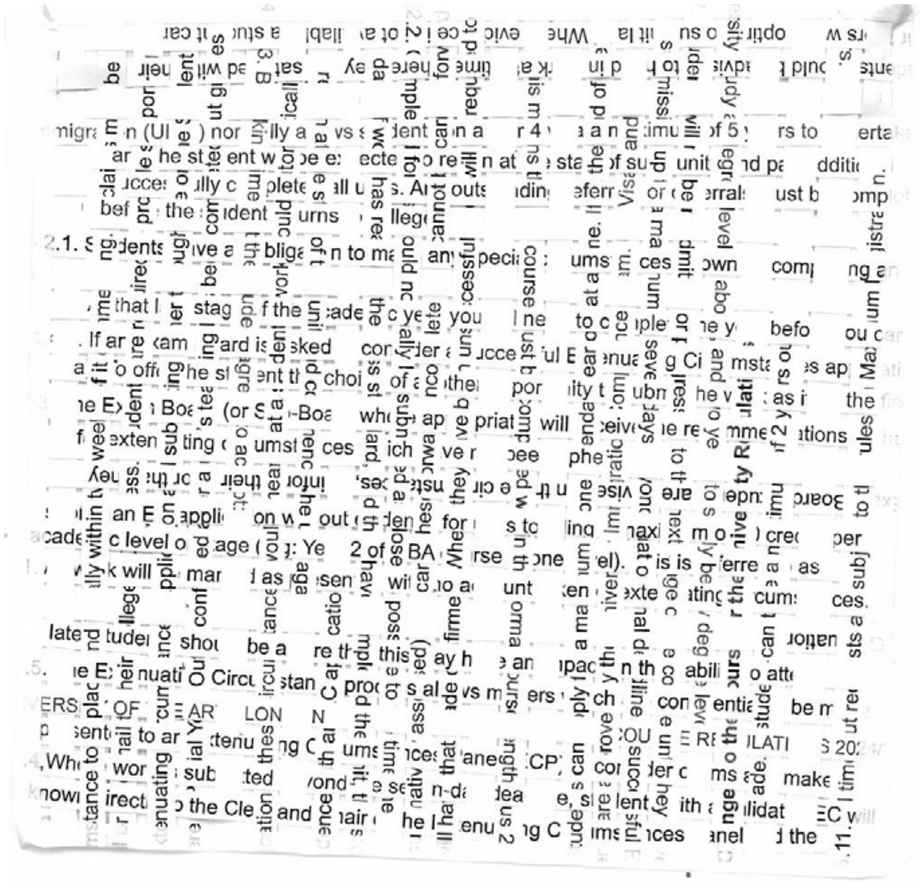
I experimented with Blender for effects such as skeletonization and light shaping to convert 3D structures into a 2D visual language. This process was originally intended to explore the relationship between light, shadow, space, and graphic design, but in the course of iterating, I came to realize a central problem: it has no clear endpoint.
In the early stages of the design, I wanted to generate complex visual effects through 3D modeling and maintain a sense of space and depth in the 2D form. However, as I experimented further, I realized that the process itself was endless - the parameters could be tweaked indefinitely, the light and shadows could be optimized, and how the skeletons were hollowed out could be varied endlessly. Each modification brings new possibilities rather than a definitive state of completion. This ‘endless exploration’ made me realize that instead of striving for a final ‘perfect image’, I should treat it as an endpoint of a phase, acknowledging the openness of the design process and deciding to stop at some point.

Therefore, I chose to ‘simplify’ the design in the third draft. I have reduced redundant adjustments, made the relationship between light and shadow more direct and the openwork more orderly, no longer trying to find the most ‘precise’ expression, but allowing the work to retain traces of exploration and become a slice of the process. Simplification is not a compromise, but an acknowledgement of the process - it is no longer directed towards an ultimate goal but becomes a part of itself.

As the text and visuals combine, I also wonder: does the meaning of design change when it becomes a process rather than an outcome? If the initial search was for a definitive answer, I now embrace the uncertainty itself, and the transition from 3D to 2D is not just a shift in form, but a shift in mindset - from construction to refinement, from experimentation to acceptance, from pursuing an endpoint to allowing for openness.

This final draft is both a result and a stopping point in the process.
Stopping doesn't mean the end, it makes the next exploration possible.





KILLING RHYTHMS (with Kaiya Waerea)
Cicely, Henry, Ken, Neyomi

Unit1-5 Methods of contextualising

L.ZHAOXUAN

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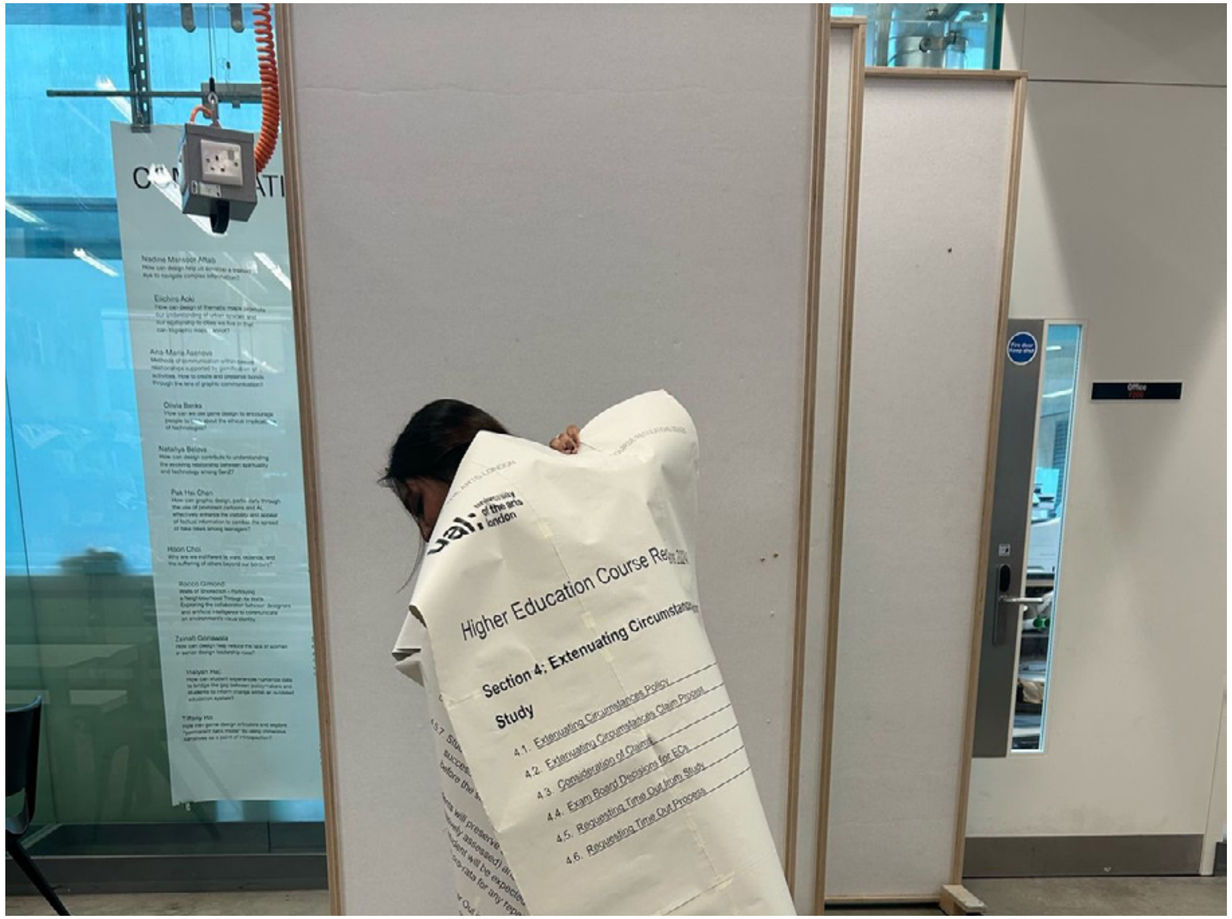
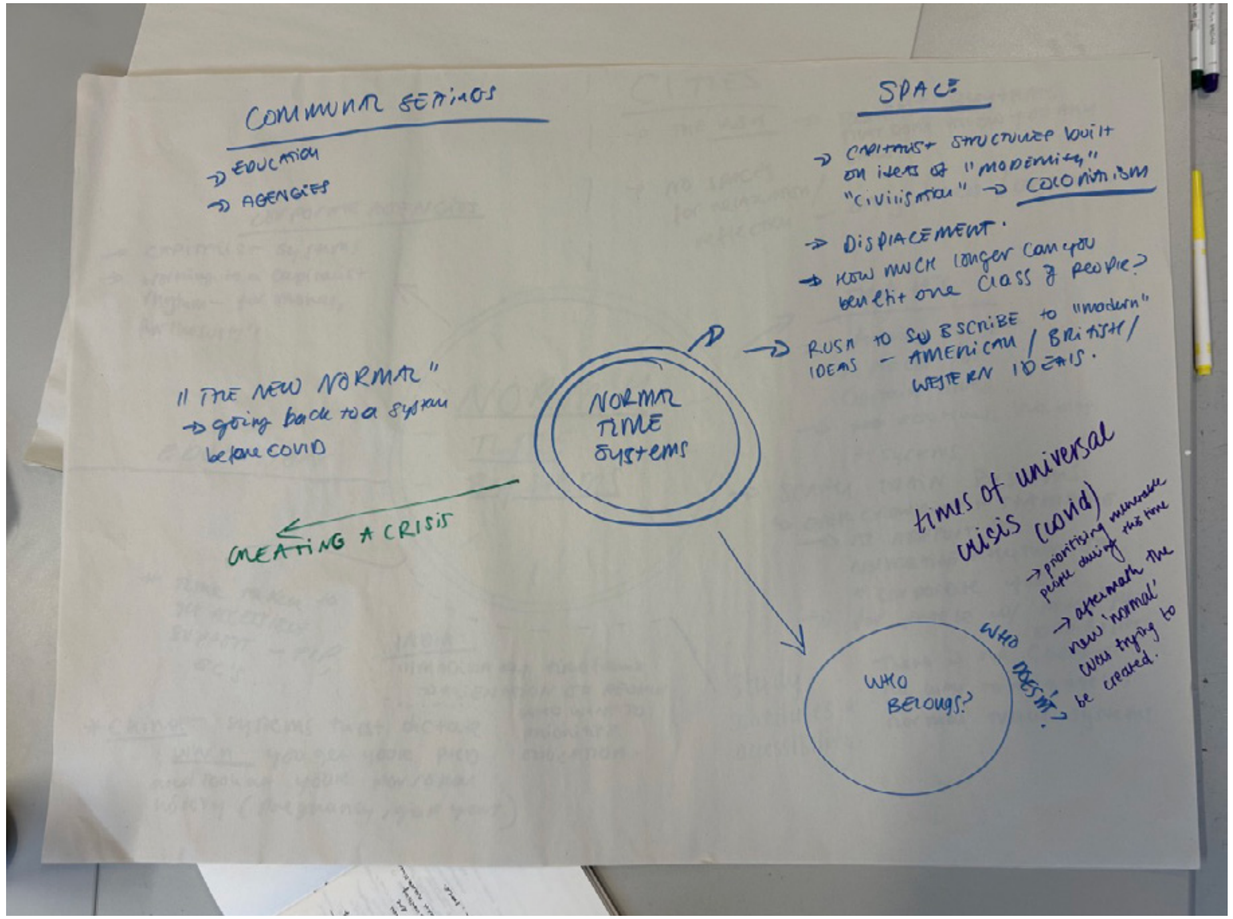
Mind map


Higher Education Course
Section 4: Extenuating Circumstances
Study
4.1. Extenuating Circumstances Policy
4.2. Extenuating Circumstances Claim Process
4.3. Consideration of Claims
4.4. Exam Board Decisions for ECs
4.5. Requesting Time Out from Study
4.6. Requesting Time Out Process


COMMUNITIES
→ EDUCATION
→ AGENCIES
SPACE
→ CAPITALIST STRUCTURES BUILT ON IDEAS OF "MODERNITY" "CIVILISATION" → COLONIALISM
→ DISPLACEMENT.
→ HOW MUCH LONGER CAN YOU BENEFIT ONE CLASS & PEOPLE?
→ RUSH TO SUBSCRIBE TO "modern" IDEAS - AMERICAN / BRITISH / WESTERN IDEAS.
" THE NEW NORMAL "
→ going back to a system before COVID
NORMAL TIME systems
CREATING A CRISIS
times of universal crisis (covid)
→ prioritising vulnerable people during this time
→ aftermath the 'new normal' that is trying to be created.
WHO BELONGS?
WHO DOESN'T?

Exploring Education Rhythms : Scheduling & Deadlines

01 / for disabled bodies there is no stopping time. continued work accrues stress, sleeplessness, and illness.

02 / no reflection time to stand back and unpack what you've made; algorithmic making. processing speeds and physical abilities every day.

03 / assumptions of a standard body and mind. deadlines assume students have the same energy levels, cognitive functions, processing speeds and physical abilities every day.

Visible Support =/= Actual Support

01 / Time taken to access support takes time away from working, creating more work.

02 / Access to support systems is not clear.

03 / “Proof ” of illness or sickness - has to meet certain "standards" to receive university support or benefits.

How is it Upheld Or Controlled?

01 / money and finance - paid fees creates a seller / customer relationship

02 / institutional and governmental policies setting guidelines and curriculums more often than not prioritise standardisation, productivity and efficiency over individual learning needs and/or support.

03 / fees create an expectation for hard skills to be taught - transferrable, desirable skills for employment.

04 / creativity becomes regulated - standardised, results driven. this drives deadlines and oversubscription, overfilling timetables, individuation over communion.

05/ results + league tables

Link to Padlet

Who Sets This Rhythm?

president + vice chancellor

deputy chancellor + chief digital officer

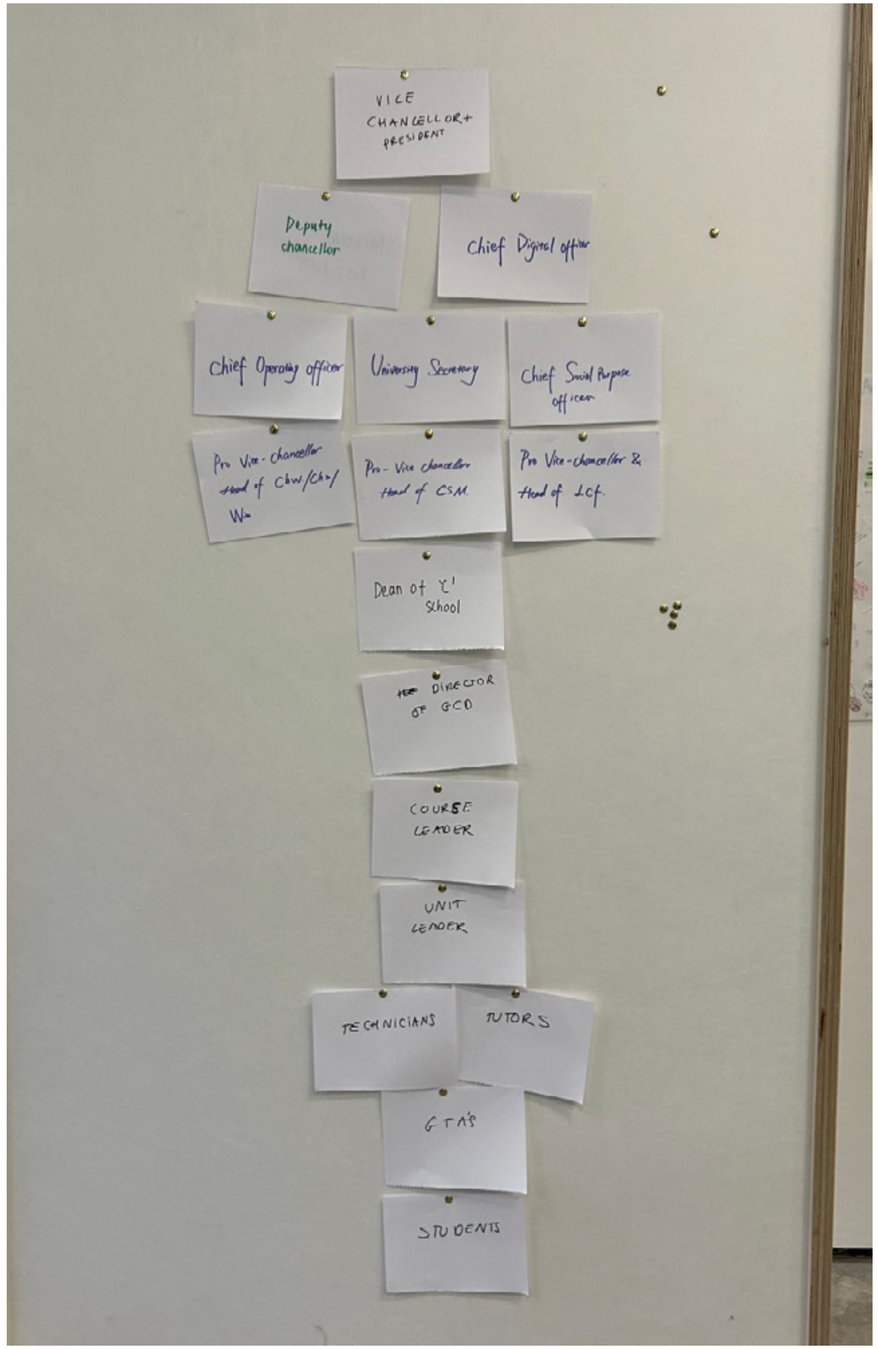
coo, university secretary + cspo

pro-vice chancellor

dean of ‘c’ school

gcd director / students

unit / course leader



Link to Padlet

What sorts Of activities Work with And against This rhythm ?

With

assessment schedules

applications for PIP, EC's, ISA's

assessment deadlines

standardised assessments

Against

flexible learning models

adaptive scheduling

adaptive learning techniques

unstructured time

Why it matters shifting from a general critique of scheduling to showing a barrier that makes academic success difficult for disabled students.

Taking a critical approach to institutional time, particularly how medical administration keeps students with disabilities or chronic illnesses stuck in a cycle. Adhering to deadlines while also waiting for help. This delay in medical help highlights
a consequence of normative scheduling into an academic rhythm.

How can we Critique this System ?

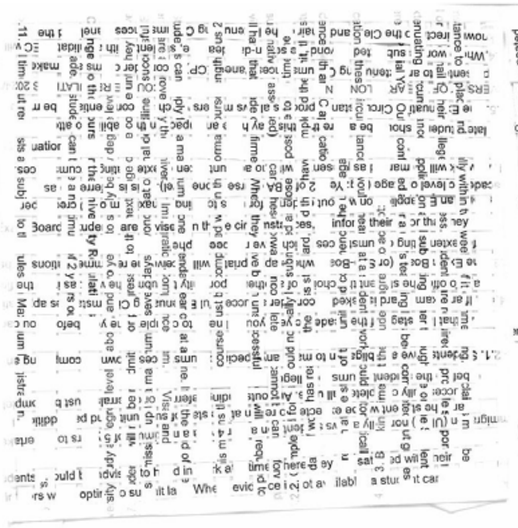
{Redefining pre-defined messaging}
Directly intervening, reframing and consequently subverting the institution's own language and material around medical help & time outs through iterating.

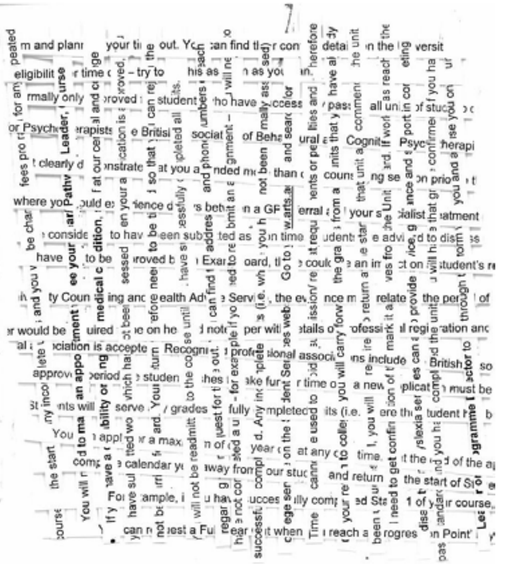
Open ended exploration of the subject to collect a series of results (quickly, unpolished, with urgency) building on the skills we have learned through iterative processes.

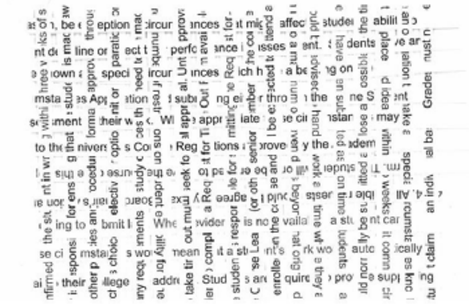
Think of a method you would like to explore and make together.

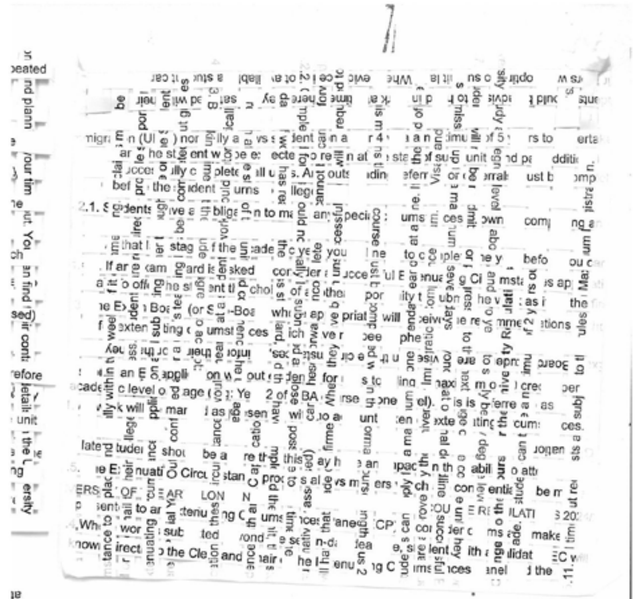
Link to Padlet

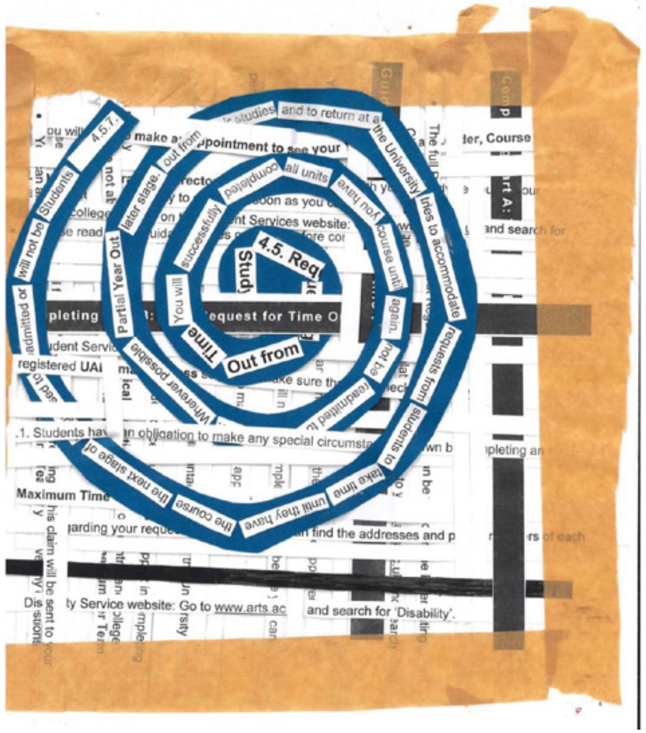
Process-1











Weaving challenges academic structures, timelines, capitalistic rhythms by emphasising craft, slowness & layers. It is used to resist normative scheduling.

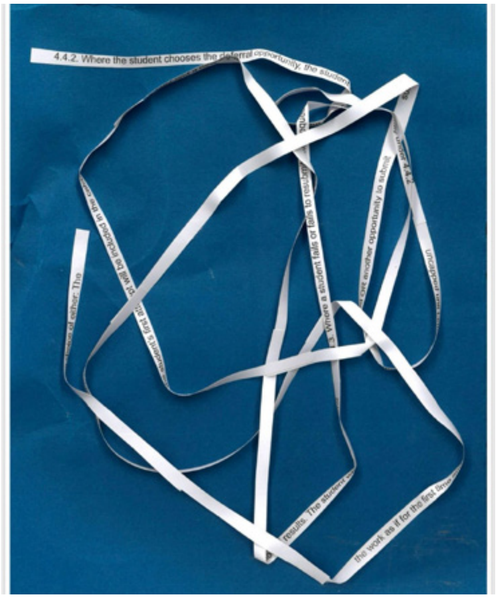
Weaving strips of documents (EC guidelines, evidence requirements, response timelines) together show how these overlapping systems create confusion rather than clarity.

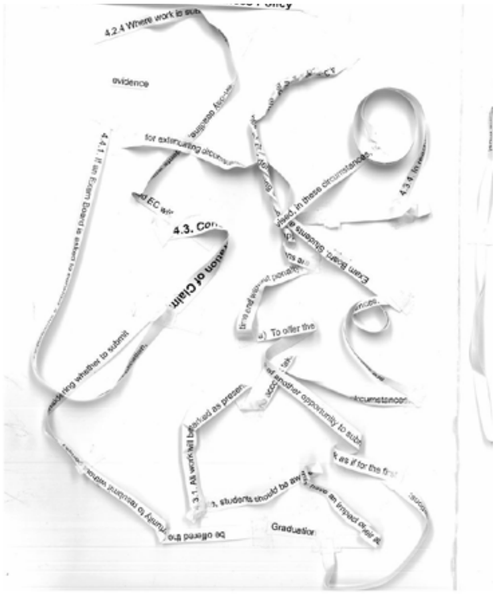
Process-2

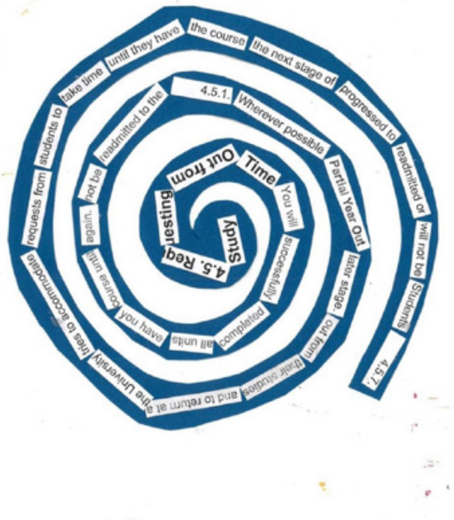
Unraveling time waiting for support can feel like a bureaucratic loop; time might not flow logically. This waiting time stutters, stalls and drags.

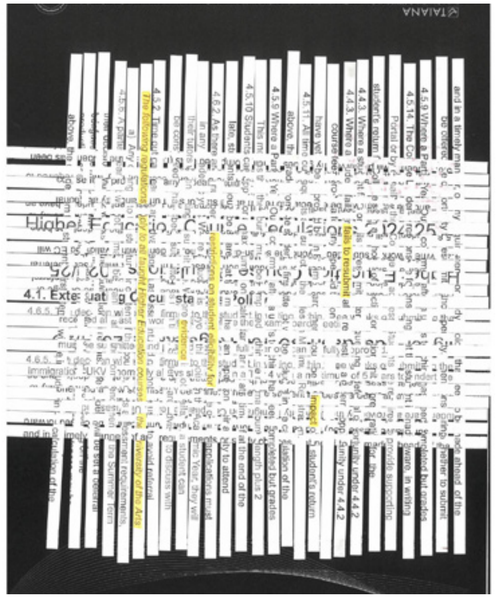
notify - submit - wait - provide evidence - wait while adhering to deadlines.

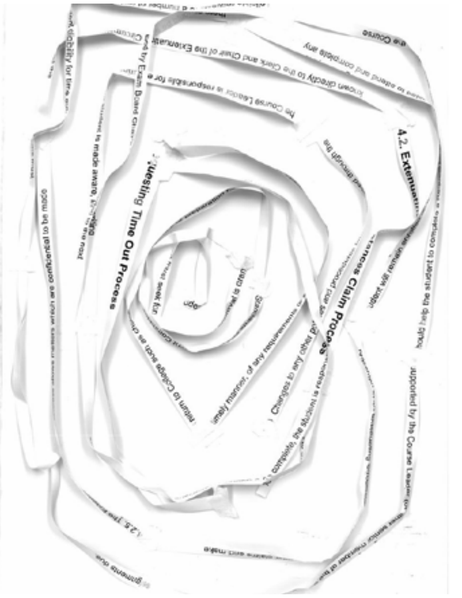
Using blackout poetry to reveal alternative messaging that can be poetic, reflective and ambiguous. Both the old and new meanings coexist within all the admin-speak.











Reference

Srinidhi Raghavan

The value of 'crip time': Discarding notions of productivity and guilt, to listen to the rhythms of our bodies
2020

Words by Ellis Tree

On Crip Time challenges the ableist systems that are “preventing disabled people from accessing the future”
2024

Taraneh Fazeli

Notes for “Sick Time, Sleepy Time, Crip Time: Against Capitalism’s Temporal Bullying” in conversation with the Canaries
2016

Tao Fei

In the Waiting Room: The Sticky, Slippery Duration of “Sick Time”
2019

Carolyn Lazard

CRIP TIME
2021

Emily J. Abrams, Colleen E. Floyd, Elisa S. Abes

Prioritizing Crip Futures: Applying Crip Theory to Create Accessible Academic Experiences in Higher Education
2024

Meredith Farkas

Queer Time, Crip Time, and Subverting Temporal Norms
2024

Museum für Moderne Kunst

CRIP TIME (exhibition)
2021

Black Quantum Futurism (n.d.)

Time Zone Protocols [Website]

Alison Kafer

Moving Feminist Disability Studies into the Crip Future
2013

Written by Valentina Di Liscia

Mira Schor’s Critical Annotations of the New York Times’
2020

Johanna Hedva

Sick Woman Theory
2020

Alison Kafer

Feminist, Queer, Crip

KILLING RHYTHMS (with Kaiya Waerea)
Cicely, Henry, Ken, Neyomi

Unit1-5 Methods of contextualising

L.ZHAOXUAN

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Goals for Week Two

01 / making the institution/context more explicit and present in the methods.

02 / thinking through how the audience will engage with the publication. replicating the feeling of discomfort & difficulty felt reading the website into the physical.

03 / exploring further with weaving as a practice.

Printed Documents Reimagined, Reassembled & distorted

01 / we put together an excessive number of weaved pages and turned it into a concertina. It becomes a performance of frustration, a physical manifestation of time lost in the waiting and the seeking of help. It feels like a never ending process.

02 / erasure of agency: as the deeper they go, the more uncertain the process feels.

03/ failure of language: bureaucratic text dissolves into abstraction, leaving nothing concrete to hold onto.

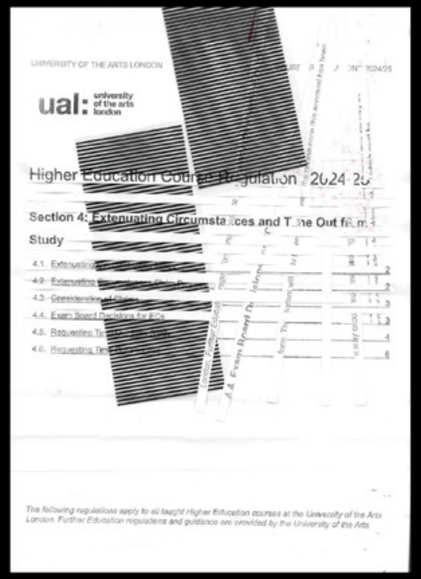
By interacting With it making it Translate abstract Frustrations into Discomfort

01 / bureaucracy is often an invisible burden, something experienced in isolation behind screens and paperwork.

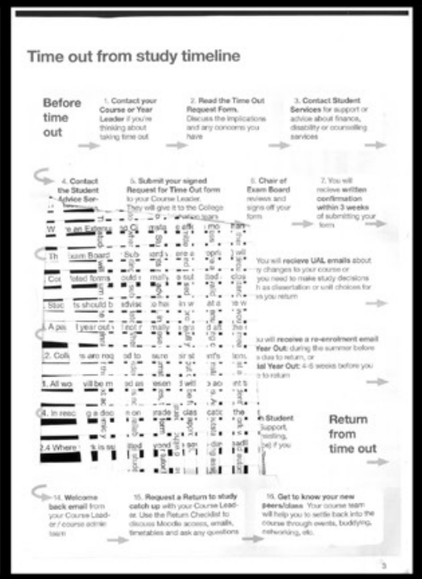
02 / thus, the performance attempts to mimic the difficulty of the document into something chaotic, uncontained and impossible to ignore.

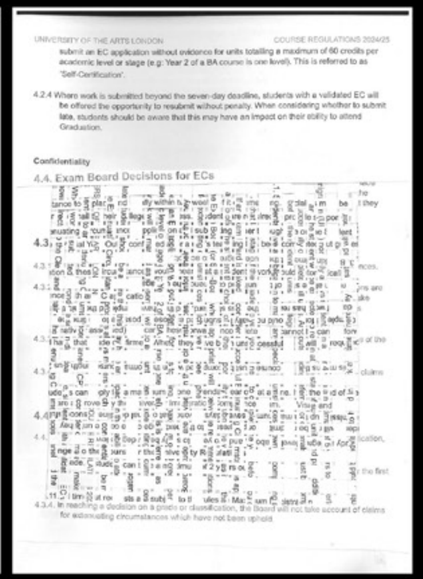
https://youtu.be/yfW8dB_webY

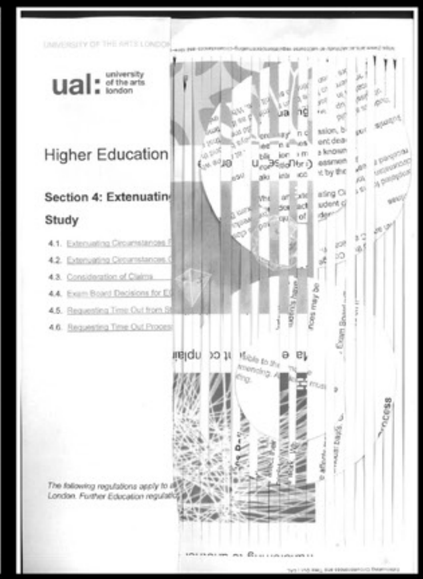
Process-1

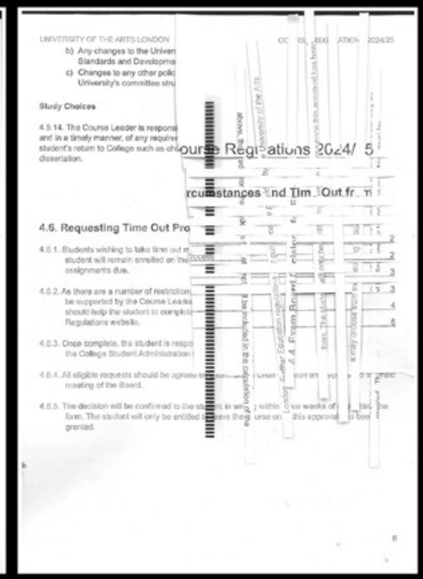

UNIVERSITY OF THE ARTS LONDON
ual: university of the arts london
Higher Education Course Regulation 2024-25
Section 4: Extenuating Circumstances and Time Out from Study
The following regulations apply to all taught Higher Education courses at the University of the Arts London. Further Education regulations and guidance are provided by the University of the Arts

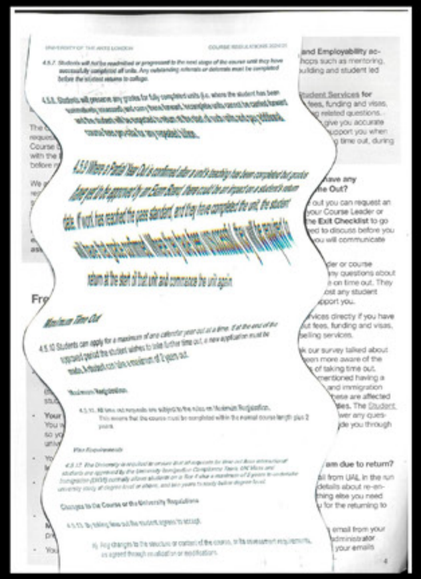

How it works
You need to apply and:
explain what has happened
provide evidence of what has happened (such as medical certificates)
talk to us to help us understand the challenges you're facing and work out the best option for you.

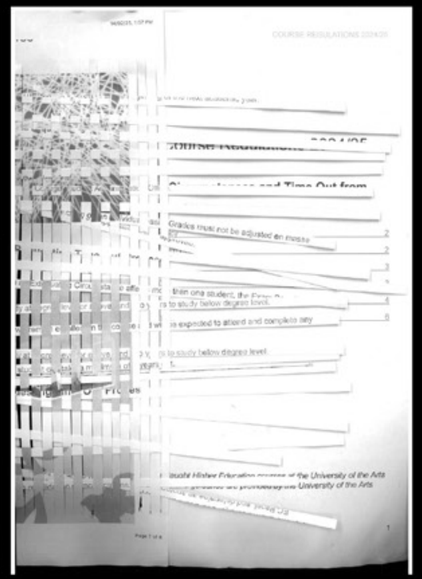

Time out from study timeline
Before time out
Return from time out

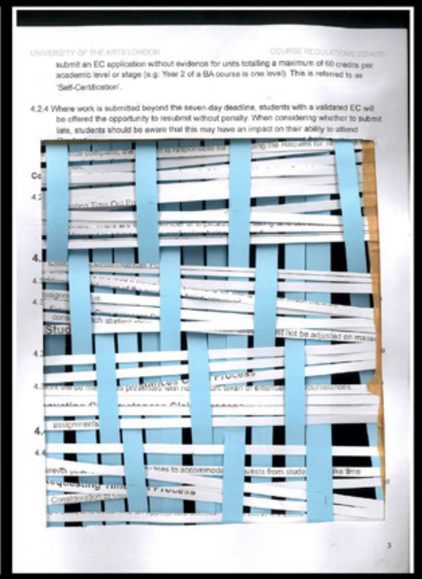

UNIVERSITY OF THE ARTS LONDON
COURSE REGULATIONS 2024/25
4.4. Exam Board Decisions for ECs


ual: university of the arts london
Higher Education
Section 4: Extenuating
Study


UNIVERSITY OF THE ARTS LONDON
4.5. Requesting Time Out Pro

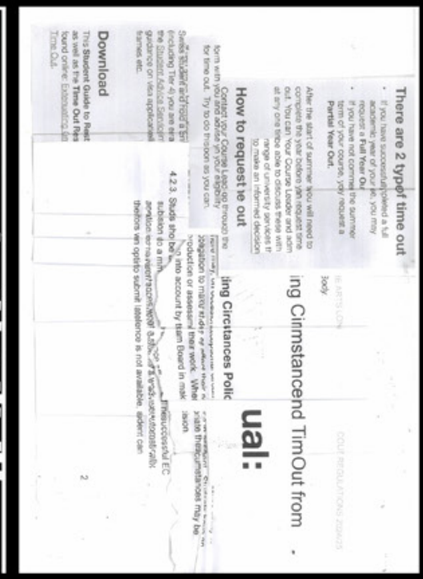

UNIVERSITY OF THE ARTS LONDON
COURSE REGULATIONS 2024/25


COURSE REGULATIONS 2024/25

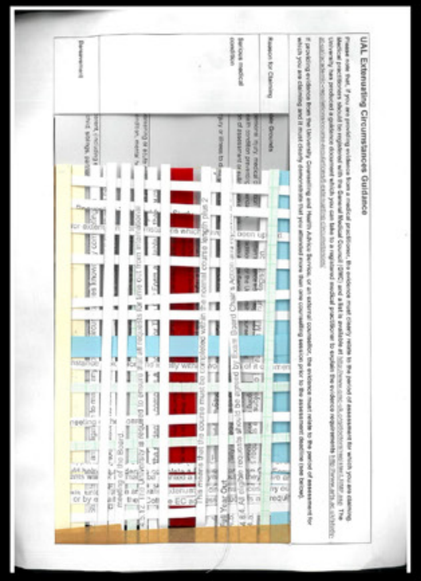

UNIVERSITY OF THE ARTS LONDON
COURSE REGULATIONS 2024/25
submit an EC application without evidence for units totalling a maximum of 60 credits per academic level or stage (e.g. Year 2 of a BA course is one level). This is referred to as 'Self-Certification'.
4.2.4 Where work is submitted beyond the seven-day deadline, students with a validated EC will be offered the opportunity to resubmit without penalty. When considering whether to submit late, students should be aware that this may have an impact on their ability to attend

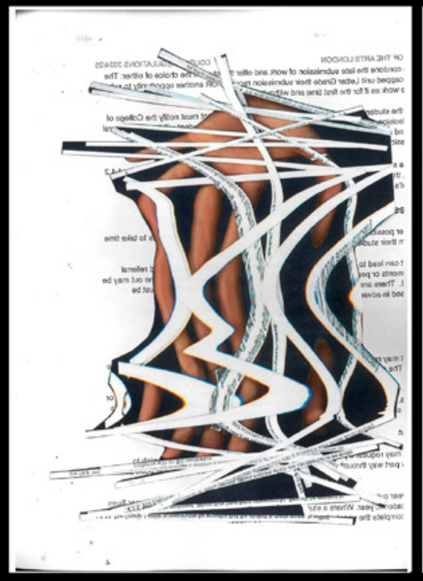

Changes to your course and UAL regulations
Have you taken time out before?
Have you had to repeat any units in the past?
Do you have any outstanding work to submit?
Are you studying on a visa?

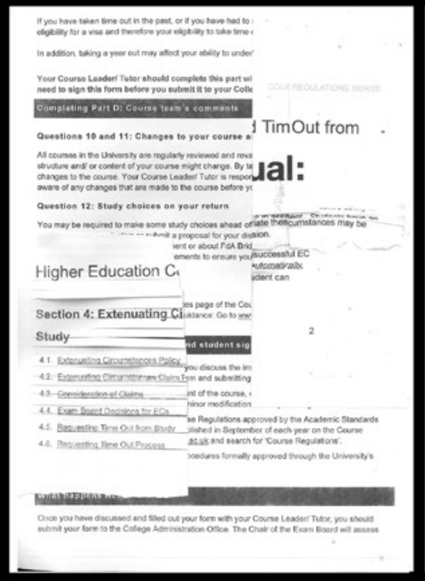

UNIVERSITY OF THE ARTS LONDON
COURSE REGULATIONS 2024/25
ual: university of the arts london

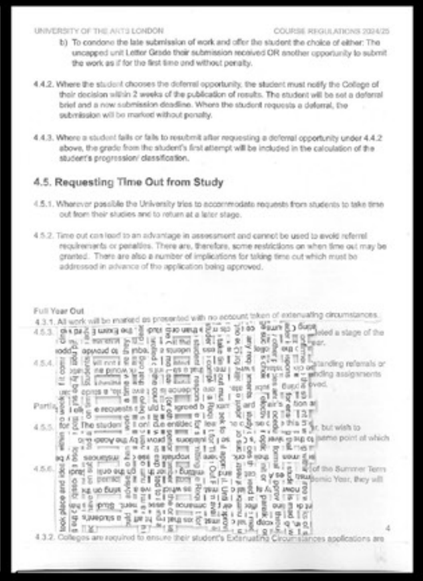

Download
How to request a time out
There are 2 types of time out
ual:

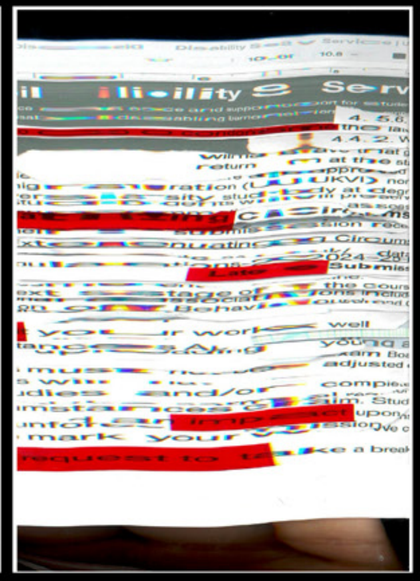
Process-2

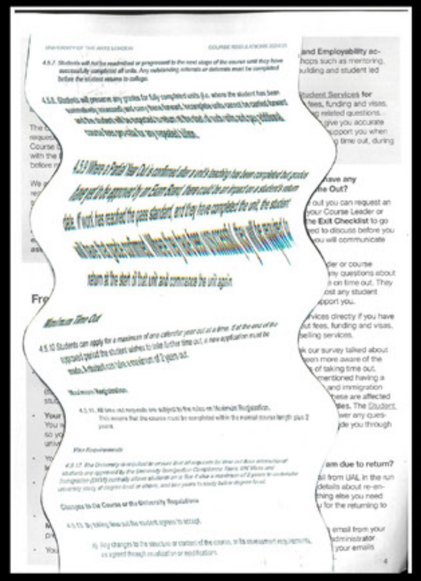


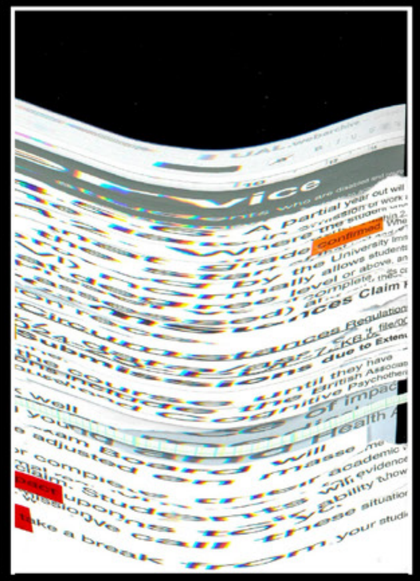












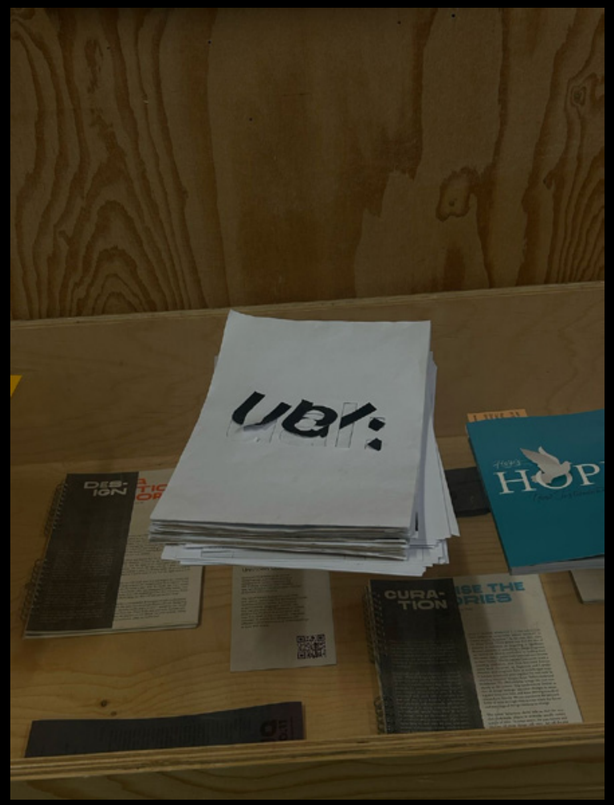
We continued to experiment with visual representations, trying to twist, distort, and visualize the chaos and complexity of the documents in forms that were difficult to read and understand.

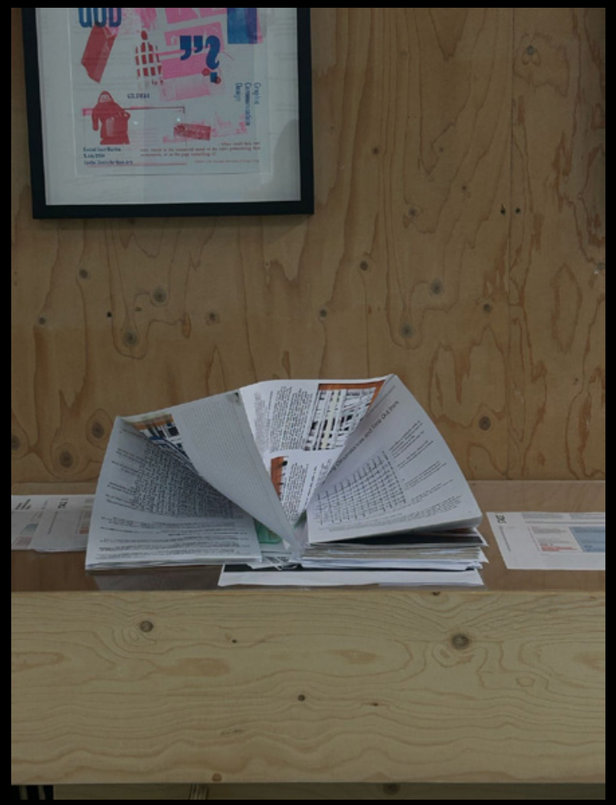
In the process, we complete rounds of iterations by deconstructing and weaving the documents, then combining and printing them into new documents. We attempted to restore the documents to their original form through weaving and deconstruction.

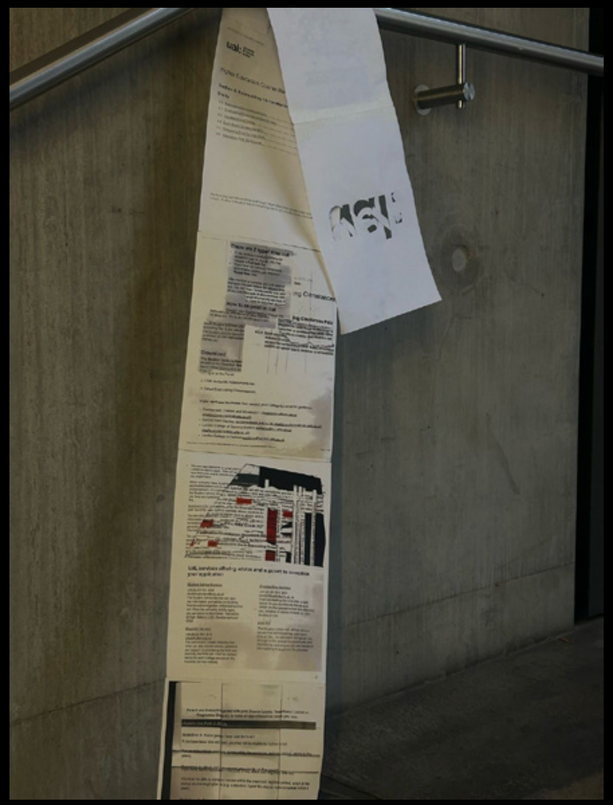
Final Outcome 1

In the end, we put all these ‘new’ documents together in a collection, like a concertina, and reweave the UAL logo because it's not what it looks like, and behind it is a long list of rules and regulations that are sometimes not very humane or very reasonable. It's long and difficult to understand

https://youtube.com/shorts/yGiC_ApS28w



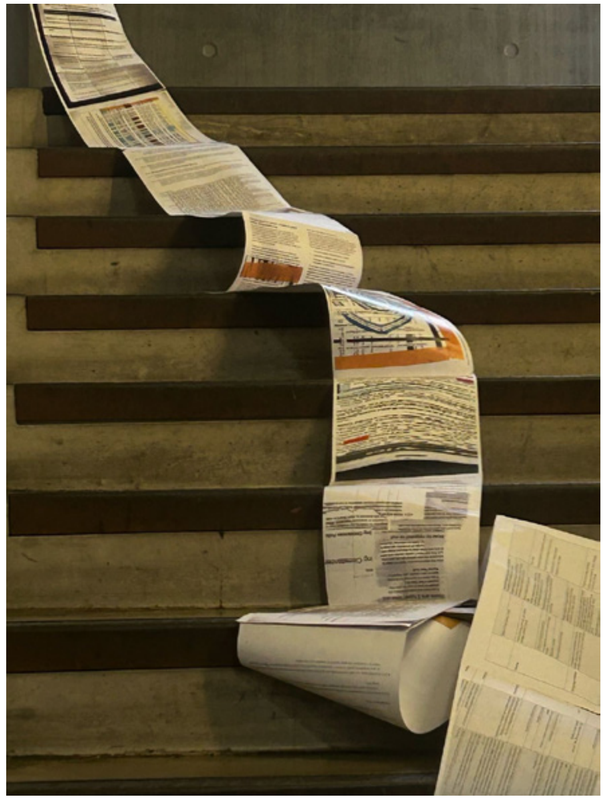


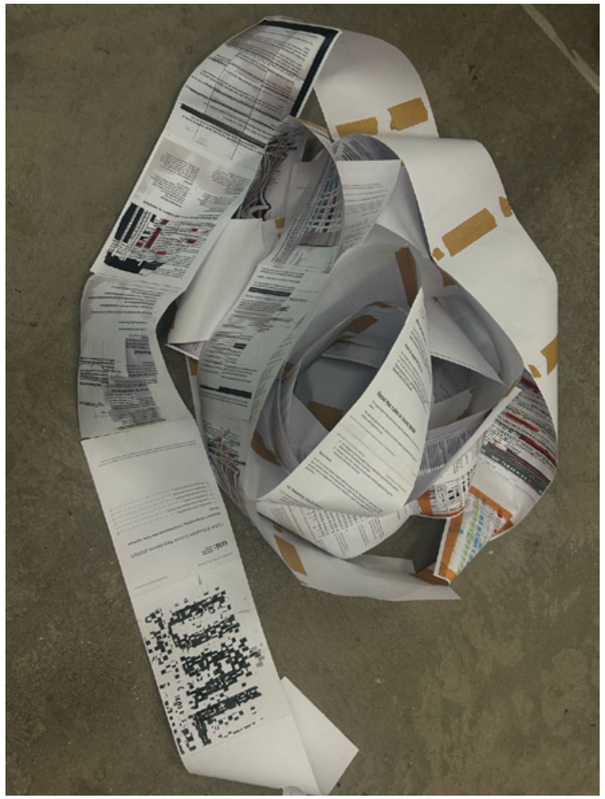


Final Outcome 1

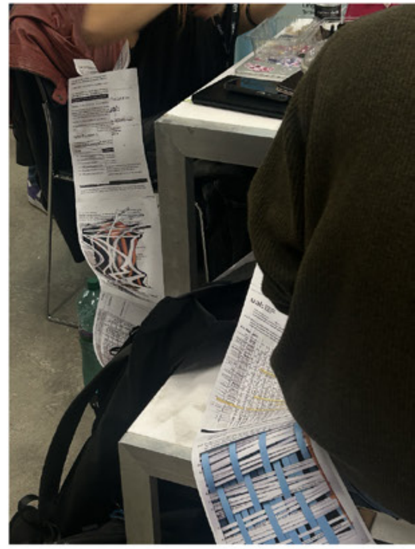
We made some attempts in the school to try to interpret these documents growing and spreading around like Climbing plants in the environment and firmly attached to the system and becoming difficult to remove. Everyone in this context is aware of its existence, but it is difficult to make some changes to it.

https://youtube.com/shorts/k77F_g4X4iI





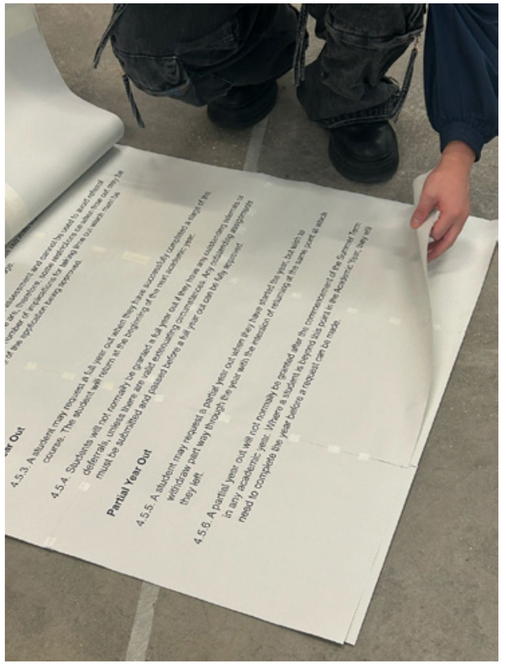
Final Outcome 1

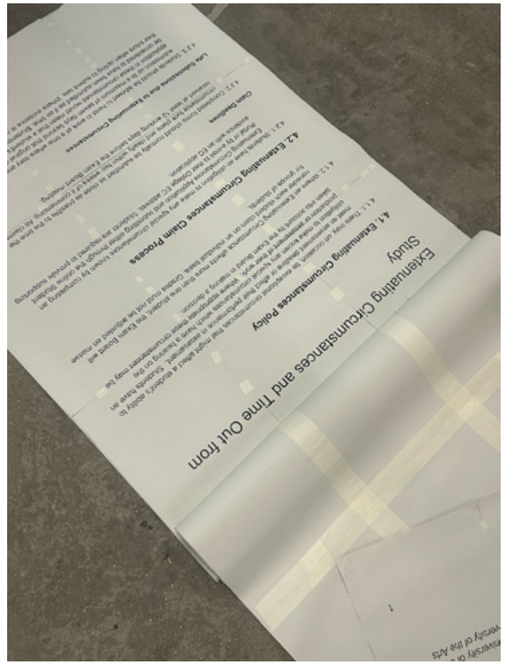


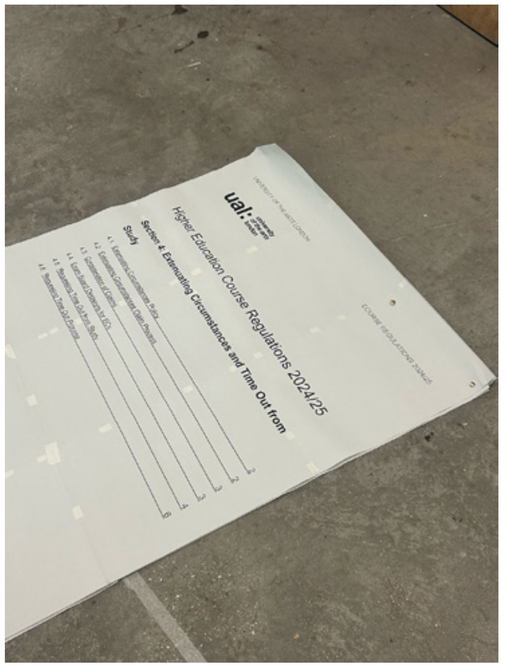
Printing the documents at an exaggerated scale transformed them from informational texts into excessiveness.

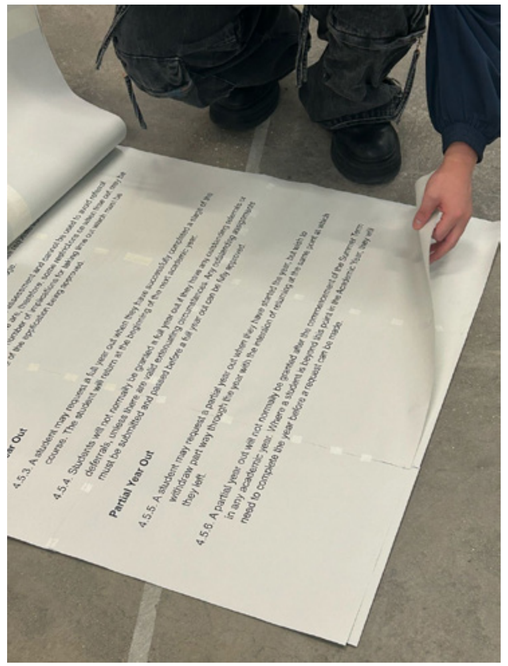
01 / experimenting with the the scale makes the text difficult to read and overbearing and further emphasises the excessiveness of the process.

02 / the scale reflects how institutional language is not neutral—it carries weight, dictating what is valid and standard.

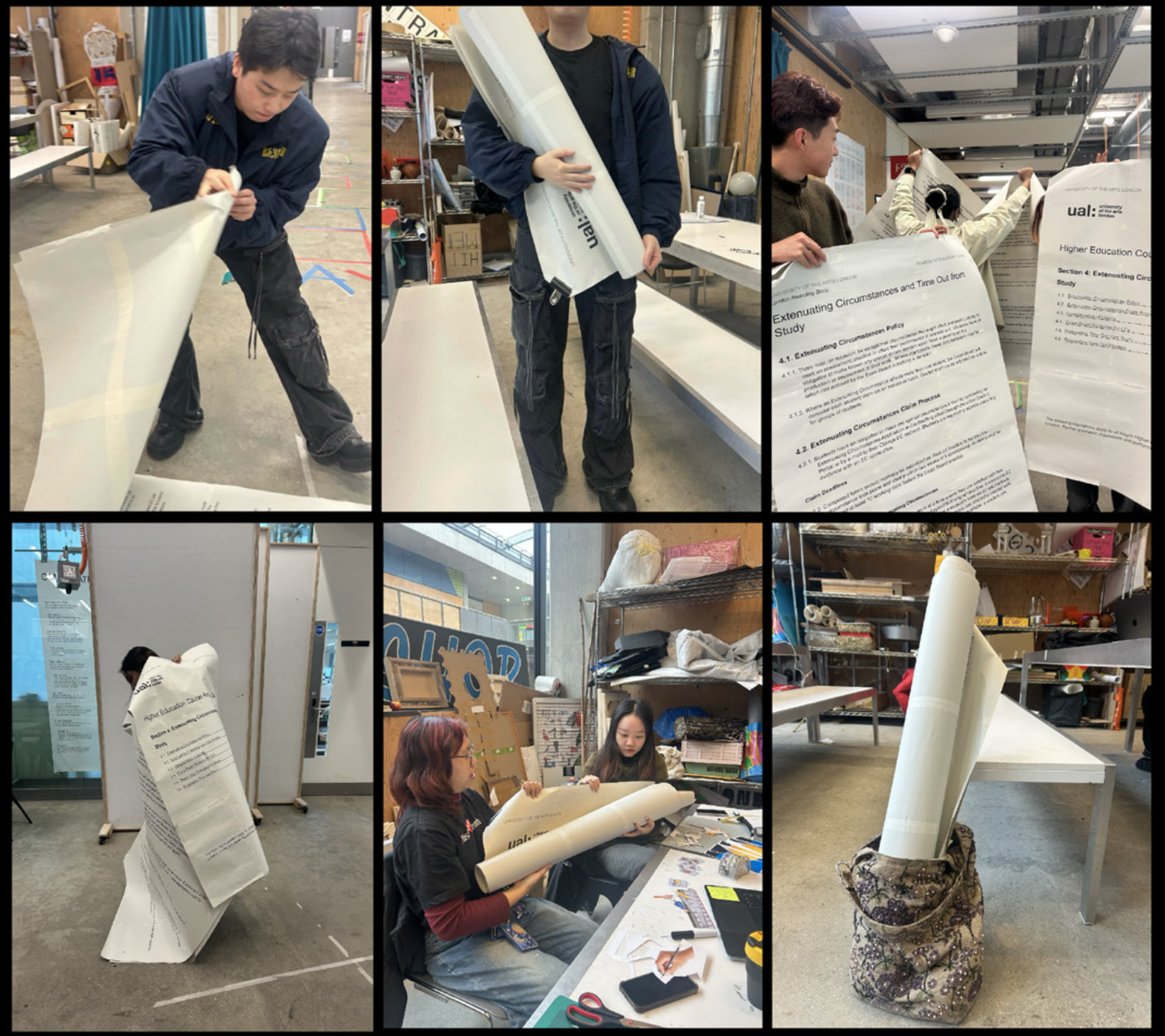








Final Outcome 2



Both approaches make the text physically difficult to engage with, recreating the frustration of trying to decipher the language and process to receive support in real life.

By distorting scale, readability, and interaction, we recreate the feeling of engaging with these institutional documents.

Thus, the act of reading itself becomes obstructive. And, the harder one tries to engage, the more difficult and exhausting the process becomes.