

Project 2

# The Allegory: Virtual Reality experience of the journey from the Allegory of Cave

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# Approval Sheet

The Interaction Design Project II titled  
“The Allegory: Virtual Reality experience of the journey  
from the Allegory of Cave” by Akvil Sakhare  
(Roll Number 156330013), is approved, in partial fulfillment  
of the ‘Master in Design’ Degree in Interaction Design at  
the Industrial Design Centre,  
Indian Institute of Technology Bombay.

Guide

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Chairperson

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Internal Examiner

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External Examiner

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Date

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# **Declaration**

I declare that this written document represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources.

I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission.

I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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# Acknowledgements

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A special thanks to all my classmates for all the motivation and support. Also a special thanks to Avinash Raj, Jr. M.Des. Animation, for the help in sketches.

Most importantly, my family for all their love, patience and encouragement.

Akvil Sakhare



# Abstract

The Allegory of the Cave is a theory concerning human perception which claims that knowledge gained through the senses is no more than opinion and that, in order to have real knowledge, we must gain it.

It describes a group of people who have lived chained to the wall of a cave all of their lives, facing a blank wall. The people watch shadows projected on the wall from objects passing in front of a fire behind them, and give names to these shadows. The shadows are the prisoners reality<sup>[14]</sup>. One of the prisoners escapes the reality of the cave and witnesses the reality outside. He begins to understand his new world, and sees that the Sun is the source of life and goes on an intellectual journey where he discovers beauty and meaning.<sup>[8]</sup>

This story has been narrated and interpreted in many forms over the years. This project is focused on creating a version of the journey of this story in virtual reality. The project proposes retelling of the story in a subjective manner so that the person experiencing it feels like he is going through the events in the story.

The project deployed as a virtual reality experience which people are invited to experience. The evaluation takes into account observations, feedback and suggestions for improvement from the visitors measuring the impact and fine-tuning the experience.



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# Introduction

## The Allegory of the Cave

In Plato's Republic, after the seventh volume, Socrates tells Glaucon about 'The Allegory Of The Cave'. Which is a theory concerning human perception. Which claims that knowledge gained through the senses is no more than opinion and that, in order to have real knowledge, we must gain it. It is a story in which Plato distinguishes between people who mistake sensory knowledge for the truth and people who really do see the truth. It goes like this:

## Outline of the story<sup>[8]</sup>

### The Cave

There is a cave, in which there are three prisoners. The prisoners have lived chained to the wall of the cave all of their lives, facing a blank wall. These prisoners have been here since birth and have never seen outside of the cave. Behind the prisoners is a fire, and between them is a raised walkway. People outside the cave walk along this walkway carrying things on their head including; animals, plants, wood and stone.

### The Shadows

So, imagine that you are one of the prisoners. You cannot look at anything behind or to the side of you – you must look at the wall in front of you. When people walk along the walkway, you can see shadows of the objects they are carrying cast on to the wall. If you had never seen the real objects ever before, you would believe that the shadows of objects were 'real.'

### The Game

Plato suggests that the prisoners would begin a 'game' of guessing which shadow would appear next. If one of the prisoners were to correctly guess, the others would praise him as clever and say that he were a master of nature.

### The Escape

One of the prisoners escapes from the bindings and leaves the cave. He is shocked at the world he discovers outside the cave and does not believe it can be real. As he becomes used to his new surroundings, he realises that his former view of reality was wrong. He begins to understand his new world, and sees that the Sun is the source of life and goes on an intellectual journey where he discovers beauty and meaning. He sees that his former life, and the guessing game they played is useless.

### The Return

The prisoner returns to the cave, to inform the other prisoners of his findings. They do not believe him and threaten to kill him if he tries to set them free.

## The Medium of Virtual Reality

VR is going to be the last medium in the history of mediums. This is because it's the first medium that makes the jump from our internalization of an author's expression of an experience, to our experiencing it firsthand<sup>[6]</sup>.

If we go back to the origins of mediums, by all best guesses, it starts around a fire, with a good story. A clan leader is telling a story about how he hunted. We hear his words and translate them into our own internal truths. The same thing happens when we look at the cave painting version of the story, the book about the hunt, the play, the radio broadcast, the television show or the movie. All of these mediums require what we call suspension of disbelief, because there's a translation gap between the reality of the story and our consciousness interpreting the story into our reality. The word consciousness is being used as a feeling of reality that we get from our senses experiencing the world around us.

Virtual reality bridges that gap. Now, you are hunting with the clan leader. Or you are the clan leader. In all other mediums, our consciousness interprets the medium. In VR, our consciousness is the medium. <sup>[6]</sup>

## Storytelling in VR

Stories are important because they are meaningful. They are meaningful because they are memorable, impactful and they personally connect. Meaning comes from the personal connection people feel when they are listening to the story<sup>[7]</sup>.

When we share a story, people are more likely to remember the message, be persuaded by it, feel personally connected to it. When content/data and stories are used together people are moved both emotionally and intellectually <sup>[7]</sup>.

Story told in VR makes the story ours or rather it creates subjective experiences from which we create our own stories.

## The Project

The project proposes a subjective experience of the allegory of the cave. Using the medium of virtual reality to create a journey of the prisoner who leaves the cave and witnesses different realities. Consciousness being the medium, the visual representation of the journey maps some ideas representing how the faculty of human consciousness matures.

Represented as series of events that occur in on journey, the experience tries to convey the ideas

# Research

## The Story

The Allegory of the Cave has been told, written and interpreted in many forms over many years. I first came across it when a friend of mine told me the story seven years ago. For the project I went through books and blogs, listened to audio sources and saw videos on the topic. But the main approach that led to development of the story was me telling the story to other people. I narrated this story over a hundred times and a minor detail was added with each telling. Such events were occasionally followed by discussions that added to my understanding of the meaning of the story.

## Plato's Simile of Light. Part II. The Allegory of the Cave by A. S. Ferguson<sup>[1]</sup>

The main task of this paper was to find the meaning of the cave. It states that the Cave is an allegory of human nature. The states described in the allegory are who seek goods other than the supreme Good and have their hearts set on the shadow-play and those who have been dragged to the sunlight and set before the shadows of real things. It concludes that last test of the philosopher-king must be the power to discriminate between the ends of the cave and the true end. It gives a interpretation of the allegory and makes space for representation of the interpretation.

## Virtual reality applications in forensic psychiatry by Massil Benbouriche<sup>[3]</sup>

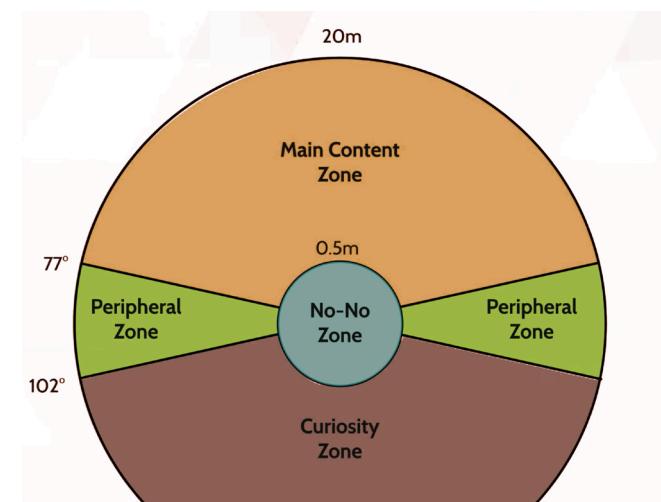
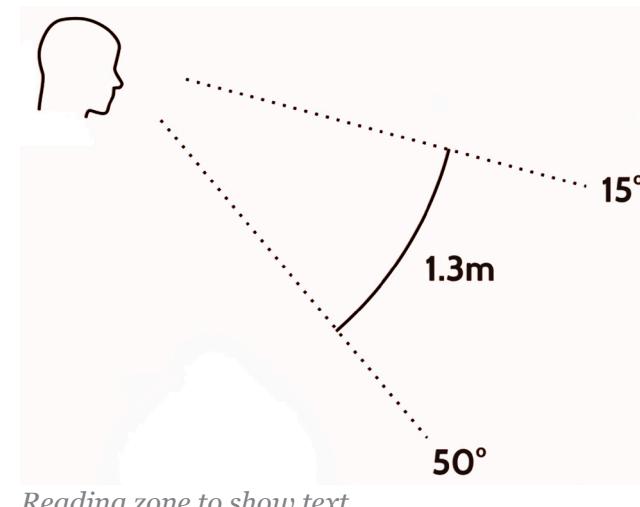
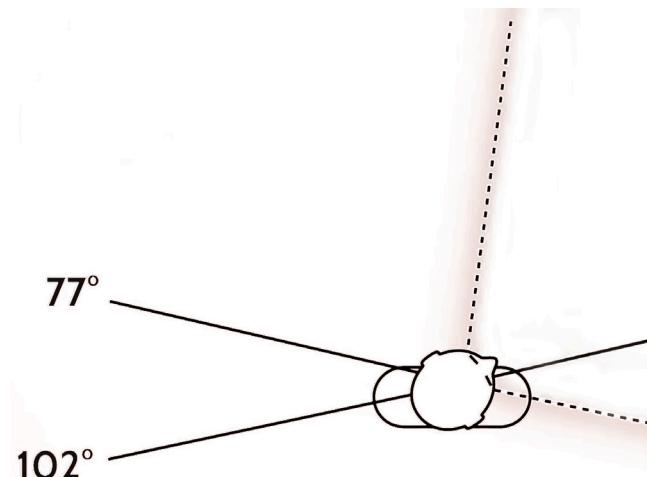
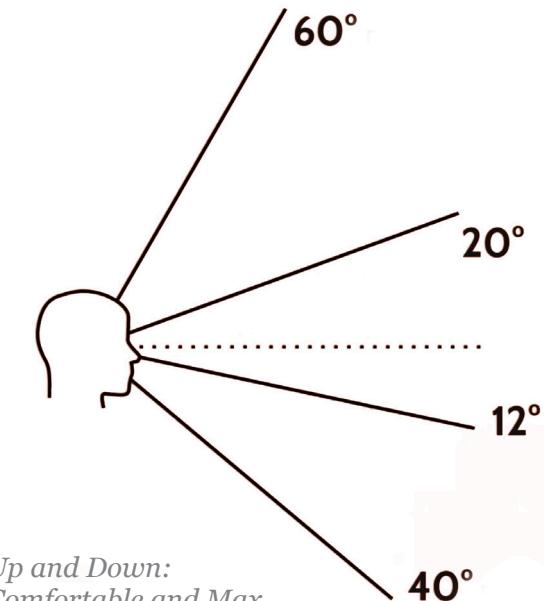
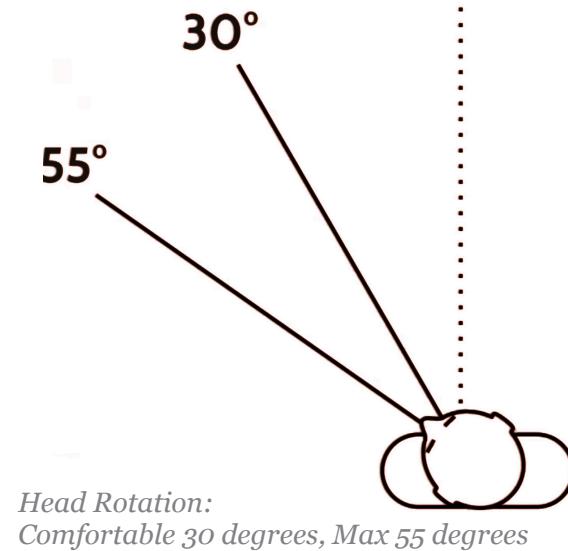
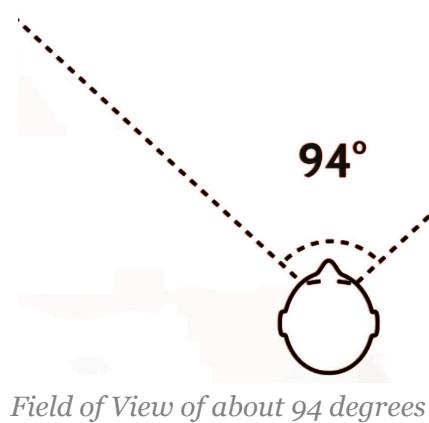
Forensic psychiatry is the field whose expertise is the assessment and treatment of offending behaviours, in particular when offenses are related to mental illness. This paper introduced VR applications in the context of forensic psychiatry. Where VR is used to generate specific environments, associated with a high experimental control on generated simulations for sexual offenders. These simulation patterns correlate with erectile response and therefore could be linked to the self-regulation of sexual arousal. VR allowed for better distinction of sexual preference profiles, as compared to the standard audio stimuli most commonly used in research and clinical settings. This paper gave an insight in the application of VR for mental impact and behavioural change.

## Visual Design Methods for Virtual Reality by Mike Alger<sup>[4]</sup>

This paper presents some pre-visualization design methods for volumetric user interfaces and experiences within the larger scope of a virtual reality operating system. It presents an ergonomic system to present content in space called content zones. The idea of content zones based on visual ergonomics worked well for this kind of VR experience where the user is not really expected to physically move much. In fact the movement of the chair where the experience was presented was restricted by rope to maintain the essence of chained prisoner.

## Visual Ergonomics

Visual Ergonomics and the content zones drew boundaries for content creation. The guidelines were most useful in the use and placement of text<sup>[4]</sup>.



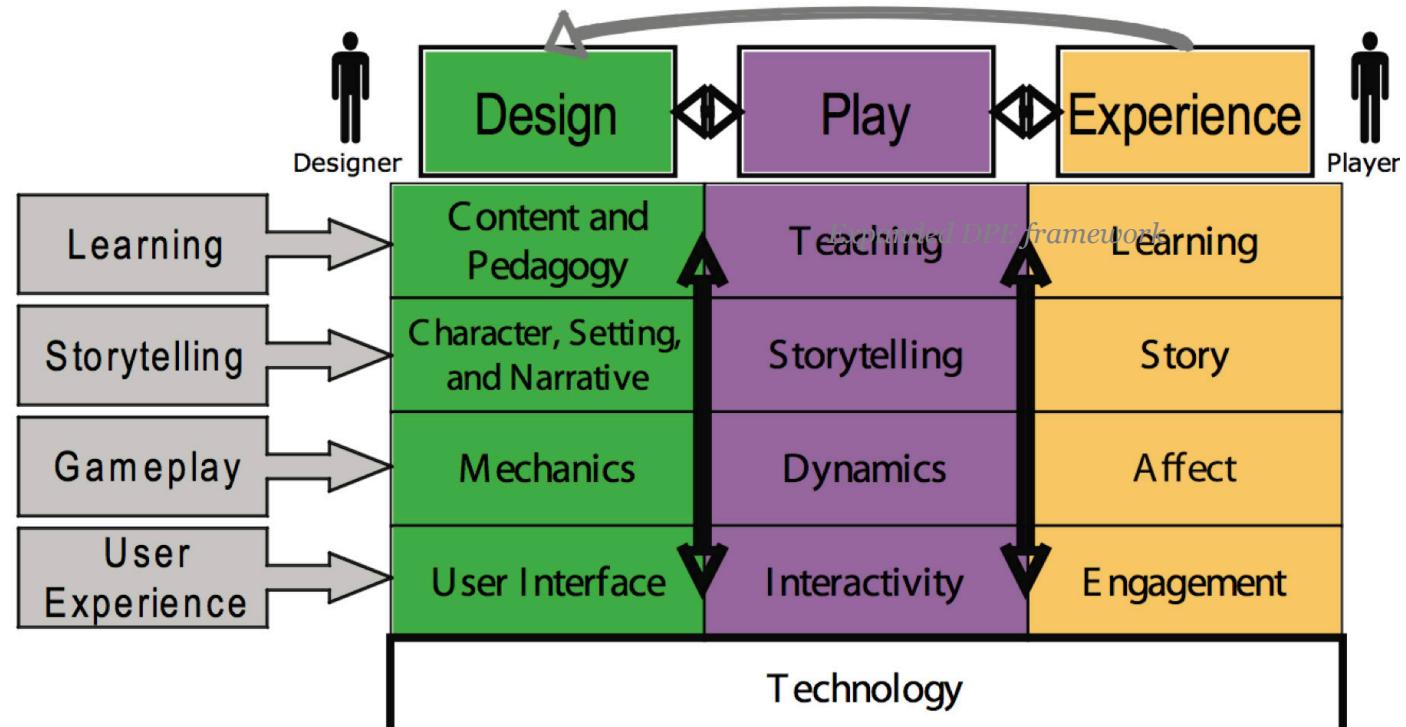
# Structure of the Approach

## The Design, Play, and Experience Framework by Brian M. Winn<sup>[5]</sup>

The design, play, and experience (DPE) framework provides a formal approach to designing the learning, storytelling, game play, user experience, and technology components of a serious game.

The framework provides a common language to discuss the design of the story, a methodology to analyze a design, and a process to design.

It helps to give a structure to the approach of designing the experience.



*Expanded DPE Framework*

Source: *The Design, Play, and Experience Framework*,  
Brian M. Winn

# Structure of the Content

## Vastusutra Upanishad by Sarma S. & Baumer B. [2]

The rich tradition of Indian classical sculpture and religious representational art is based on the visualization principles laid down in ancient texts. The procedure of form creation and formal visualization of the formless, the invisible, and the unmanifest, is given in Vastusutra Upanishad, one such ancient text.

The principle/phenomenon to be visualized has no form – an image is created to express the qualities and attributes of that principle/phenomenon so that it can be seen. The image is both a representation and an aid in understanding the nature of the principle.<sup>[15]</sup>

The story is full of meaning and the medium demands a visual representation of the story. The visualisation procedure given in vastusutra upanishad maybe considered as the basic framework to create the content in a systematic manner.

*The Visualization Procedure according to  
Vastusutra Upanishad<sup>[15]</sup>*

Realization of the principle to be visualized  
(Understanding it completely)

Verbal Articulation of the attributes

Meditation of the attributes and  
generation of mental image

Projection of mental image  
on a visual grid-field

Making of the Basic Image

Enhancement of the basic image  
through addition of attributes and details

Final Visualized Image

# Design Process

## Storyboard

After writing the basic outline of the story sketches of the scenes and events of the story were made on paper and a basic storyboard was created.



Initial storyboard of the story

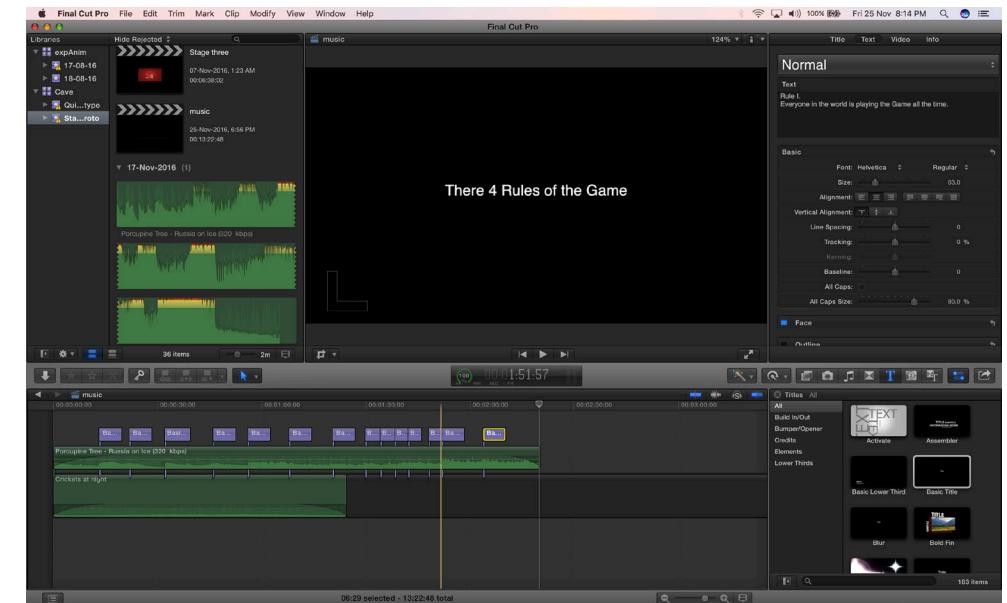
## Timeline



Final timeline of the experience

## Video Prototype

After the basic visual story was laid out by the storyboard, a video prototype was made using video footage that resembled the actual scenes.



Timeline of the story created in Final cut pro using video footage shot using mobile camera.

# Initial Approach

## The Meaning of the Allegory

### Principles and Attributes

*Existence*: Existence is, it's neither true or false.

*Reality*: Reality is a representational property of existence.

*Truth*: Truth is not a property of existence, it is a property of representation.

*Human Being*: Being who's essence is pursuit of truth.

## Context

To know a thing is to have an essence of it.

Essence precedes existence.

Existence presupposes truth.

Truth represents essence.

If we know the essence, we know the truth.

Pursuit of truth means Pursuit of accurate depiction of Reality.

When a representation depicts reality accurately then we can attribute the 'quality of truth' to that representation. Truth represents reality accurately.

## Metaphor

Our nature is not immediately revealed, it is disclosed to us.

Rather, we must reflect to understand this nature.

True nature is covered up by idle talk.

I do not get to choose my existence and am thrown into the world.

It already has projected projections, projected by society in general and...

World makes us follow that projection by idle talk.

It works as it helps transverse the everyday, provides an easy way out.

## The Story was divided in following parts:

1. CINEMA THEATER
2. THE MODEL OF CAVE
3. FIREFLY
4. WALK
5. WATER
6. WALK BACK
7. CAVE
8. CINEMA THEATER

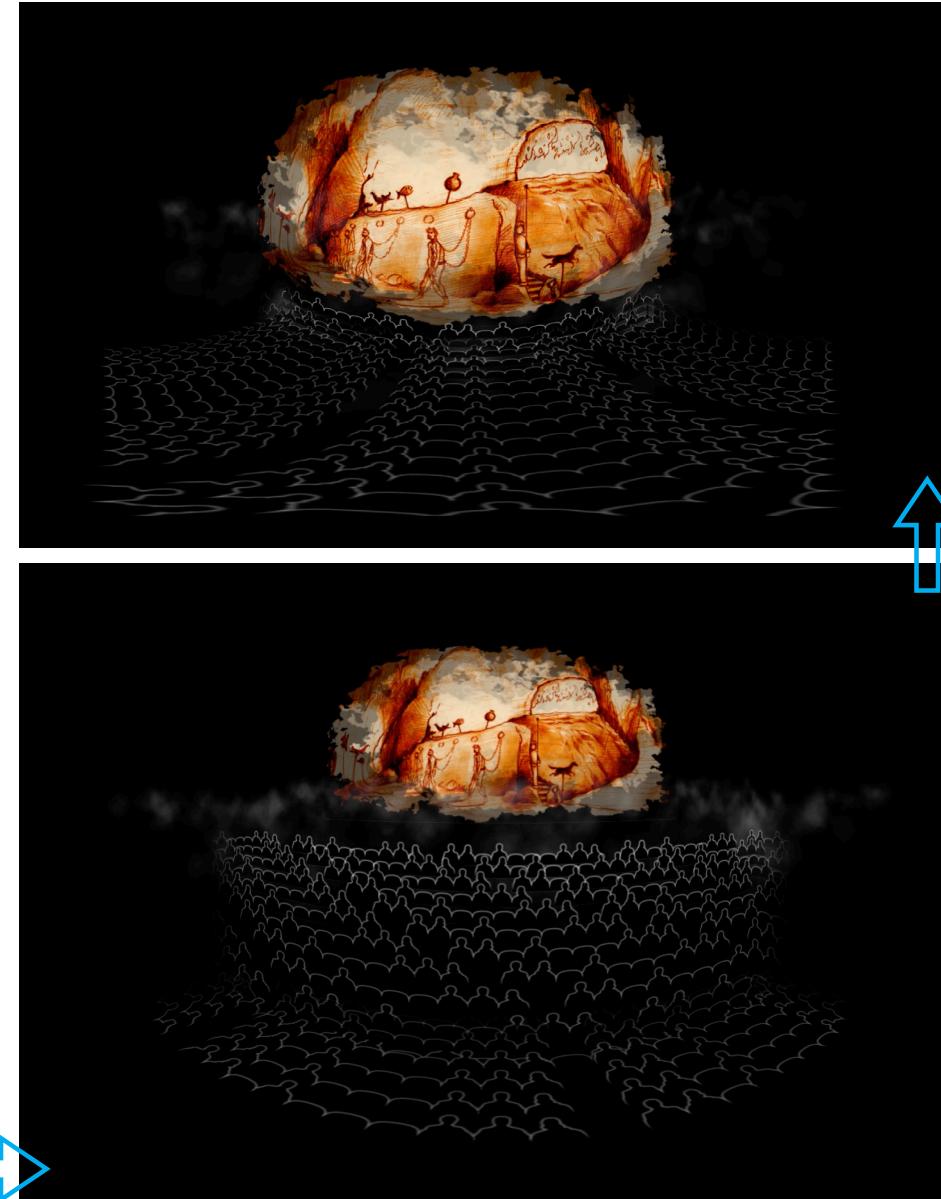
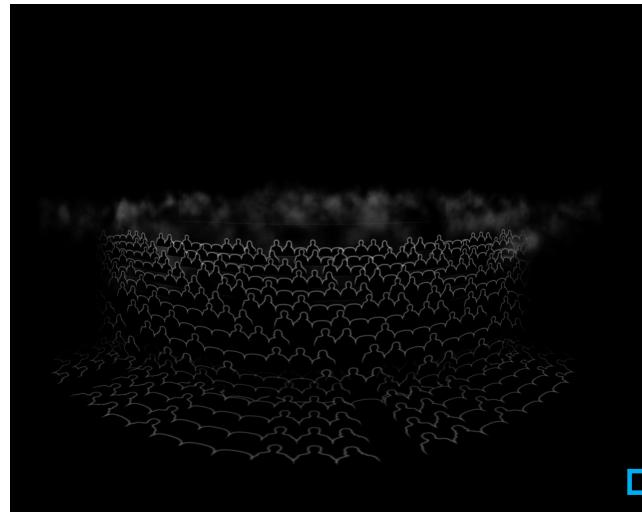
Each chunk would act as an event that the user could build story upon. What follows in the outline of the experience based on this approach.

### Cinema theater

You are sitting in a dark movie theater in such a way that all you can see is the screen—no other seats, no other moviegoers. (Black silhouettes)

There is a screen in front of you.

When you play the screen begins to burn from the centre. Slowly the fire spreads all around you.



Beginning screens  
of the experience.

## The concept model of cave

### NARRATOR

Human beings living deep inside a cave, they have been here, chained since childhood. Their legs and necks are chained so that they cannot move. Not only are their limbs immobilized by the chains, their heads are chained as well so that their eyes are fixed on a wall.

They can only see before them, being prevented by the chains from turning round their heads. They have always lived here and don't know anything about the outside world. There is no natural light in this cave. The walls are damp and dark.

Above and behind them a fire is blazing at a distance. The prisoners see only their own shadows, or the shadows of one another, which the fire throws on the opposite wall of the cave.

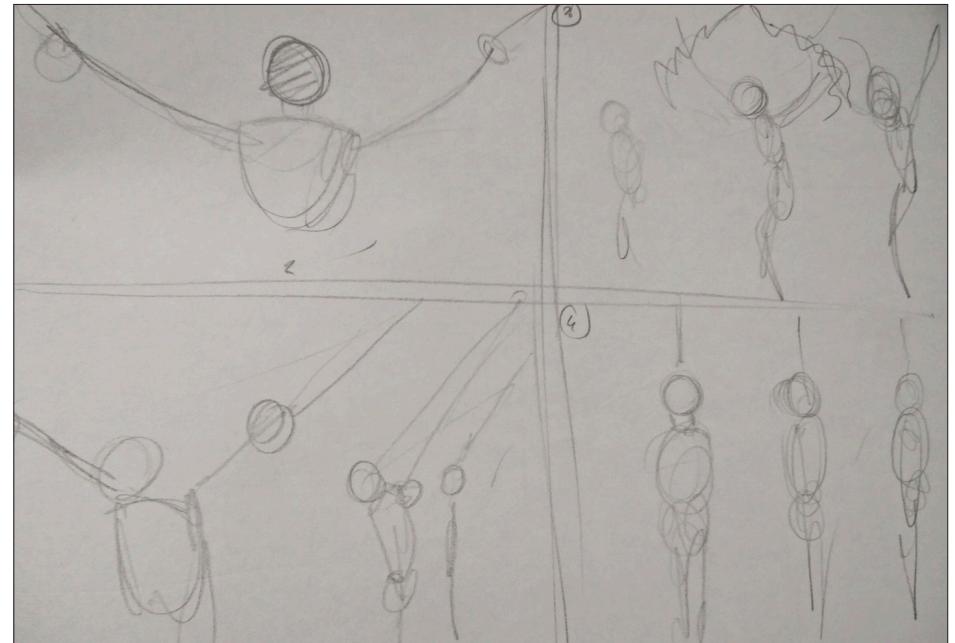
Between the fire and the prisoners there is a raised walkway; Do you see, men passing by carrying all sorts of objects. These shapes cast shadows on the wall, which occupy the prisoner's attention.

The cave dwellers get fascinated by these shadows. They assume that these shadows are real and that if you pay a lot of attention to them you'll understand and succeed in life. They don't of course realise that they are looking at mere phantoms.<sup>[16]</sup>

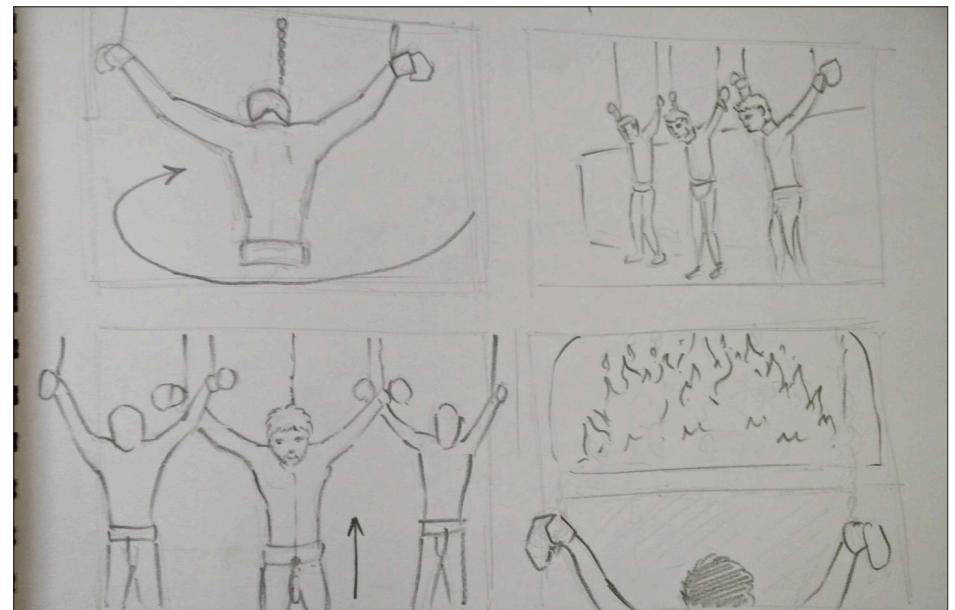
The prisoners engage in a game – naming the shapes as they come by. They converse with one another and believe that they are naming what was actually before them. They chat about shadowy things enthusiastically and take pride in their sophistication and wisdom.

And you are sitting here, watching it, completely absorbed and believing, this is all there is to life.

When one of the shape-carrier speaks, an echo against the wall causes you to believe that the words come from the passing shadows. To you, the truth is literally nothing but the shadows. The images on the screen are reality. That's what life is.



*Ideation through sketches*

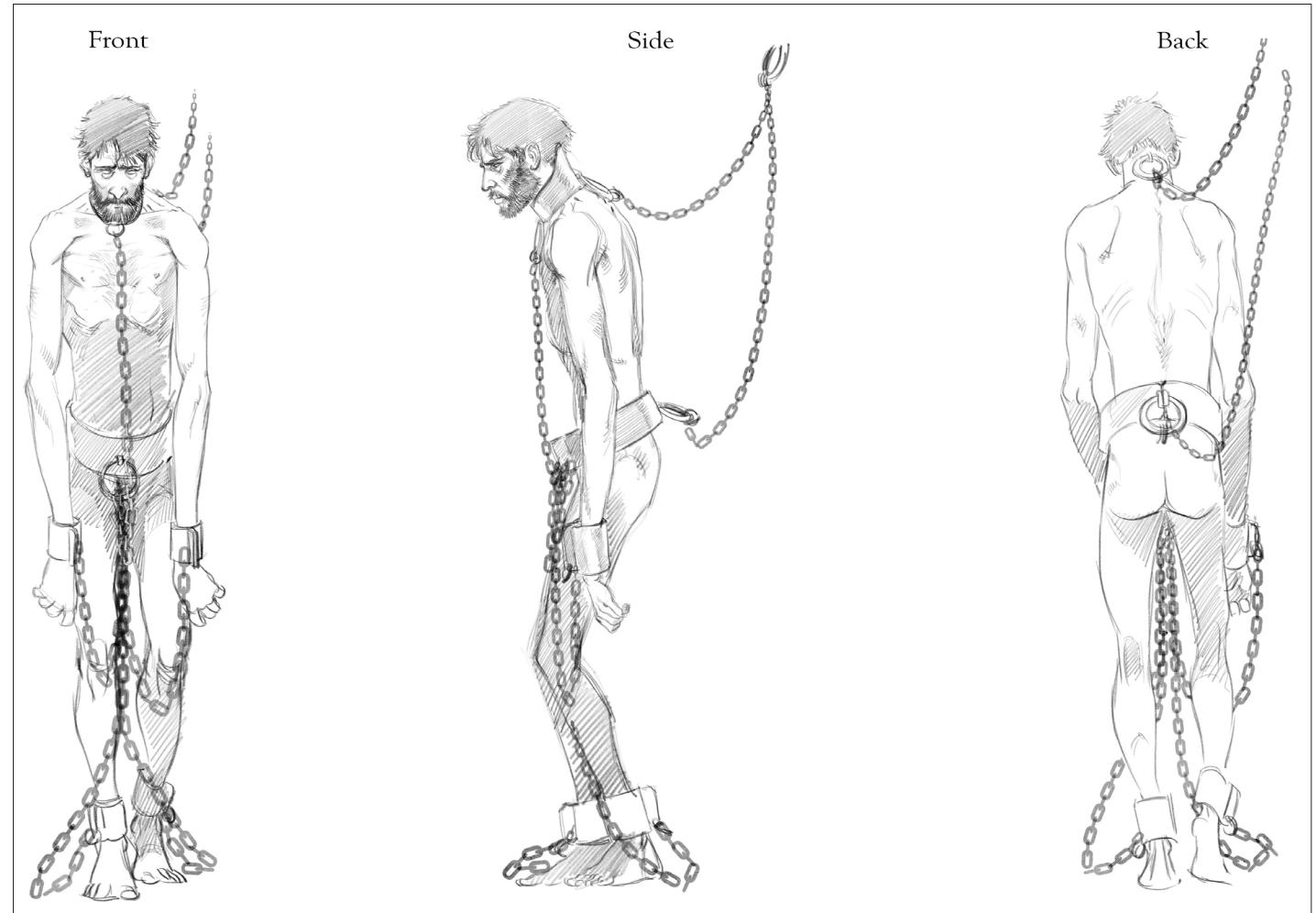


## Characters and Models

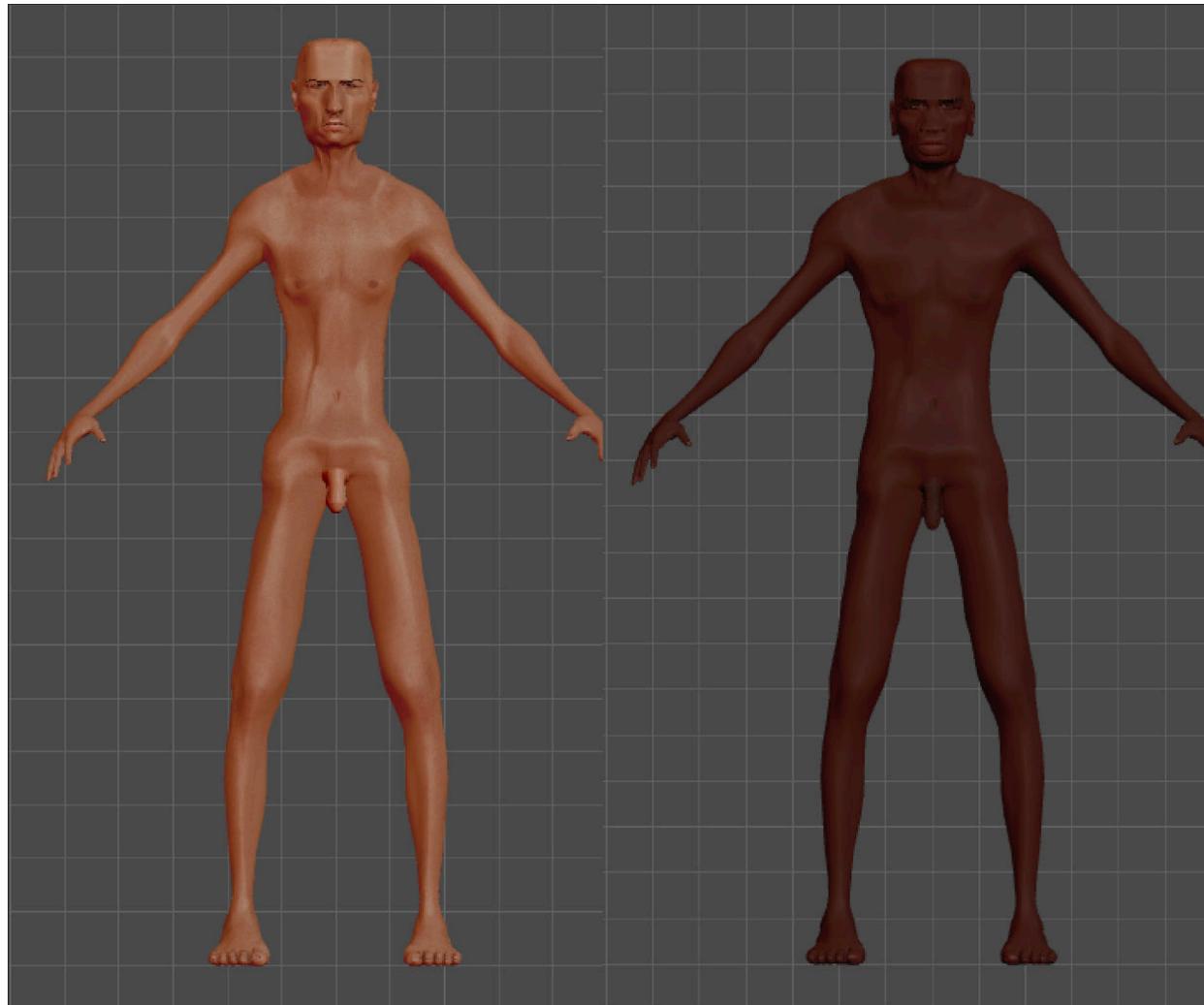
### Prisoners



*Initial sketch of the prisoner*



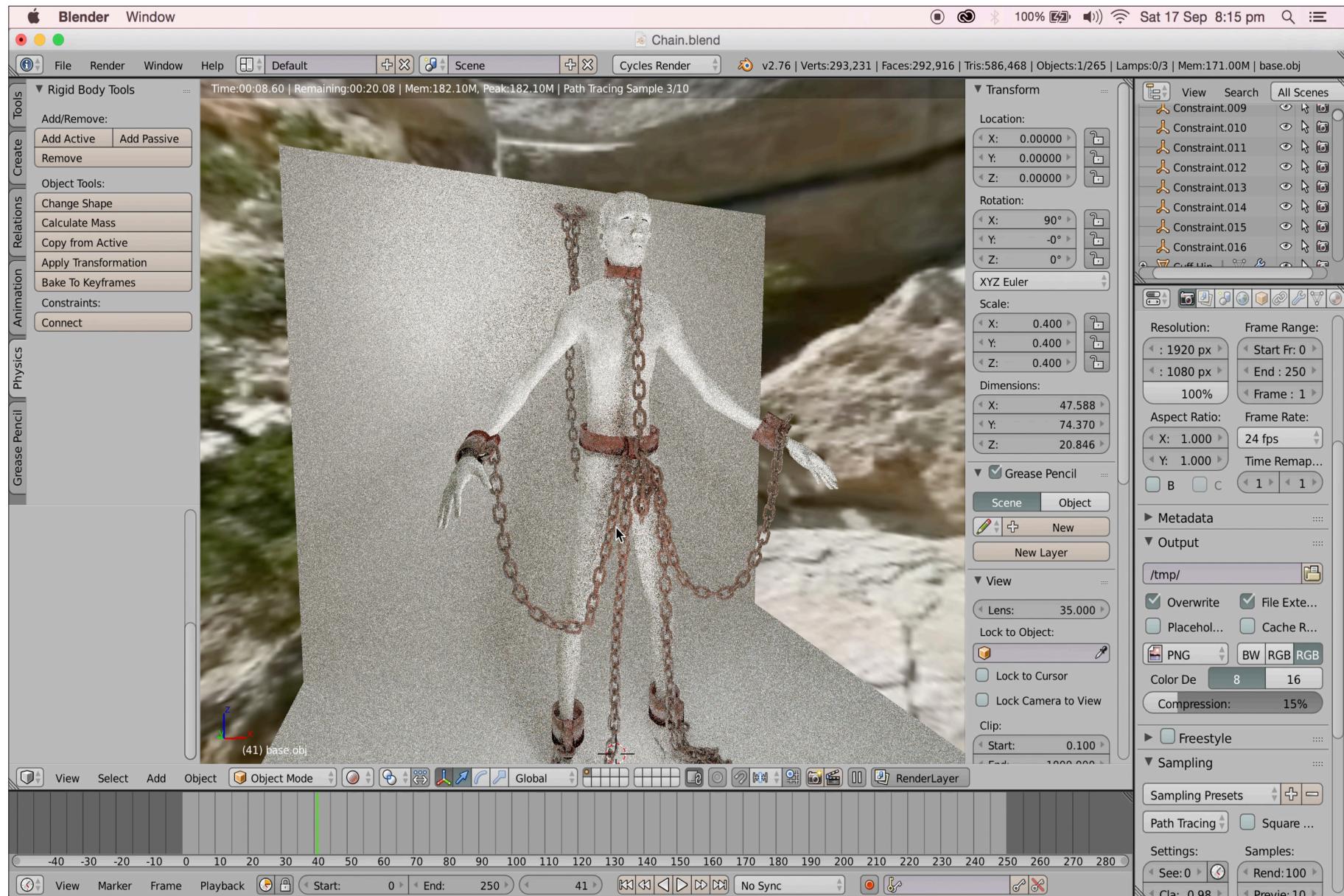
*Character sketch of prisoner for 3d modelling.*



*Character models made in Make Human.*



*Chains modelled in Blender.*

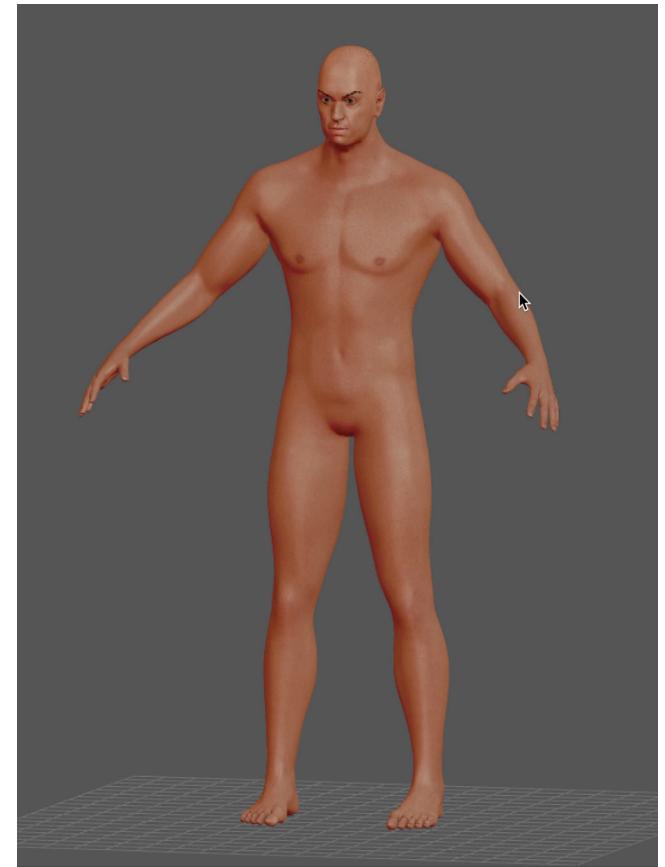


3D model of the prisoner made from the sketch in Blender.

## Puppeteer



*Character sketch of puppeteer for 3d modelling.*



*Make Human character model.*

## Map of the Cave

*From when you are a prisoner - Till you come out of the cave*

A firefly sweeps past your eyes. It starts bugging you. It buzzes near your ears. The irritation is building inside you. It comes back and fiercely tires to enter your eye. You move your chained hand to shoo it away. It starts hitting you on your arms, then legs, then your face again. It's a distraction. A pain in the ass. When suddenly it starts to calmly hum in front of your eyes. You move your hand to smash it again and your focus shifts from the fluttering firefly to your chains.

In a moment you realize that 'There are no chains'.  
You try to move. You are thrilled that you can. You are free.

You take your first step, then the second. Slowly, following the firefly you (are guided to) reach the corner. You turn around and see that everything is distorted/ blur.

### NARRATOR

Look, can you see the screen? Can you see the prisoners, the puppeteers and fire. You might suffer sharp pains; the glare might distress you, and you might not be able to see the realities of which in your former state you had seen the shadows.

Now turn around and look.  
This cave has a mouth open towards the light.  
That's where we go next. I can reluctantly drag you there, do you want me to?  
Or you can just choose to walk with me.

*You walk towards light through the tunnel.*  
You must realise that the world is a dungeon and man is a prisoner in that dungeon. <sup>[10]</sup>

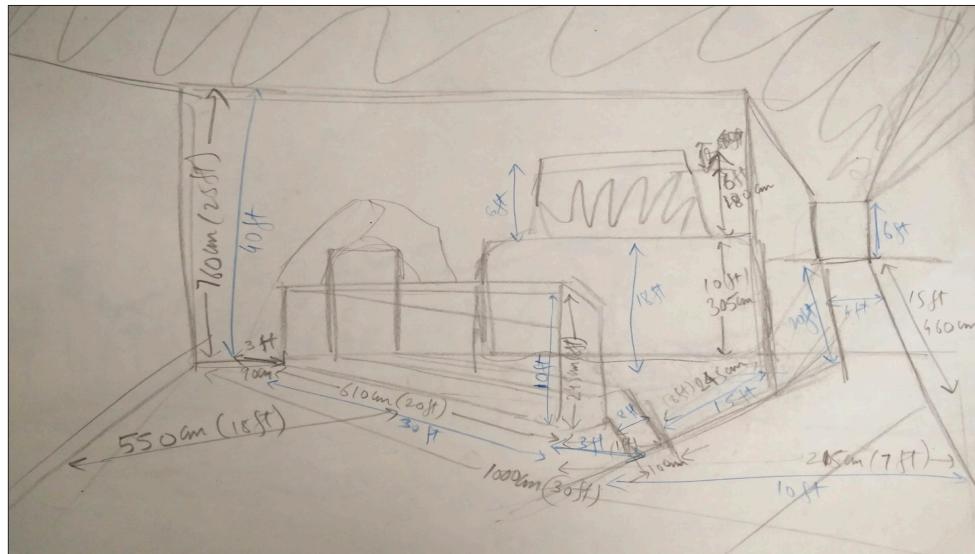
This dungeon is full of darkness.  
So dark is it that scarce anything at all can rightly be seen by the prisoner.  
The prisoner cannot see that he is a prisoner.

Indeed, man has not only become blind by living too long in the darkness, but he very much doubts if any such strange thing as light is said to be, can ever exist at all.

Mind is the only instrument through which light can come to man.  
But the mind of these dungeon-dwellers is by no means a perfect instrument for the purpose.  
It lets through only a little light, just enough to show to those with sight that there is such a thing as darkness.

Thus defective in its nature, understanding as this is.

*You enter the white light. When you are out direct glare hits your eyes.*

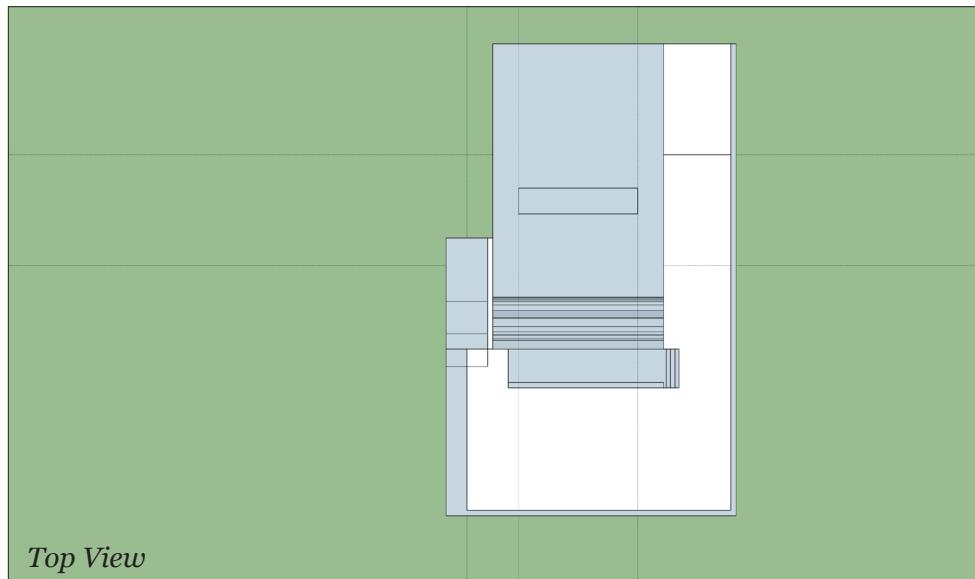


### *Initial sketch of the Cave with measurements.*

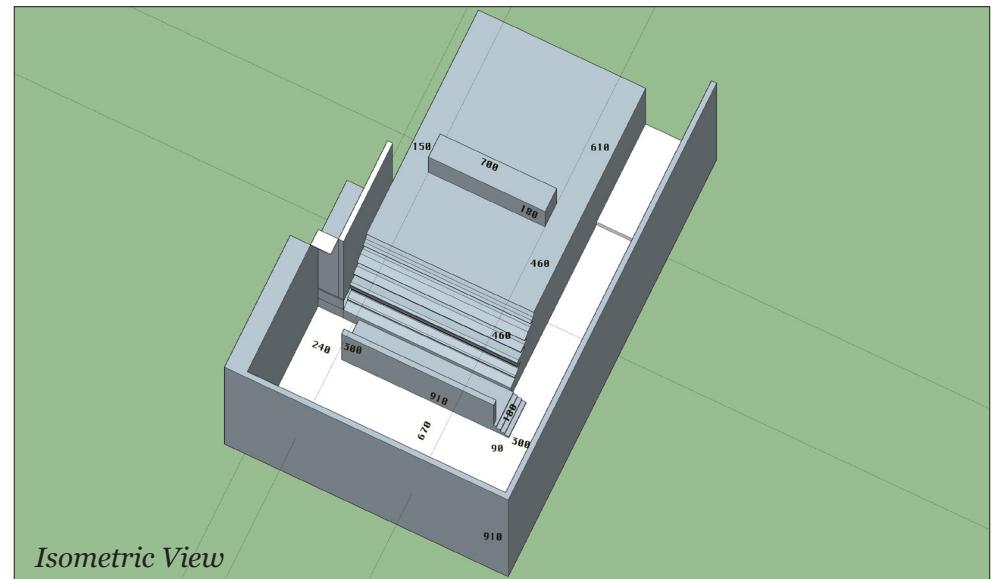


## *Final Sketch of the Cave*

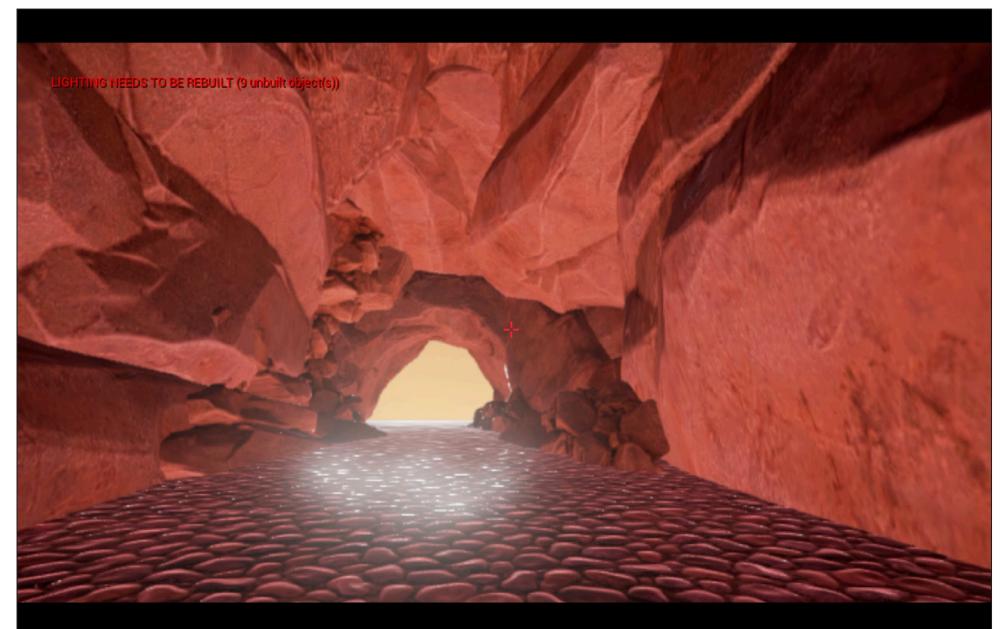
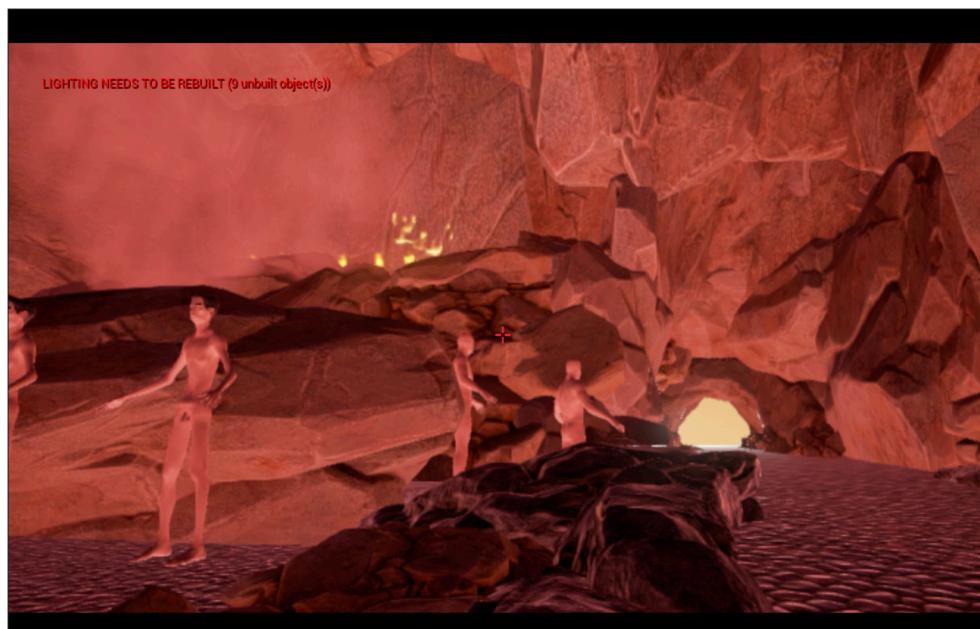
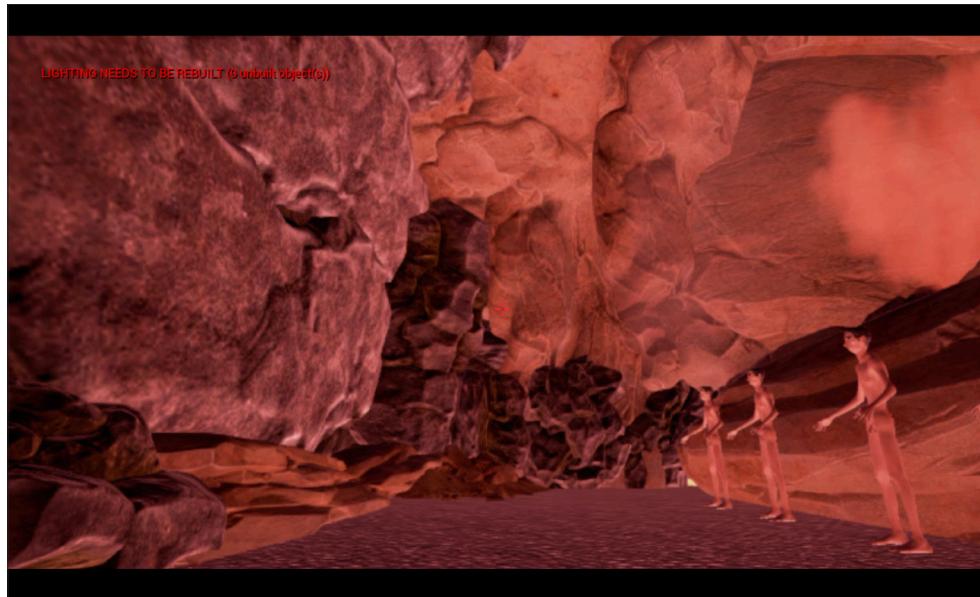
Basic block structure of Cave in 3D



### *Top View*



### *Isometric View*



3D environment of the Cave with prisoners and puppeteers made in Unreal engine 4

## Walk

*You come out of the cave - Till you reach water*

You are out of the darkness and into the light. You are standing in bright white light with nothing in it. It's all white, you aren't able to see anything. You look down and notice your shadow, you are there, you exist.

A eagle comes down in circular fashion. It appears as a tiny grey dot circling around you. He reaches you and starts elegantly encircling over your head. He stops, you look down and you notice his huge shadow in front of yours. He begins to guide you forward. You start following his shadow.

Slowly shadows of trees, stones, and grass appear on the path.

You rise up and become him. When you look down you are able to see all the shadows on the land. The entire path full of shadows.

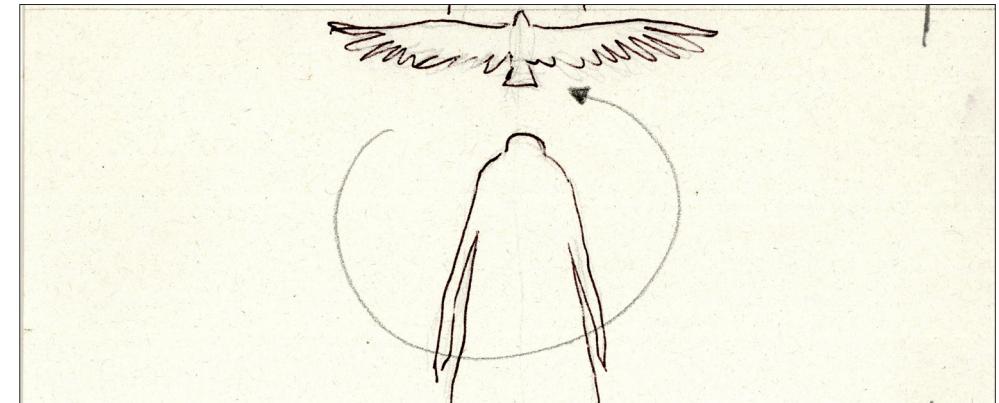
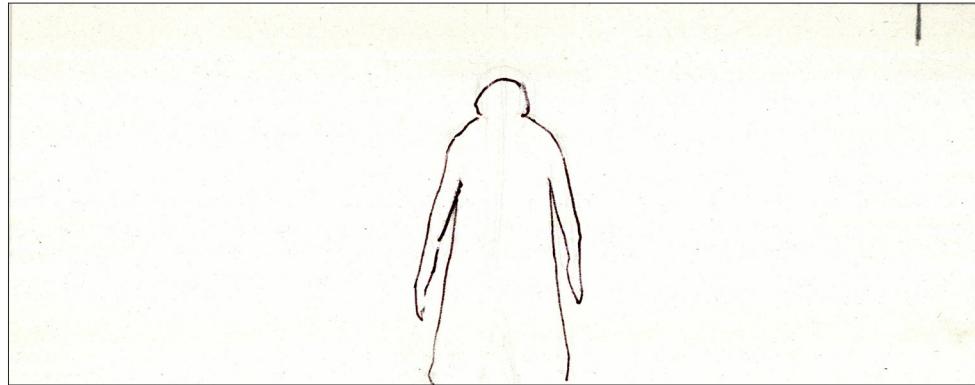
As you go further, suddenly the land itself melts and you are back as human.



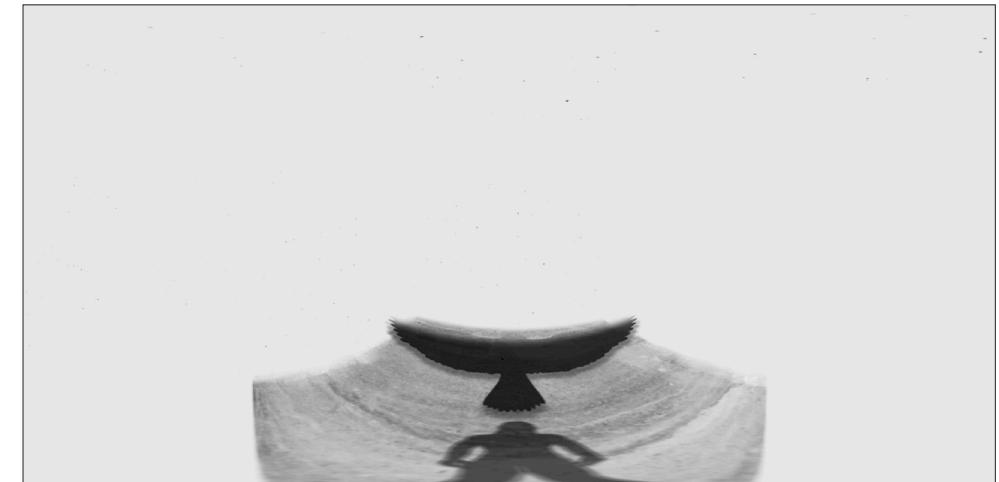
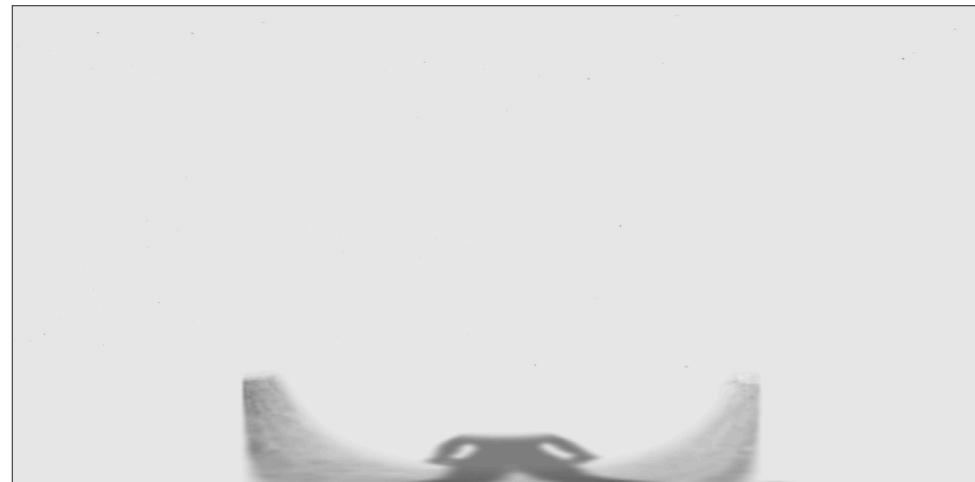
*Path outside the cave:  
Initial and Final.*

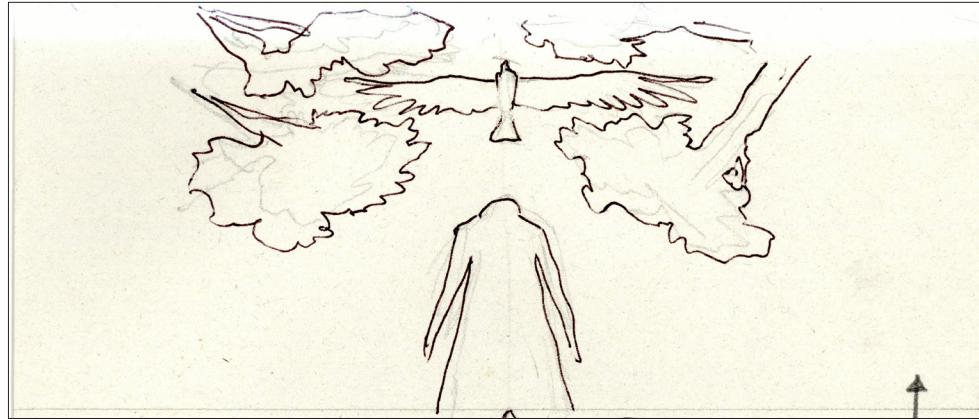


## Narration to Final Image

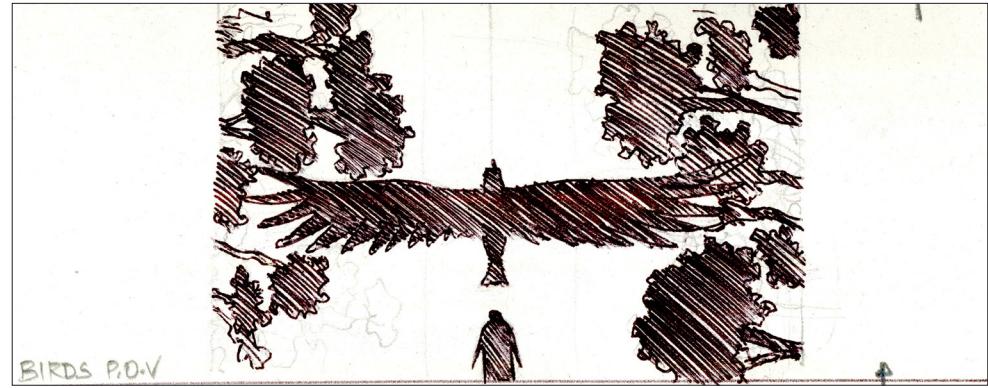


I talk and you don't believe me, just listen.  
I am here because my life works and your life does not work.

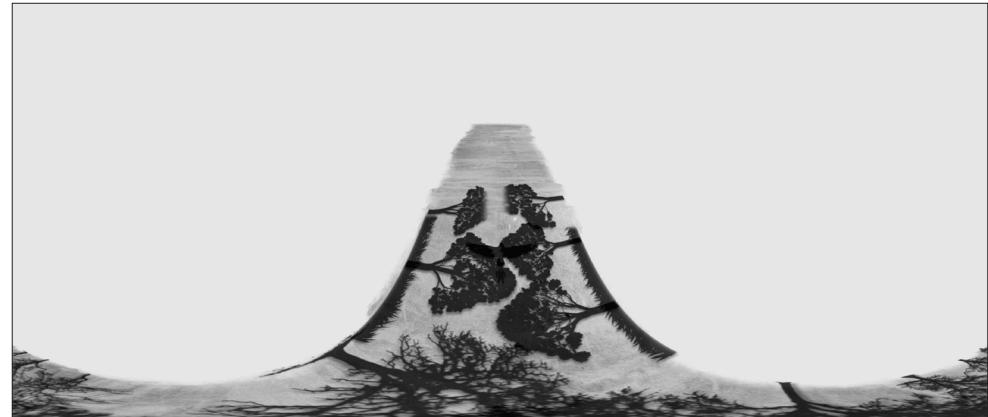
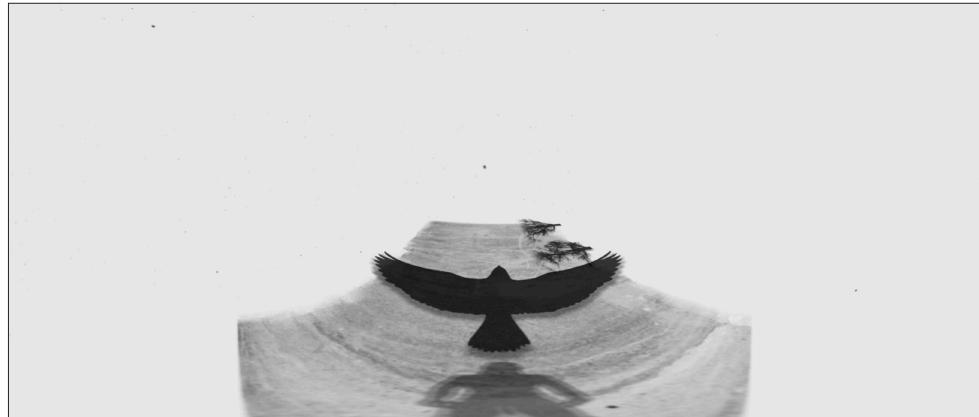




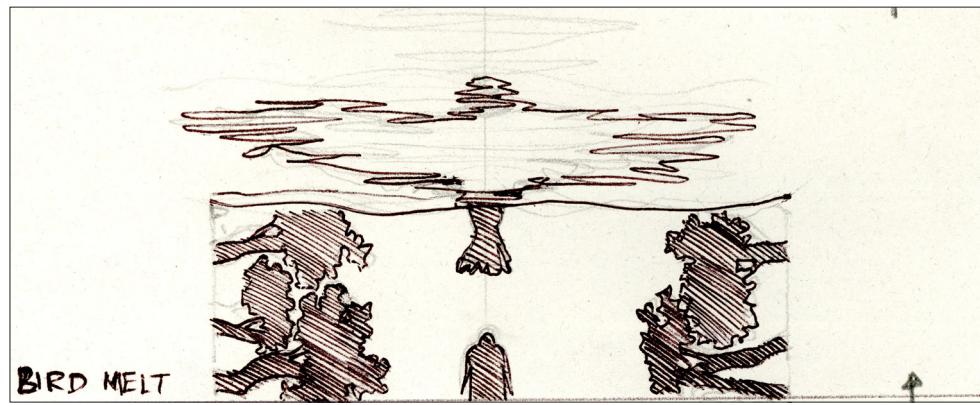
The reason your life doesn't work is that you are living mechanically in your belief systems instead of freshly in the world of actual experience.



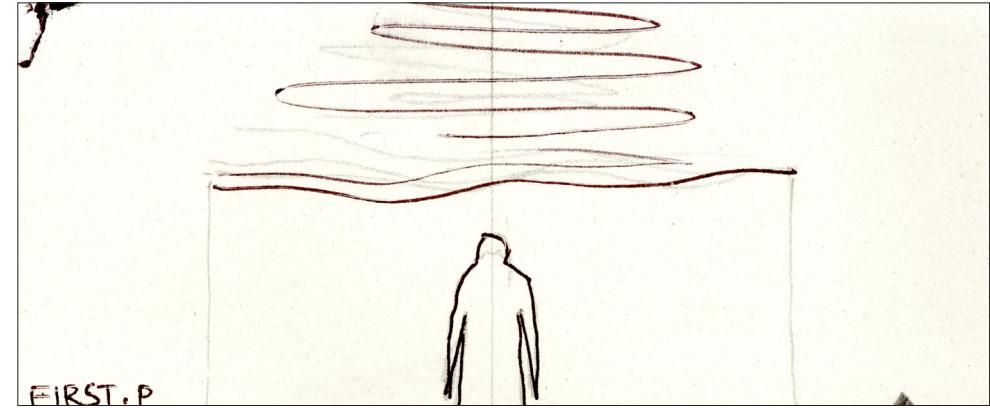
You don't look at reality and then construct conclusions.  
No. No. You did that decades ago.  
Decades ago you constructed reality, no wonder you have lost all aliveness.<sup>[17]</sup>



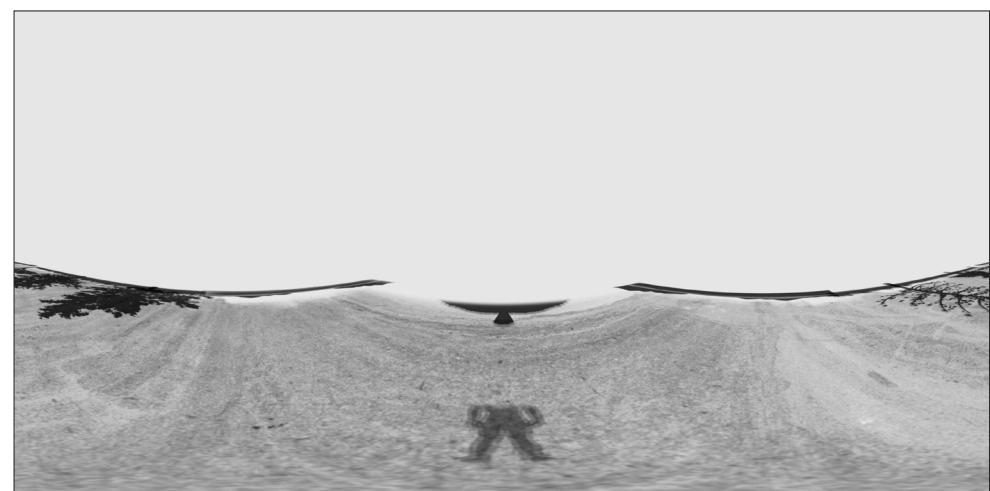
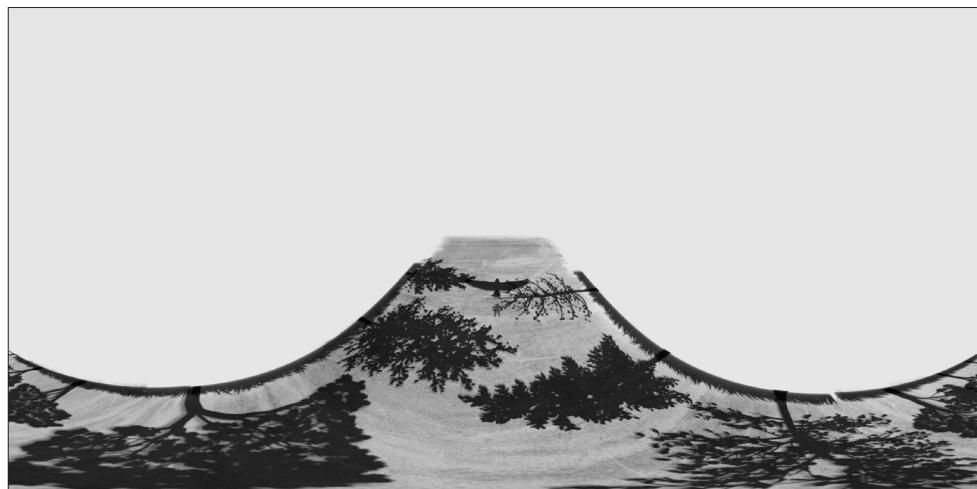
Your whole life is based on the principle that you are right.  
And the fact that you are miserable, that your life doesn't work makes no difference.  
You rather be right than be happy.<sup>[17]</sup>



You are in chains.  
Add to it resentment, anger, bewilderment, depression, amusement, hatred, shame, whatever it is that you add to being called in chains.  
Whatever you add that's part of your mechanicalness, your chains.



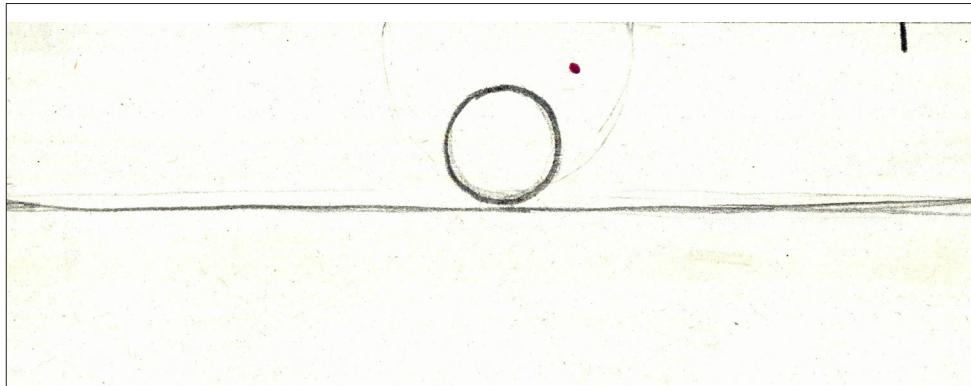
You resent me calling you in chains?  
Just observe and know that it's yours not mine.  
I give you the words, 'You are in chains', rest is all your creation.



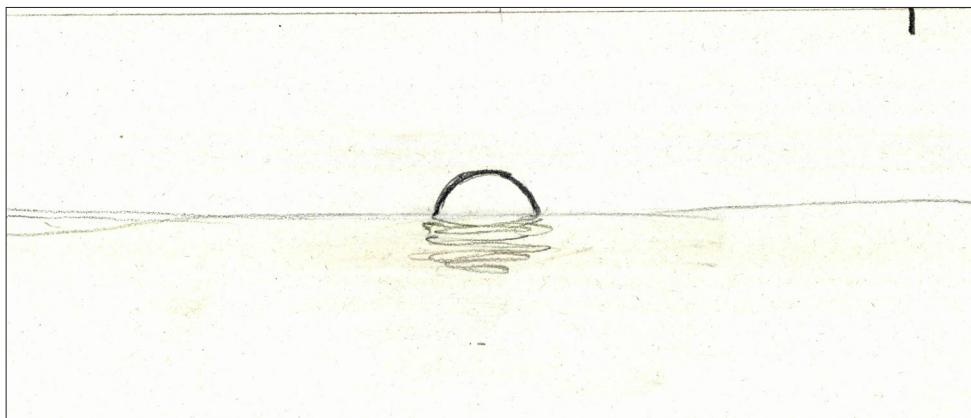
*The shadows disappear. You walk into the melt and you start to sink into it. Your feet melt with it. (Water during sunset.)*

## Sunset

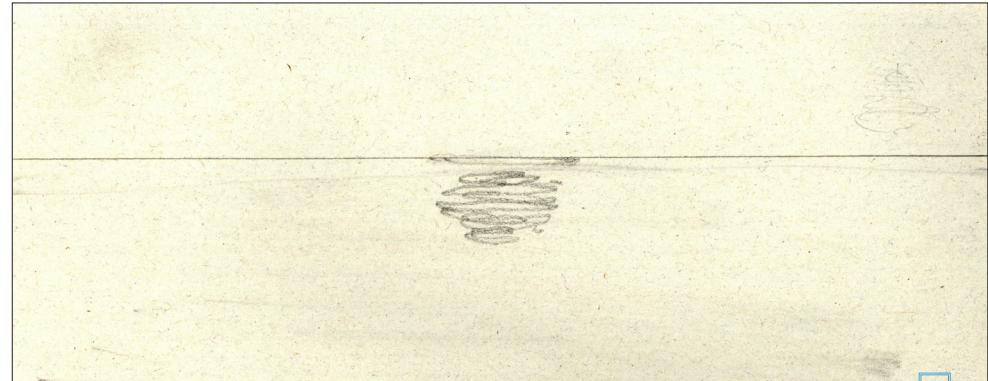
At the horizon you can look that the shining liquid pouring out of a circle, melting down in water. You look at that portal as it descends, touches the horizon, enters the distorted land (water) and bends 90-degrees as it melts/dissolves in water. The saffron melted sun comes near you and forms your distorted-rippled-reflected image in saffron. The image begins to expand radially with reflections of lotuses, leaves, trees, swans radially appearing and then disappearing into a darkness.



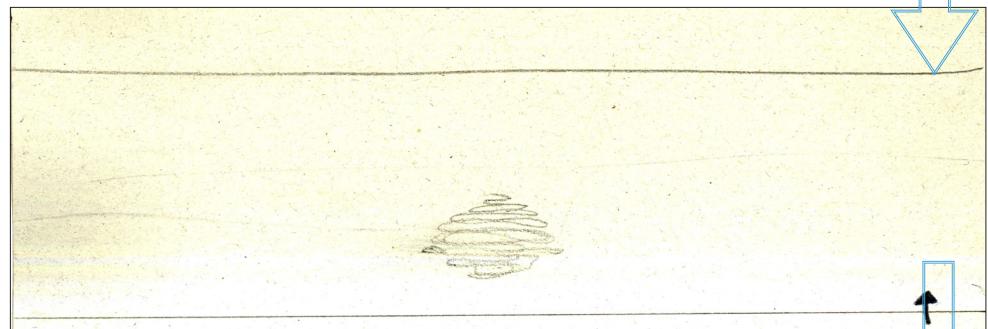
You have been living your life in reasonableness and thus in non-experience.



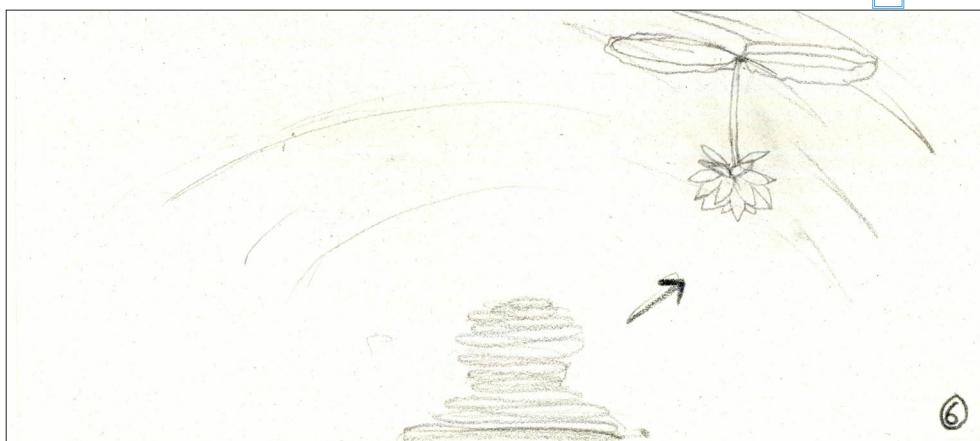
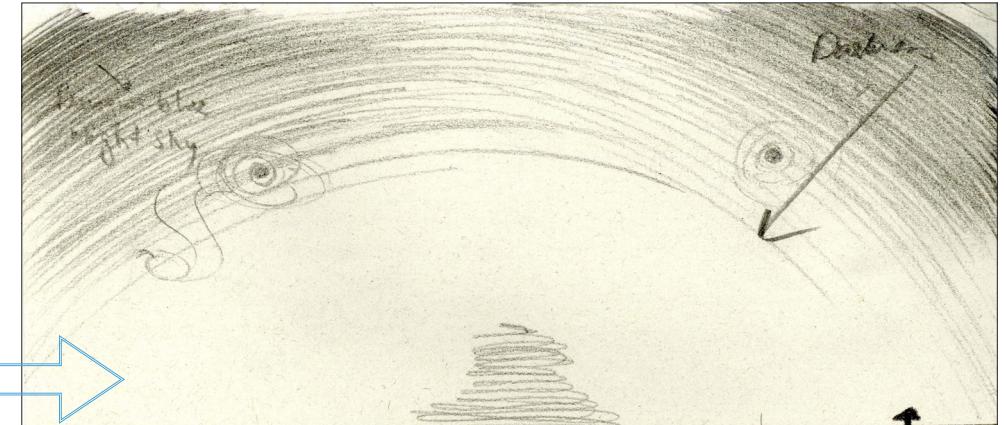
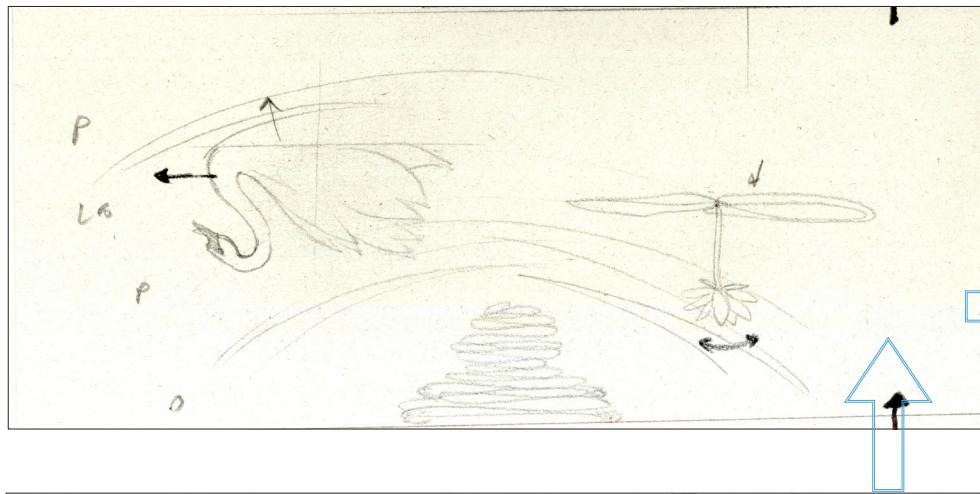
Above the line is experienced experience. The first step above that line involves simply accepting. Accept what is.



When you do accept the light of experience turns on, until you don't it's turned off.



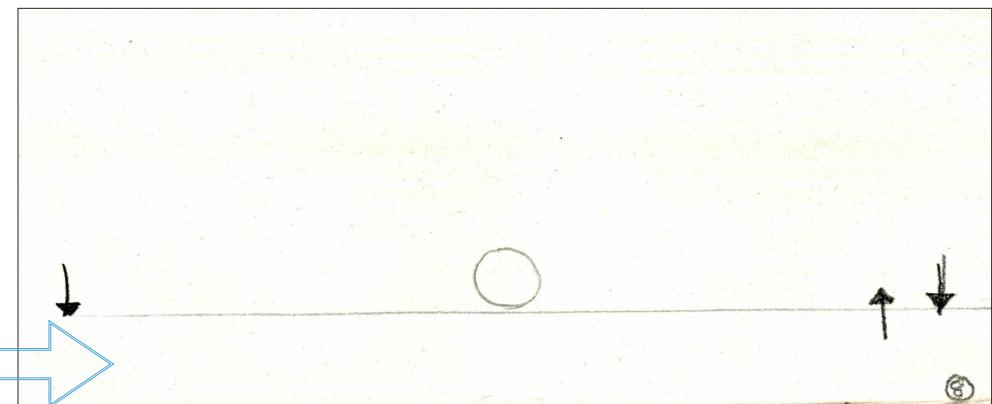
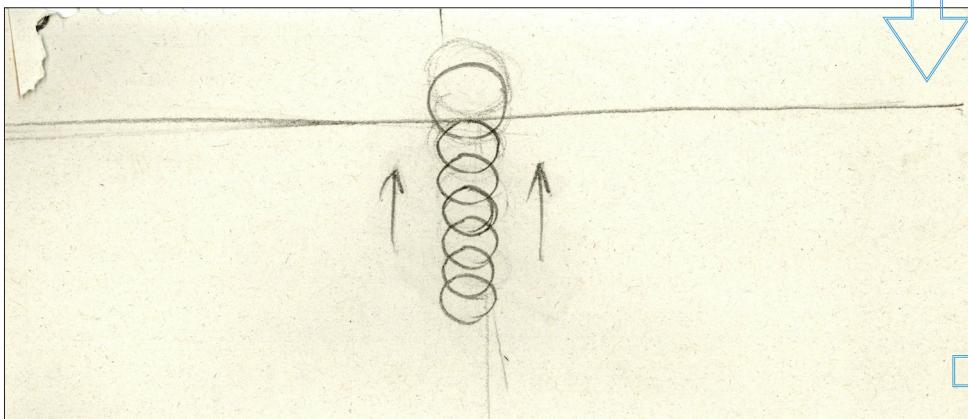
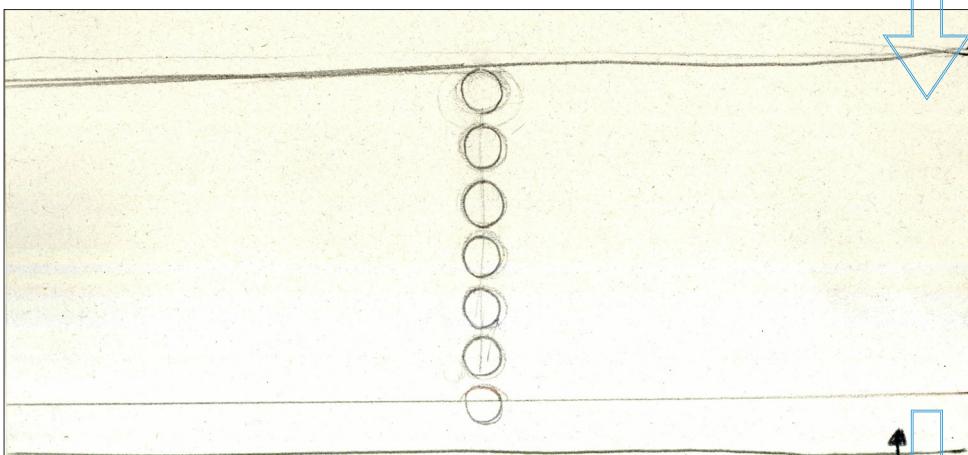
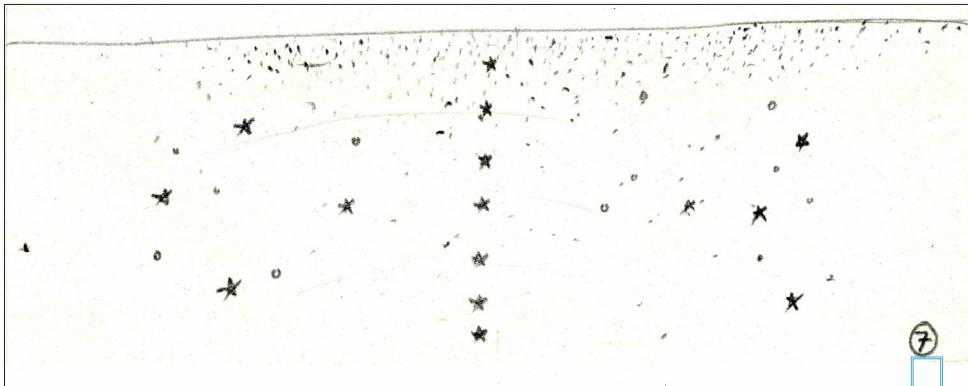
Experience is either on or off, there is no such thing as slightly experiencing something.



Now, how do we go from minus of reasonableness to plus of acceptance?  
 You go through the zero.  
 You have to go through nothing.  
 To go from non-experienced to experienced you have to go through nothing.

As the night falls, darkness radially takes over and the lotuses, leaves fade as they turn into tiny white bright dots(stars).  
 You gaze at the transformation of water into a star filled reflected sky.  
 As you gaze ahead the density of stars increases cluttered towards the horizon.  
 The horizon shifts down and you see the sky is full of stars mirrored spectacularly in the water.  
 Seven stars in front of you align and start moving up.  
 They combine at the horizon and come up as a moon.  
 It rises up with two eyes that open on the side with the moon on the forehead.  
 With the crescent moon the eyes are wide open.  
 Slowly it starts getting clear - the dots connect.

It's either plus or minus.



# **Breakdown: Show, don't preach**

At this point I went out to take feedback from professors. One important point I got from Prof. Alka Hingorani was that my approach wasn't really working for the medium. In VR the input is raw sense data, not the concepts. Immersed in visuals and sound, it becomes difficult to pay attention at the narration. I noticed this after creating the Kumbh mela VR experience as well and realised that I should work with basic forms of sense data, visuals and audio.

So I dropped the narration and began to work on visual narratives and tell the story in series of pictorial events complemented by the sound.

# Compositing Elements

Compositing in 360 space is not trivial. To see in 360 space one has to create the complete environment which when mapped around the viewer creates immersion. In VR, omnidirectional video which is equirectangular is spherically mapped in HMDs.

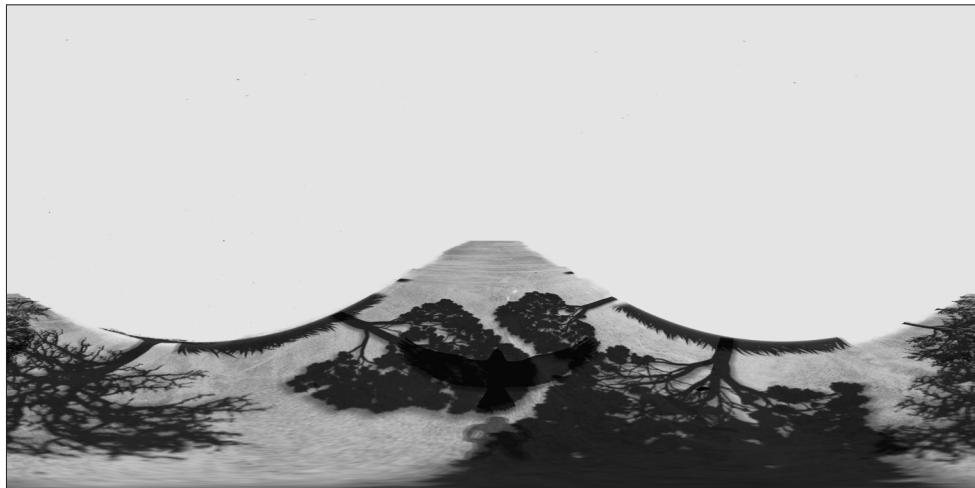
Mettle skybox is a adobe after effects plugin that converts 3D compositions into different image maps. It creates 6 compositions each for front, back, right, left, top and bottom from 6 cameras in the main after effects composition and stitches it to give out equirectangular map.

## The workflow of animation:

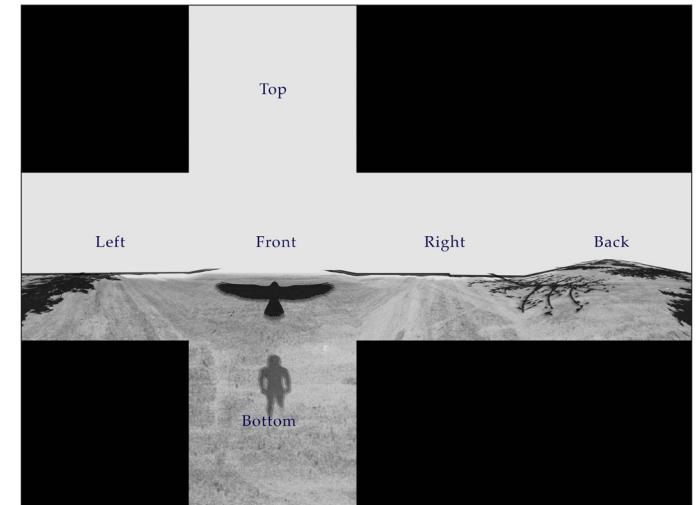
Draw in Cube-maps.

Convert to Equirectangular map.

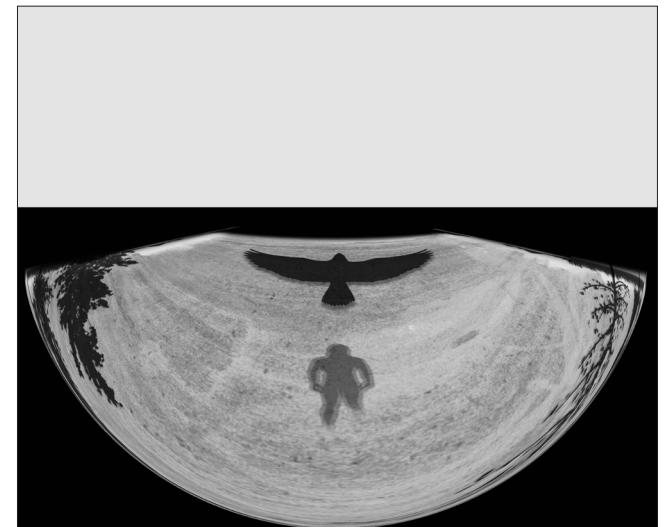
Wrap around as Spherical map to view in headset.



Equirectangular map: Spherical map opened up on a rectangular surface



Cube map: Cube with six sides  
Front-Back, Right-Left, Top-Bottom



Spherical map

# Text and Context

## Context

Every situation we deal with shows up for us in some context or other. A context functions as a cognitive lens (a powerful filter) through which we see life (the world, others, and ourselves). In any situation, one's context for that situation

- 1) determines the meaning of certain aspects of what we are dealing with,
- 2) highlights some aspects, and
- 3) dims or even blanks out yet other aspects.<sup>[18]</sup>

In visual storytelling of the allegory, text is used to create context for the story so that the images coming one after the other make sense. As the experience has just visuals and audio, it becomes difficult to create a unified meaning of the metaphor which the story represents. Text has been used to redundantly convey the meaning of the story.

It starts with the title itself, which gives the definition of the word 'Allegory' as, noun  
a story, poem, or picture which can be interpreted to reveal a hidden meaning, typically a moral or political one.

## Text

Given the definition of the name, the next text gives a brief explanation of the game which the allegory represents.

The Allegory is a mental game where the objective is to avoid thinking about The Game itself.<sup>[13]</sup>

Thinking about The Game constitutes a loss, which must be announced each time it occurs.<sup>[13]</sup>

Tactics have been developed to increase the number of people aware of it and thereby increase the number of losses.<sup>[13]</sup>

It starts in this Cave of Shadows.

Here the story begins with you sitting in a cinema theater.

The Allegory of the Cave has been interpreted in many ways. Here the meaning of the journey is divided in a game with four rules that carries the essence of the allegory of cave and communicates the meaning to the person experiencing the experience.

The text appears as the Rules of the game, at the end of every scene complemented by the rule the text represents.

### There 4 Rules of the Game

Rule I. Everyone in the world is playing the Game all the time.

Rule II. When you realise that you are playing the game, you Win.

Rule III. When you think that you are winning the game, you Lose.<sup>[13]</sup>

Rule IV. When you lose, you have to declare that you have lost the game and tell someone about the game,

So that the chances of loss increase.

DONE

And the experience ends.

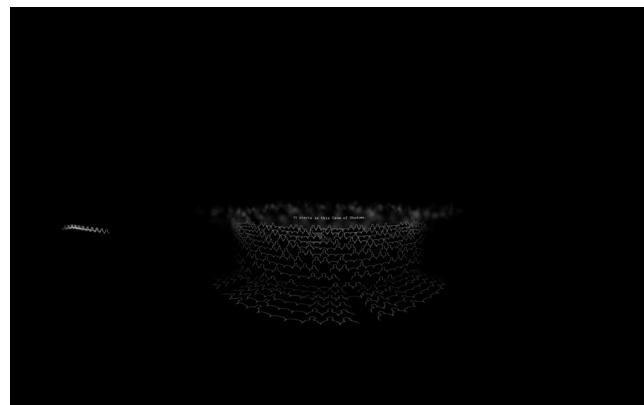
# The story in VR

The first attempt of the experience in VR is divided in 4 parts. The first part is when the viewer is in the cave and getting out of the cave. Second, he sees the world of shadows outside the cave. Third , he reaches the lake and sees the reality of knowledge. Followed by the physical reality and ends in its disintegration.

## Sequence I: The Reality of the Cave

This part starts with the title 'The Allegory' with its meaning. Next come the three lines of text stating the allegory as a mental game and then the crowd scene appears.

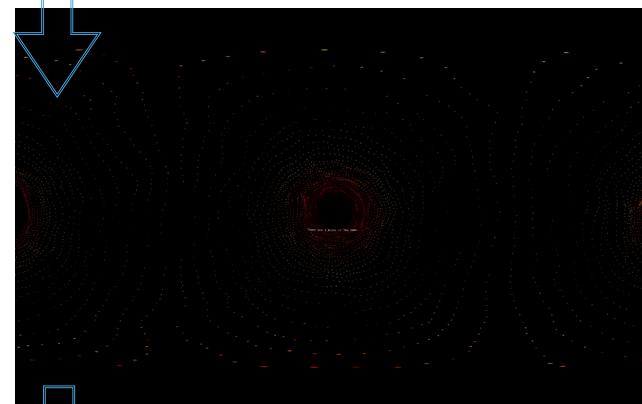
The background score for this part is first two minutes of russia on ice by steven wilson.



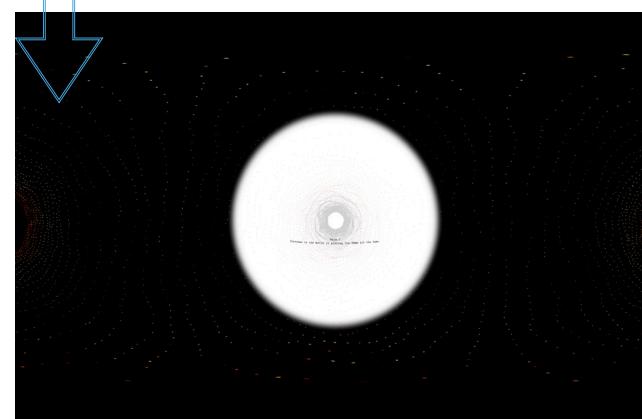
1. Crowd sitting in a Cinema Theater



2. Cave appears,  
This is where the user  
should enter the  
3D Model and introduced  
to the idea of the cave.



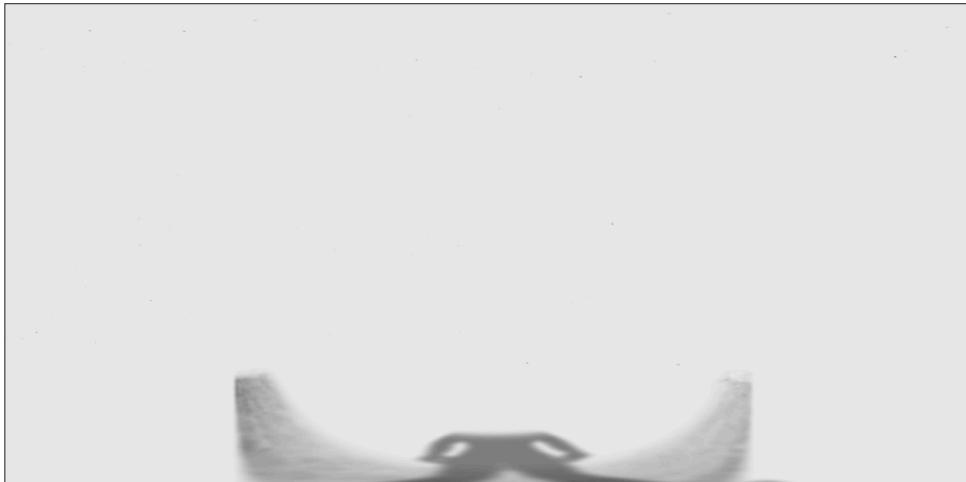
3. You get out of the theater  
and enter a tunnel where  
you are told that the game  
has 4 rules.



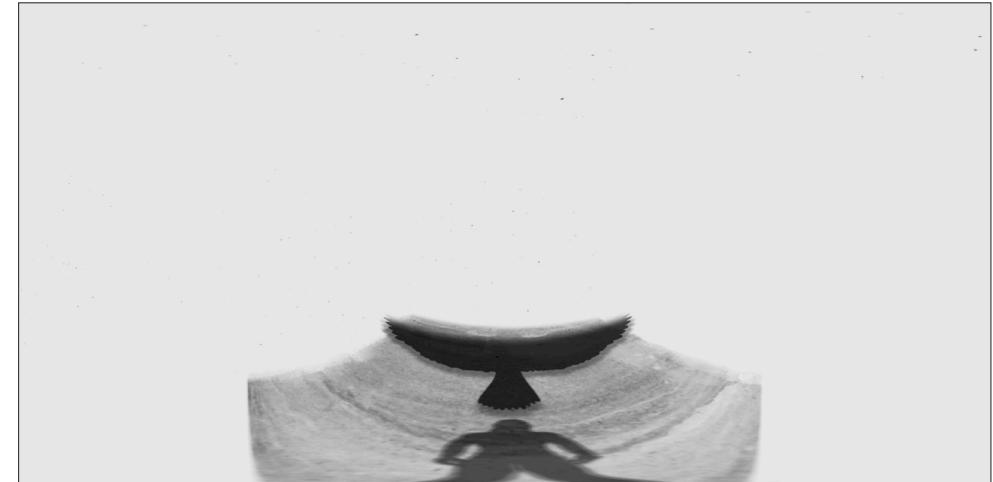
4. As you go out of the  
tunnel first rule is stated  
and the second rule is stated  
when you are out of the  
cave.

## Sequence II: The Reality of Shadows

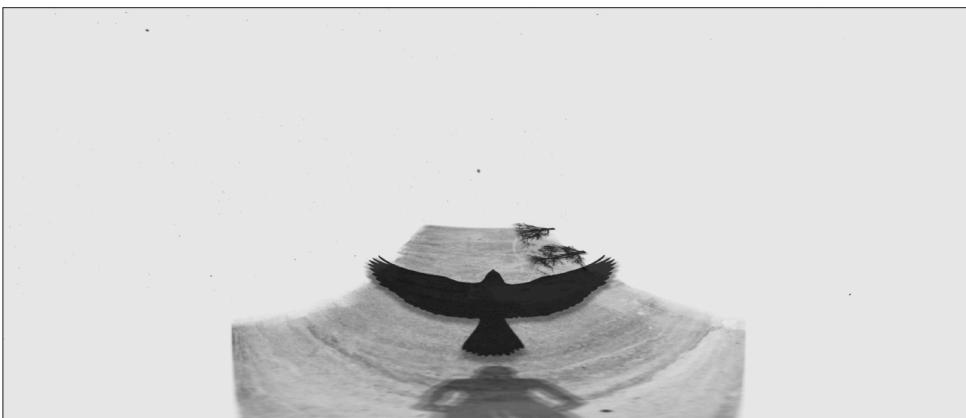
In this part you are out of the cave and start to see the world of shadows. As you have won the game you see, as a bird, the world of shadows below you and then you become human again.



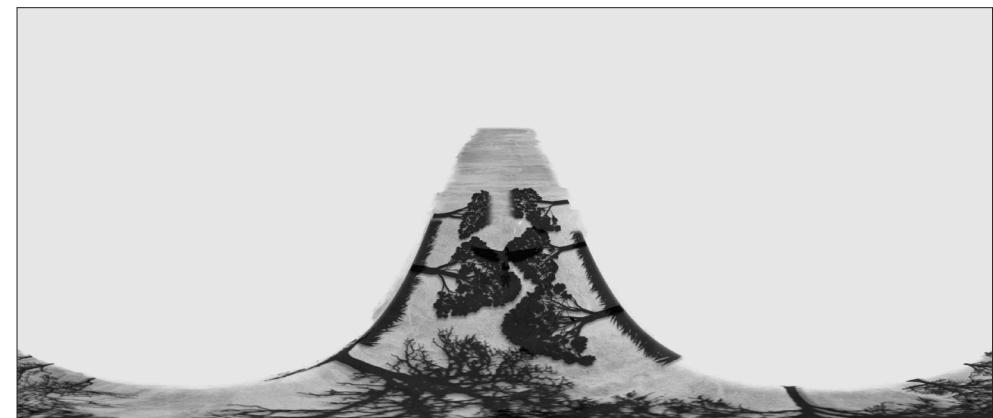
*1. Your (human) shadow appears in front of you.*



*2. Followed by shadow of a giant bird.*



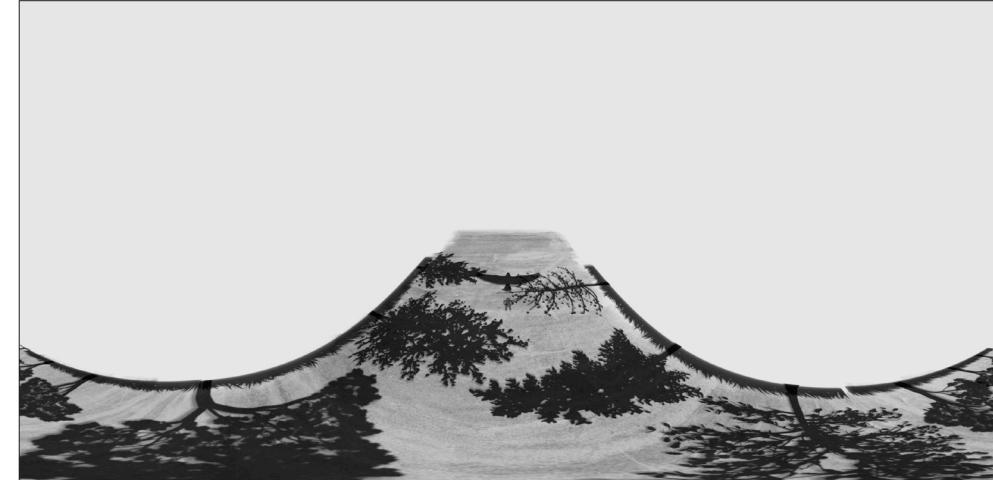
*3. As you walk forward shadows of trees appear.*



*4. After a while you take off.*



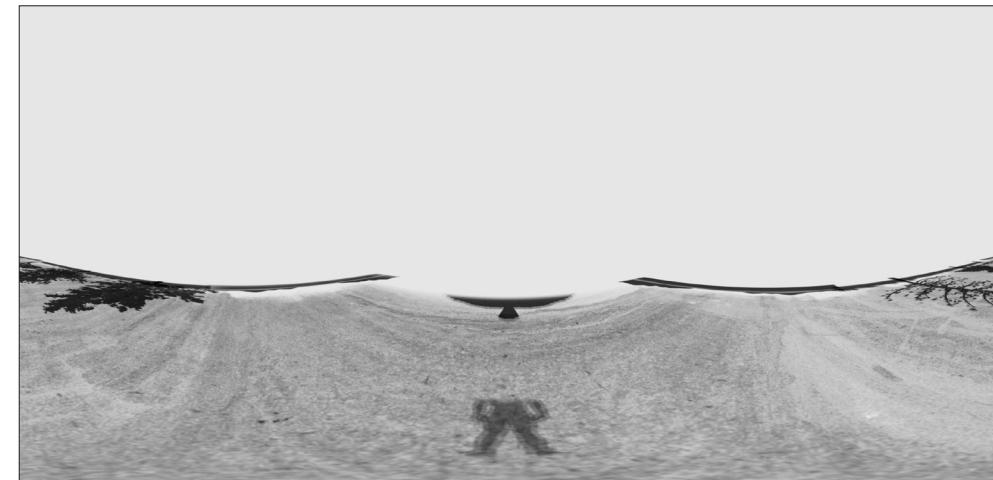
5. You see the world of shadows.



6. You start falling back.



7. You are back as a human.

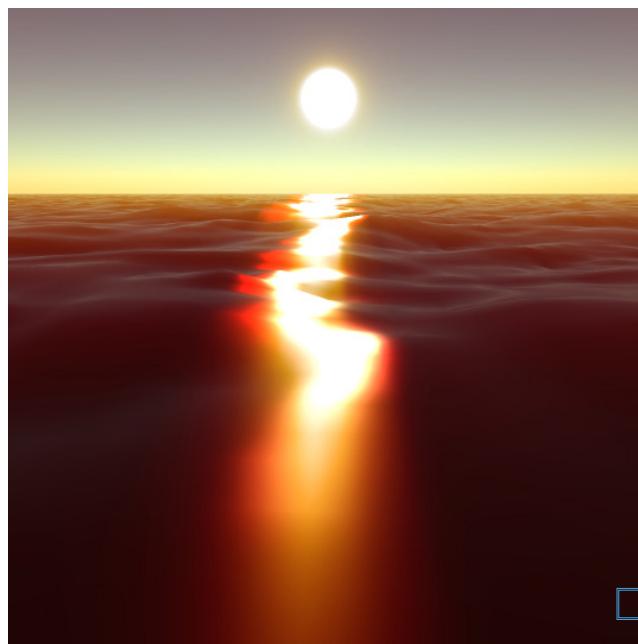


8. And that reality disappears.

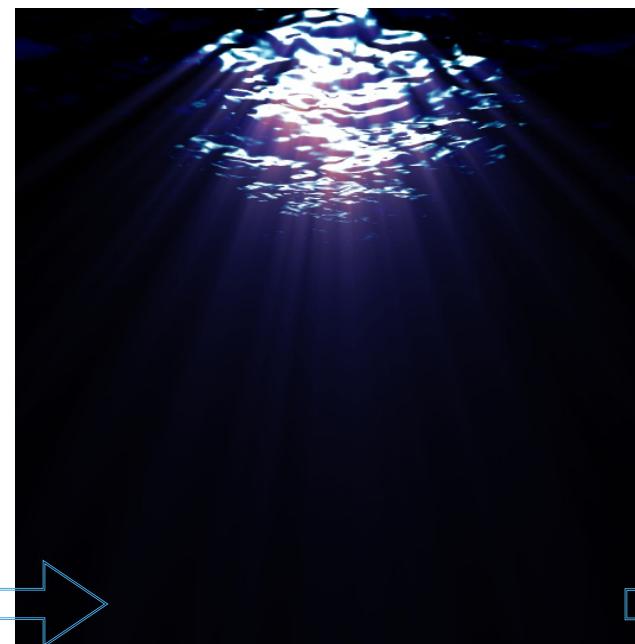
### Sequence III: The Reality of Knowledge

In the allegory of the cave, at this point the escaped prisoner sits besides a lake and see his reflection. This metaphor can be depicted as gaining insight and knowledge beyond ones present reality. And as the story of inner life goes, the mind is deep like a lake, the ripples on the surface represent the conscious mind, the activity of the mind on the surface. And the whole depth of the lake is silent and that is the subconscious mind which is not used by the wave. But if, the wave could deepen, and incorporate more silent levels of the water, the waves could become the waves of the ocean. The surface activity of the conscious mind deepens and incorporates within its fold the depth of the sub conscious. Nothing remains sub conscious the whole sub conscious becomes conscious.<sup>[12]</sup>

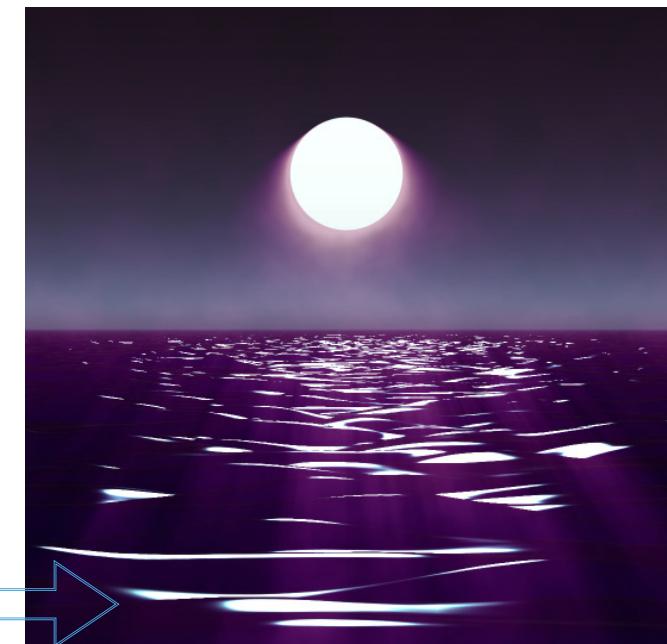
The sequence after rule 3 starts with this idea.



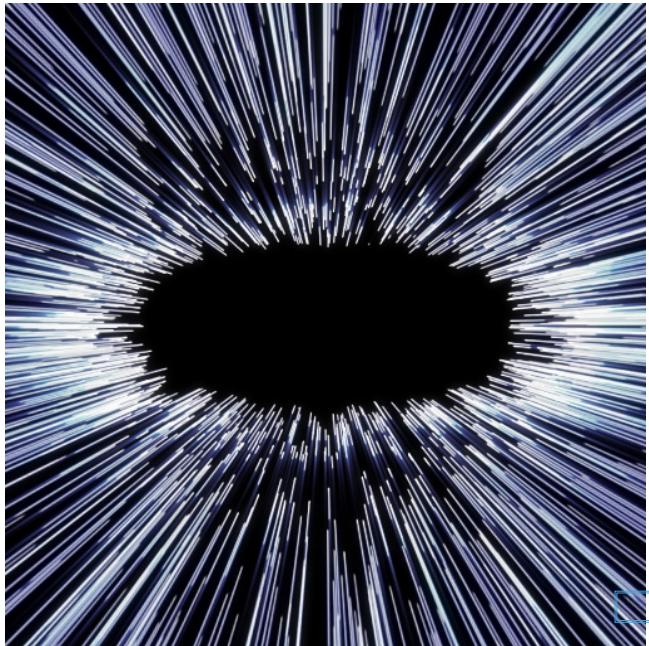
1. Sunset



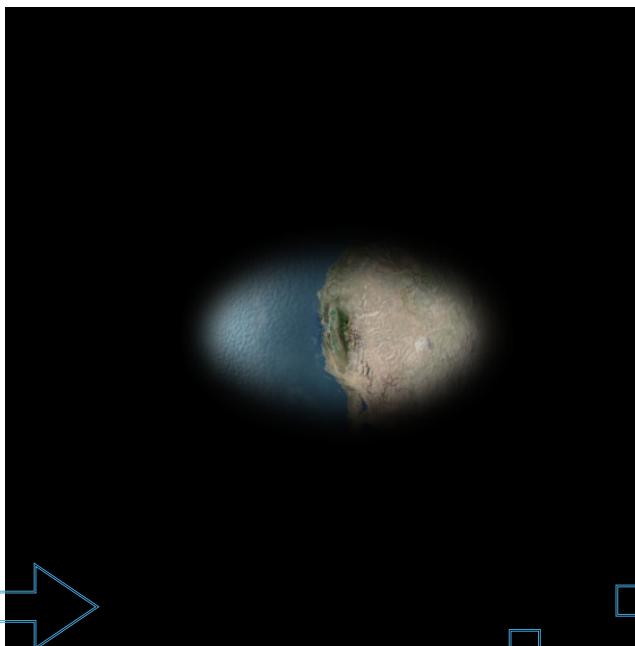
2. Going underwater



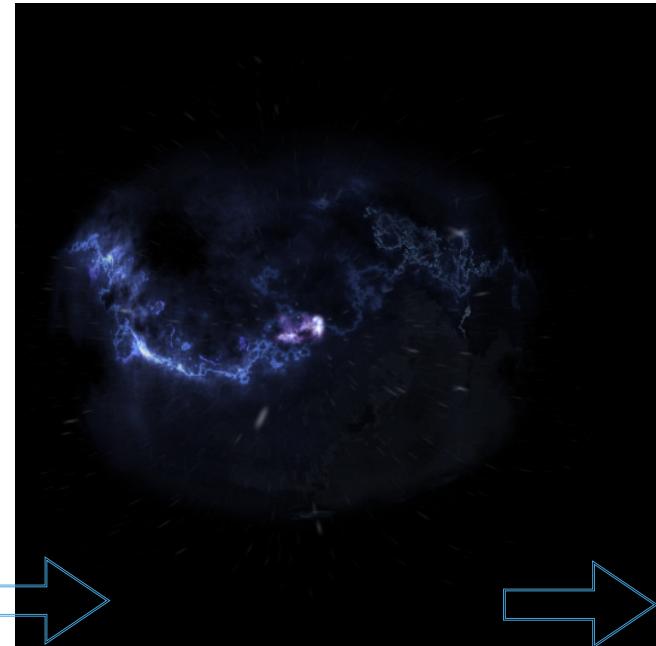
3. Coming up



4. Sunset



5. Perceiving the surrounding (Earth)



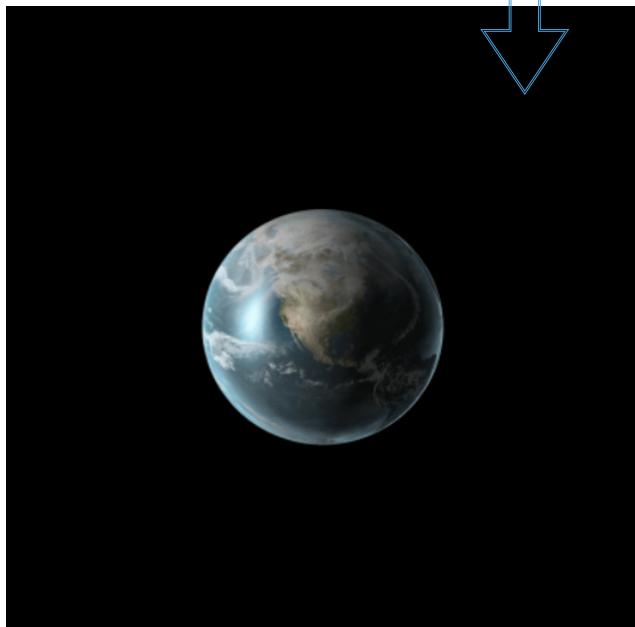
6. Wider perception to know the skies.

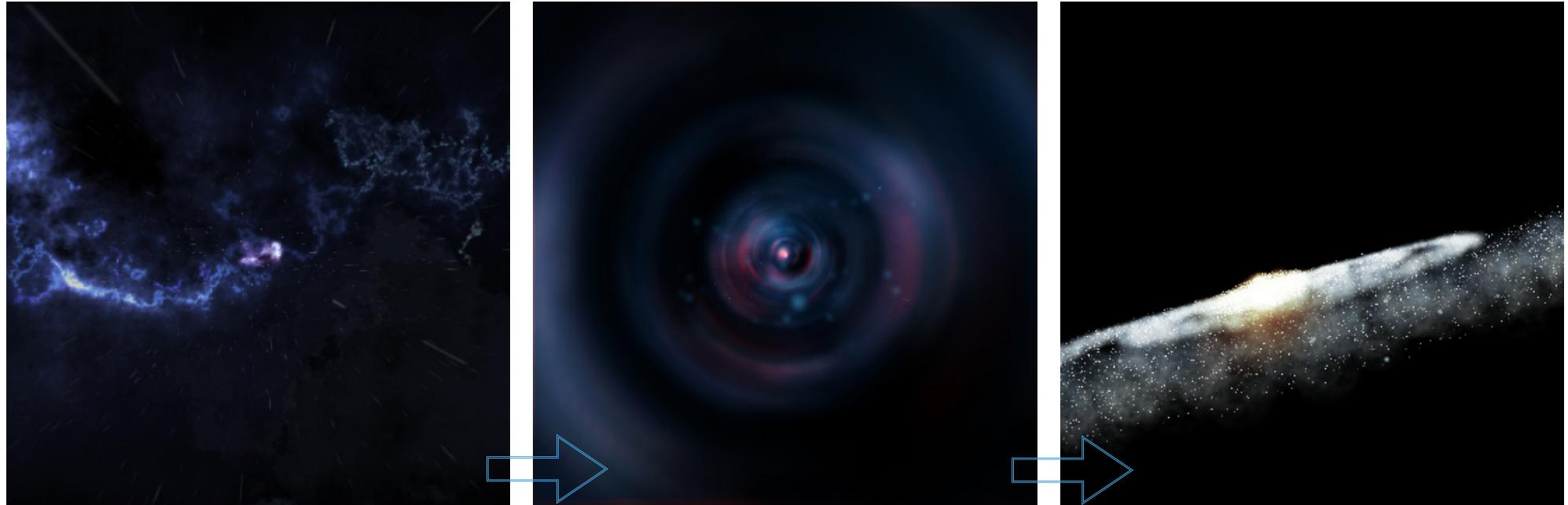
This is where the journey of self begins. Which is a subjective experience.

The text that follows are the thoughts of the prisoner at the lake, sitting on a rock. Associated visuals are visual expression of his experience of those thoughts.

### Thoughts of the prisoner

The distinction between what is me and what is not me disappeared and what is me is all over the place. The very rock on which I sit, the air I breath and the whole atmosphere around me. I had just exploded into everything. I was sitting there eyes open, fully conscious and time had just flipped.

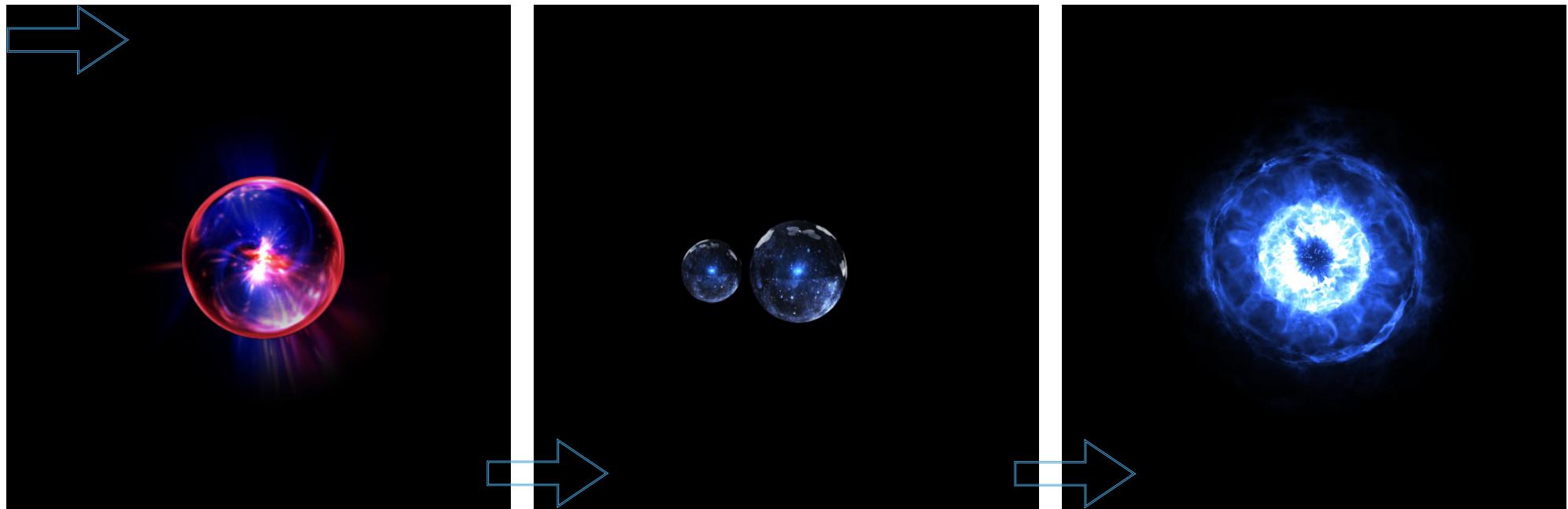




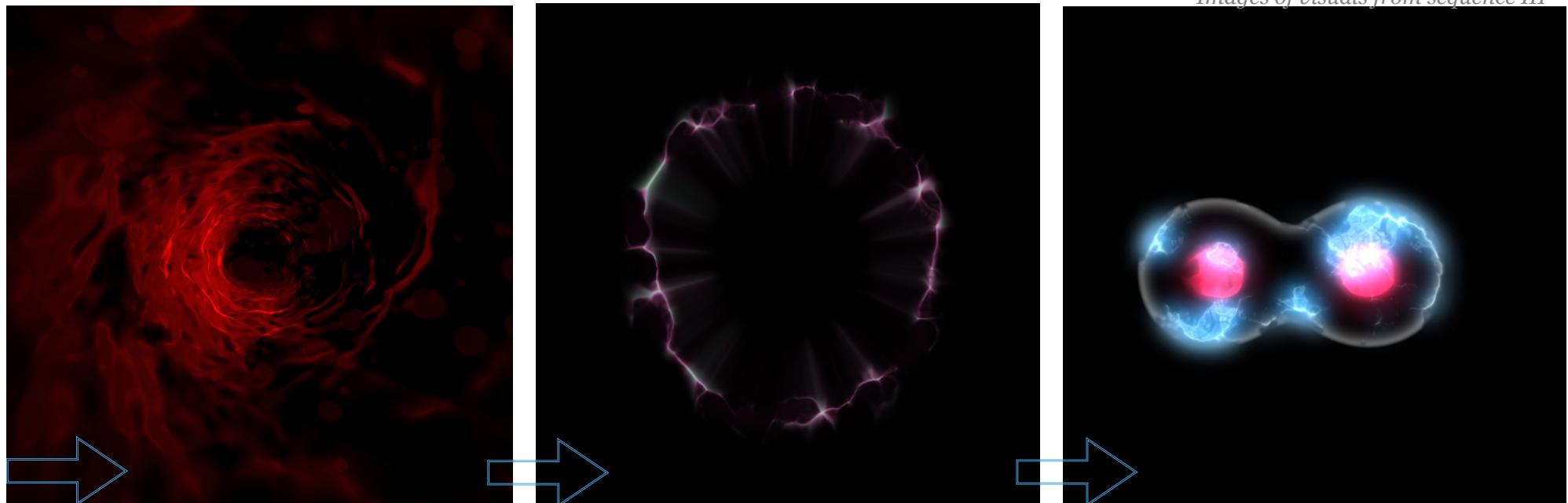
*Series of visuals*

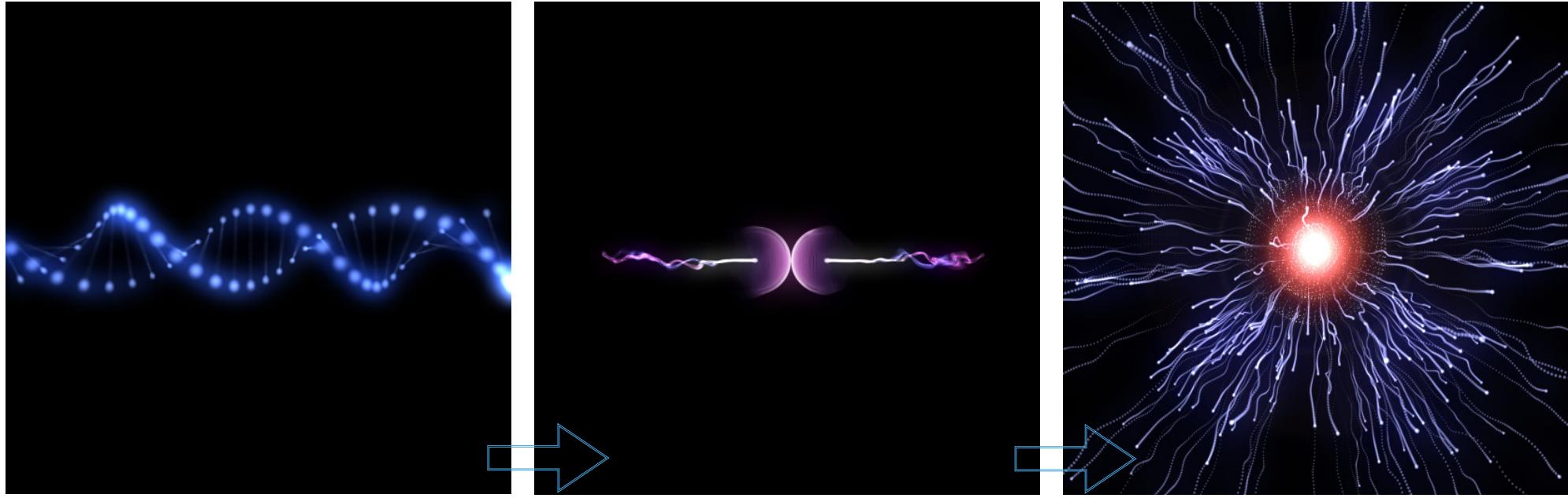
### Contd...

Existence is not human centric and all human experience is self made. What is it that makes me and that what is not me? If I look at this body, it's just a piece of this planet I borrowed then why is this body separate? It is just the boundaries of sensation that determines which is me and which is not me. Boundaries of sensation can be stretched and made smaller than what it is right now. Anything that is within the boundaries of sensation I experience it myself. I can stretch it further experiencing the very cosmic escape like I experience my body.<sup>[11]</sup>



*Images of visuals from sequence III*





*Images of visuals from sequence III*



## Sequence IV: The Physical Reality

### Conclusion in the real world.

This is when we enter the physical reality, the real world. The transition is similar to the intro transition of the cave painting in an attempt to establish a co-relation between image of the cave and the real world.

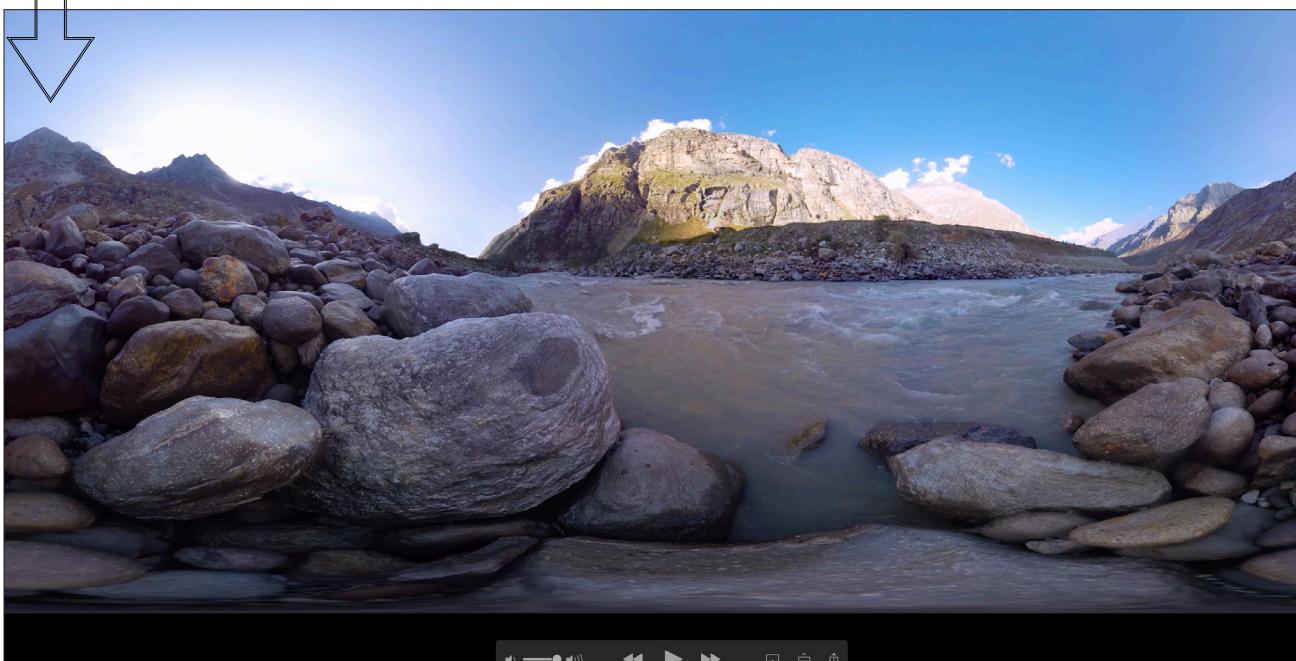
Followed by 6 progressive visuals. The idea associated with the visuals in this part is described along with the image.

The reflection of the mountain on the water is like the impression that the objects of the mind perceives and as long as the mind is not capable of maintaining its essential nature which is consciousness, so long the mind gets imprinted by the perceptions of the objects and this is called the bondage of the mind. <sup>[12]</sup>

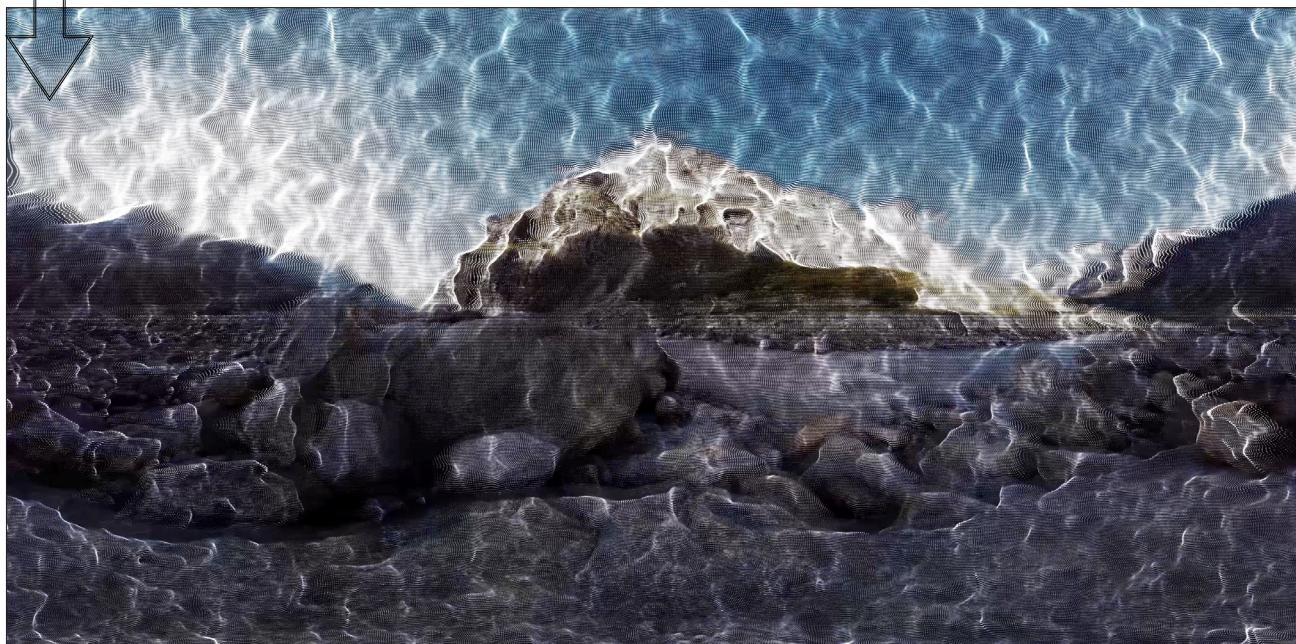
*Images of visuals from sequence IV*



The mind is not capable of maintaining its essential nature, consciousness and is overshadowed by the reflections of objects of perceptions then only the object remains and the subject dies.<sup>[12]</sup>

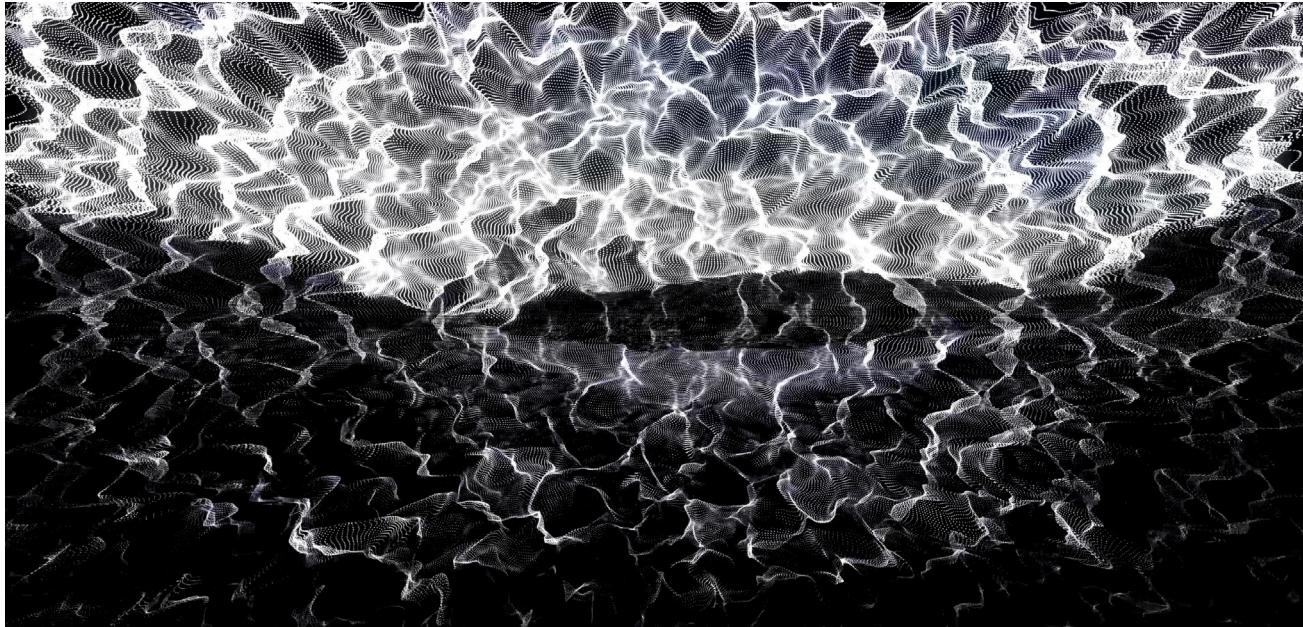


*Images of visuals from sequence IV*

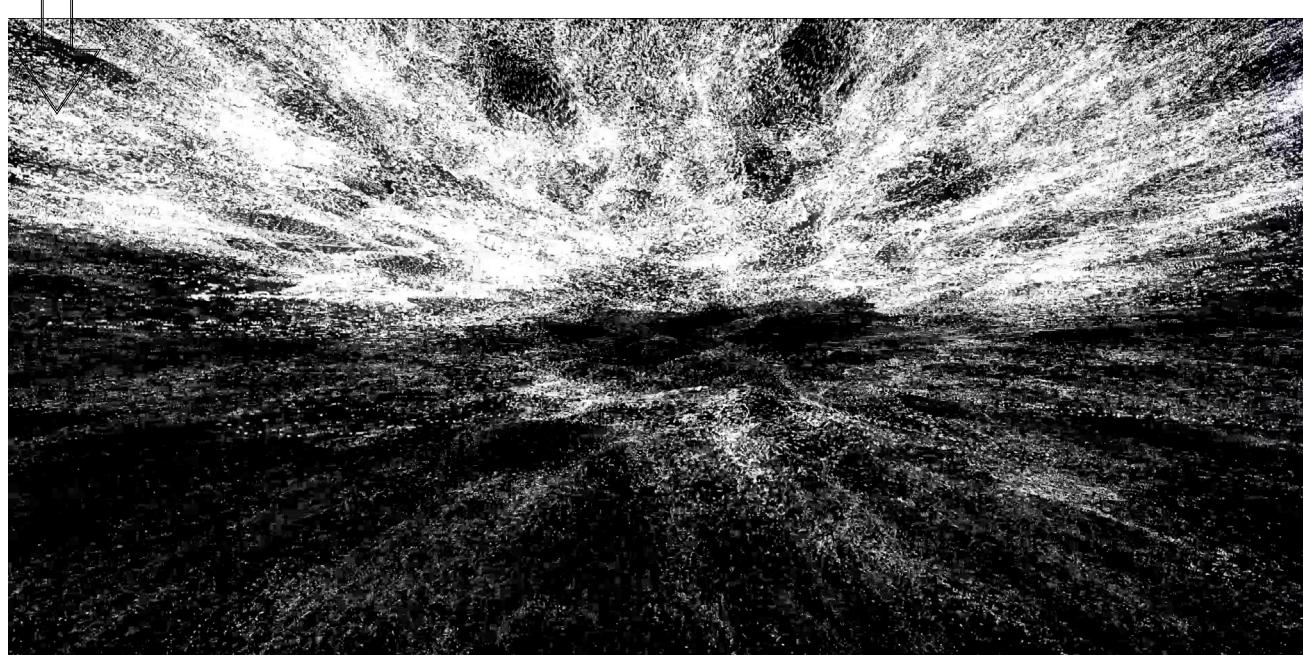


The vision of the water brings about a great teaching about spiritual life. Life as pure existence. When it expresses itself, it expresses in layers of existence, layers of energy, layers of intelligence. <sup>[12]</sup>

*Images of visuals from sequence IV*



This being one of them.



*Images of visuals from sequence IV*

# Evaluation

The purpose of evaluation for the project is to understand the efficacy of VR as a storytelling medium, issues that come up while creating a story from the experience and other issues while experiencing the experience.

## Objectives

- To evaluate if people get the story, understand its meaning and are able to relate it with themselves.
- To evaluate the effectiveness of VR as a storytelling / experience creating medium.
- To check the validity of the approach to create a VR storytelling experience.

## User Testing

Participants were invited to experience the VR experience sitting on a rotating chair. After the experience, a contextual feedback was taken. They were asked to narrate the story as they saw it and talk about the meaning that they were able to draw from the experience. Whether there were any breaks in their experience and what they thought would have enhanced the experience. A total of 25 users from age 17 to 59 were interviewed.

## Findings

- Most of the viewers were able to complete the experience and construct a basic narrative from it.
- Some found it too abstract to build a story and said that for them it was just visually pleasing.
- The words journey and life were most reoccurring when asked about the meaning of the experience.
- When asked about relevance of the story in VR 9 said that it was very relevant, 9 said that it was relevant, three were neutral and two thought it was not relevant.
- 15 remembered rule 1, 16 remembered rule 2 and rule 3, 17 remembered rule 4.
- 11 out of 25 people thought that it was less than 10 minutes long, even though it ran for 12 minutes.
- Some viewers found no break points in the experience while some thought it was too long, the visuals were disconnected, there was no correlation between the visuals and the text and that the story was getting lost in too many visuals.
- People with spectacles had issues with HMD screen
- Many couldn't get the point of having the visuals in one direction in a omnidirectional video.



People experiencing the allegory on Samsung gear HMD

## Insights

- The approach to VR storytelling seems to work as most of the people were able to relate to the events as happening to them
- People were not able to connect to the story and find meaning in it when they were not able to figure out the context in which things were happening (when they did not read the text)
- People seemed to be engaged in the VR experience as they felt the time spent in experience was less than the actual run time
- The distribution of content on the timeline needs to be worked on as some could not process the complete story and wanted to experience it again, while some felt it to be long

# Next Iteration

The project was about creating virtual reality experience of the allegory of the cave. VR technology today is nascent and this project went just as far as creating the first version. The project is still incomplete and there is a lot of room for improvement in terms of storytelling and technology.

As far as extending this version, following are the point of improvement in the next iteration:

- Including detailed introduction of the Cave
- Adding appropriate narration when required
- Adding ambient spatial audio and fine tuning music
- Third sequence is too long and abstract, shorten the length of this sequence or perhaps figure an alternative way to represent the idea so that the story isn't lost
- Straight forward representation of idea in the last sequence
- Reduce the amount of text and create the context using narration or visuals



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