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CHALMERS SCHOOL OF ARCHITECTURE,
DEPARTMENT OF ARCHITECTURE&CIVIL ENGINEERING
CHALMERS UNIVERSITY
COURSE PM ACE35, MASTER'S THESIS, SPRING
SEMESTER, 2020



ABSTRACT

There is a book called <<Architecture without Architect>>. It is very possible for people to use their own wisdom to build houses without architects at all.

But my title is ARCHITECTURE WITHOUT ARCHITECTURE. Is it possible?

In my opinion, buildings and spaces may be just the most common way of expression among the many different expressions of architecture. When the existence of the building is no longer attached to the physical space, it can also be called ARCHITECTURE. It all comes down to how we understand architecture. Here I try to understand architecture in other ways. I think architecture can be seen as a world with complete and clear logic.

This project is a design for a virtual world. The frame of the world is composed of designed stories and scenes, which means they are the basic structure of the world. A logical system will be generated from the structure and the whole world operates according to this system. My work is to design the basic structure and the system.

I will use architectural drawing instead of physical space to express stories. When getting rid of the constraints of real space and using two-dimensional drawing to express, it is possible to create more possibilities about time and space.

After reading, you will gradually understand my world of architecture.

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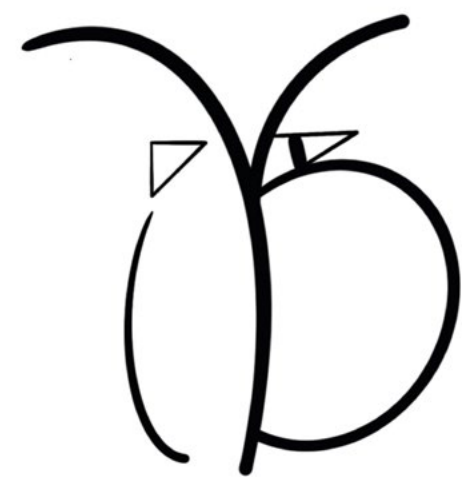
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THAT IS ME



I am Yandi, an architect and also an illustrator.I am currently studying architecture at Chalmers University of Technology in Sweden.

I am good at recording life with paintings. I am used to recording people and things around me. The lines of my life comic series are very relaxed and smooth. Sometimes I use watercolor to create the atmosphere.

Architectural illustrations are an area that I am currently focusing on. Architecture should not be a house, and painting can be an important tool. Painting in a more architectural way can tell a good story. I am focusing on how to combine this two interesting things and trying to create exciting projects.

INS: @ yandiherd
WED: <https://www.yandiillustrator.com/>

INTRODUCTION

BACKGROUND

There is always a question in my mind: WHAT IS THE MEANING OF ARCHITECTURE? I mean not just the word "Architecture", but what can be expressed by the language of architecture?

In my opinion, architecture should not just be a physical space. We always think about how to tell a story by using architecture design and what the story is about? Actually, I find out that when we are thinking about architecture in this way, we default to our architecture as a heroic existence. Architects hope to focus people on the space they create, and guide people to read the story according to their own mind. But I think that a specific space, from appearance to interior can limit people's imagination. Architecture design is not the beginning of a story. The original concept may be a beginning, but when the design is done, the story is over at the same time.

I loving reading fairy tales, especially the book with some illustrations. When I read those stories, the scenes, and characters depicted in the text, even if they are described in great detail, will always give me unlimited imagination as well. It just like a trigger, by which people are more focused when reading the story, and are more likely to be attracted to the story itself. It represents the beginning of imagination.

Back to the architecture. I found in the process of learning architecture, with completion of each design, my interest in architecture has also decreased because I lost the space and motivation of imagination. In that reason, after learning architecture for 7 years, I hope to go back to the original state, and rethink about what is architecture? Whether the architecture can really exist without physical space?

I am trying to explore, when architecture is out of the position of "ending", it may change its role as a beginner and can also be in the position of a process where architecture can always be accompanied by a certain idea or a process of creation. So it's worth to explore the possibility that whether I can change the role of architecture to turn it into a trigger, showing my personal attitude toward the world in some interesting methods not just design a boring building. Let the viewer understand my attitude by watching my works, and at the same time, inspiring them to rethink the world and some real issues. The architecture should be powerful and meaningful.

CLAIM & MAIN QUESTION

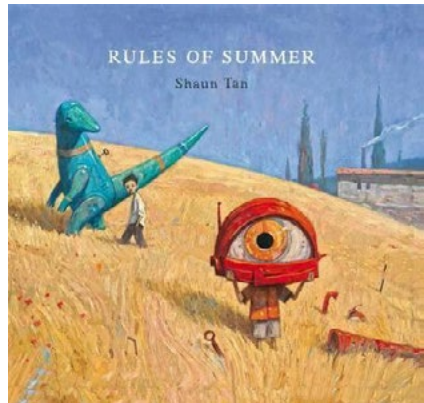
The main title of my project is Architecture without architecture? And sub title is CHOICE that is the name of my final work. Architecture without architecture? That is a question. I'd like to elaborate my claim through this question.

What is architecture? This is a question without any certain answers. We are used to express architecture with physical space design, and certainly this is architecture, but there must be more possibilities under the broad definition of architecture. So, my claim is a discussion and an experiment of this open question. If we break away from the physical space, how can we express architecture? And whether the architecture can really exist without physical space?

READING INSTRUCTIONS

There are 3 types of discourse that inspired me a lot. The first category is the book related to architecture. <<War and Architecture>>written by Lebbeus Woods. The second are story illustration books not related to architecture. The last category are the drawings created by Escher.

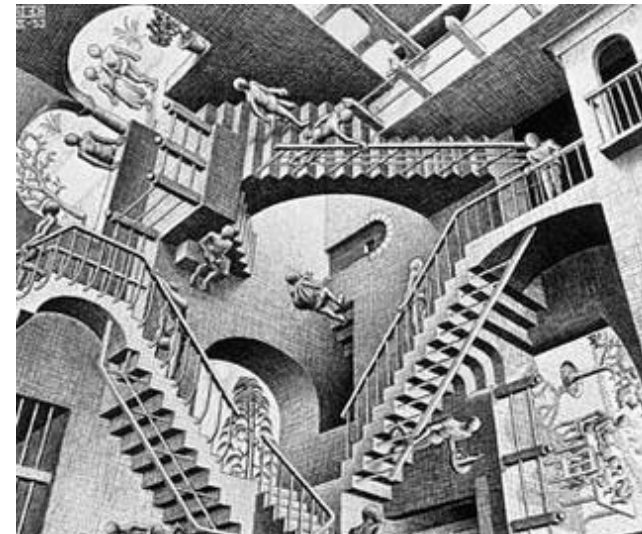
1.



<<Rules of Summer.>> Shaun Tan

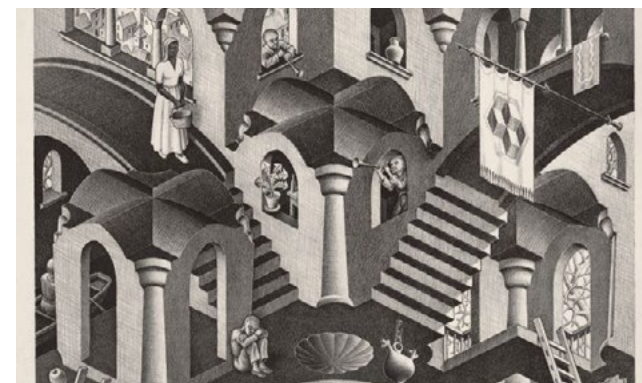
Let's start from illustration books. I read a few illustration books of Shuan Tan. The reason why his story is attractive is because his books can always give readers a lot of thinking beyond the story itself. There are two reasons to build up a wonderful story. One is that the text can be well combined with the illustration. The illustration as a visual expression of the text does not completely translate the text, but selectively expresses the content of the text, which will leave the reader with a rich imagination space. Another is the structural arrangement of the story itself. His stories are not always told in sequence, which will be mixed with flashbacks or interludes. Arranging the structure of the story in this way will make it more readable and make the reader feel immersive. So I think that exploring the narrative architecture through a combination of illustrations and text is an interesting method.

2.

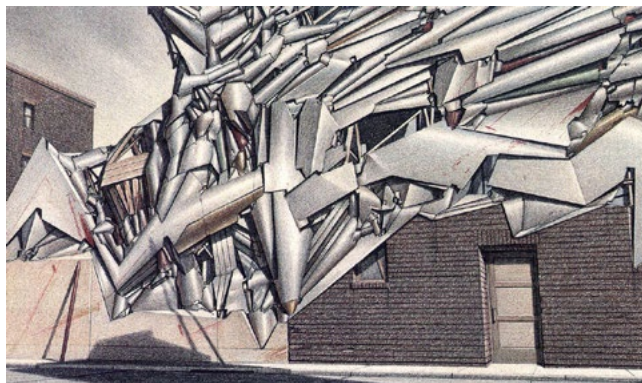
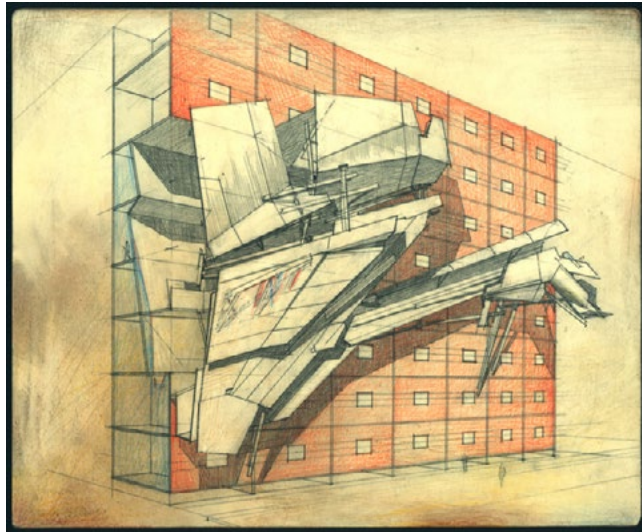


Escher's paintings are also an important reference.

Escher's paintings have their own style of drawing. The entire picture is divided into grids according to proportions, and the creation follows a strict parallel or perspective system that can cause visual illusion to people.



3.



An important discourse is the book <<War and Architecture>>. Woods uses the city after the War as the background, using architectural drawing method to tell a fictional story in combination with text. His drawings have a strong conceptual and structural beauty. But if we just look at the conceptual diagrams he painted, we can't understand the story he wants to tell, or what the architecture he understands is. Because these drawings are too conceptual. We can only understand when we read the explanatory and narrative text he wrote, and look at it together with his concept drawings. I understand that he set up a fictional world under a special historical background. All the structure in this world are self-conscious. They can grow and even reproduce according to the environment and needs. In this way, he expressed his views on the relationship between post-war cities and humans. This is his architecture.

<<War and Architecture>> Lebbeus Woods, Princeton Architectural Press; 5th edition (December 1, 1997)

RESEARCH DIRECTION

After learning from these discourses, the focus of my research is about HOW ARCHITECTURE CAN TELL STORIES CAN TELL STORIES WITHOUT PHYSICAL SPACE?

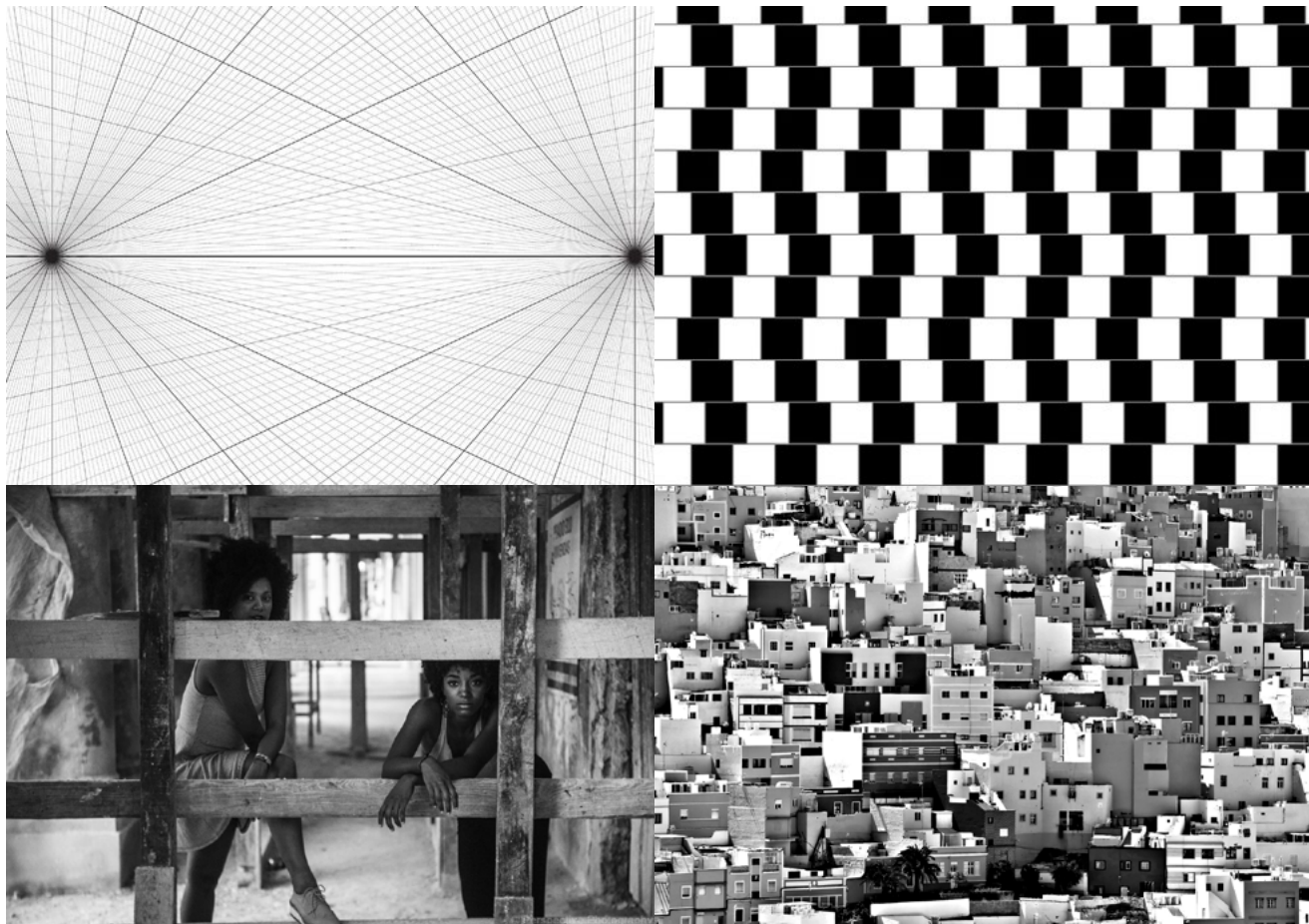
My tool is architectural drawing. I will design a complete world by drawing on two-dimensional papers. This virtual world is made up of stories. As the basic units, stories can be regarded as the materials and basic construction for building this world. The combination of the stories, the ordering method is the framework of the world, and it can also be considered as the overall structure.

There are two key challenges in the process of designing this virtual world.

The first one is about the basic units of this world: STORY. Stories are always combined by a series of time and space, then, **how to use architectural drawing to express time and space?**

The second one is about the overall structure of the world: **In which way and in what order to combine all the stories?**

1.



The solution of the first problem is that I should build up a drawing system to express time and space in my stories. Parallel lines and perspective lines systems are the main ways of constructing two-dimensional images. Images composed of parallel or perspective systems can give us different feelings, some are more narrative, some are more focus on the presentation of the scene. So, I will use parallel line and prespective line systems to express time and space.

RESEARCH OBJECTS

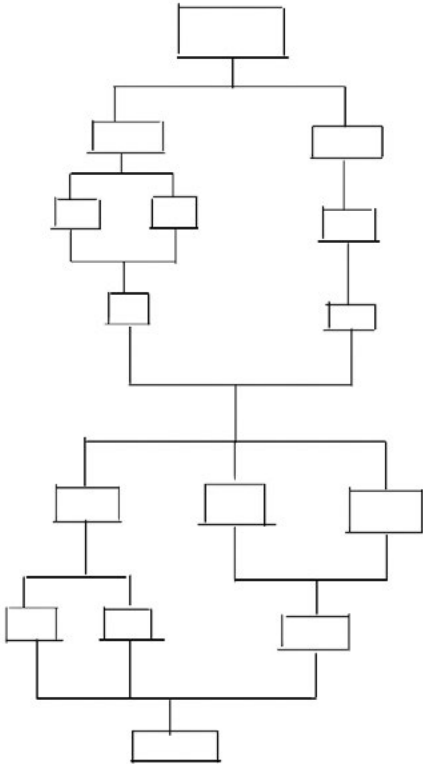
2.

There must be a main topic to connect all stories.

One of the hot issues in our society nowadays is the worldwide refugee problem which is a legacy of history. This issue has brought inevitable problems to different countries and peoples, and it will also have a lasting impact on the world. I think architectural design has the ability to convey ideas and opinions, so I set this world issue as my main topic which can lead the following structure and the system.

I create the world depend on some documentaries and some historical documents, telling a series of stories about the tough journey of refugees leaving their homes in search of new places to live. The whole story is under the background of refugees which can lead other sub stories.

OBJECTIVES



I will present the final design in the form of a story book. Each page is a story scene. These scenes form a complete reading network through different combinations. As shown in the figure, this network is not sequential reading, there will be some loops and choices in the reading process. We can understand that this is an interactive experiential reading process. When the reader finish the book, he will learn how I understand the question: what is architecture. And I hope that readers can put forward more views and opinions from my understanding through reading.

The book is combined by 27 sub stories and each of the story is a simple architectural drawing image.The arrangement of these drawings is shown in the figure. When reading, there will be different branch choices, they will guide the reader to different situations, and every time you enter a new situation, a new branch will appear. In this process, you may do the previous steps or continue reading smoothly, completely according to the reader's choice.

METHOD

DRAWING METHOD

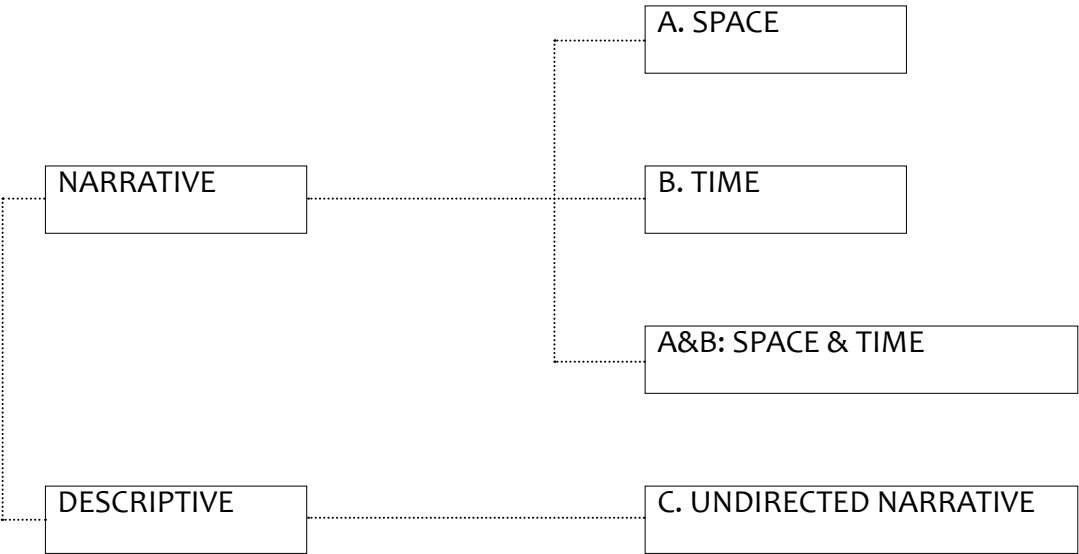
Based on the experience of the different stories I set, I divided the drawing methods into two categories. The first category focuses on narrative, the second category focuses on descriptive. Then subdivide as 4 different situation.

Type A is the drawing that emphasizes SPACE and has guidance.

Type B is the drawing that emphasizes TIME and has guidance.

Type A+B is the drawing that emphasizes both time and space, and has guidance.

Type c is drawing without guidance, it can be understood as listening to a narrator describing a scenario.



THEORY

Since the two-dimensional images we see generally focus on space rather than time, I find a time theory which helps me to add time element to my drawing.

It is called: SPECIAL RELATIVITY THEORY (Time Model)

When I superimpose the drawing method and the Time Model, I set up a personal drawing system.

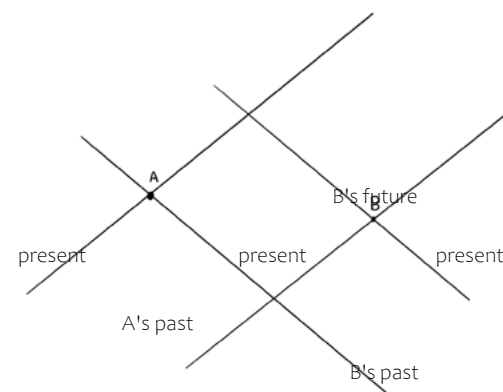


figure 1

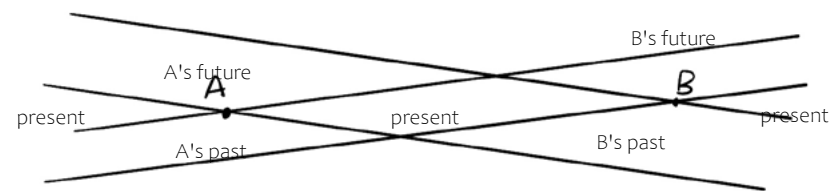


figure 2

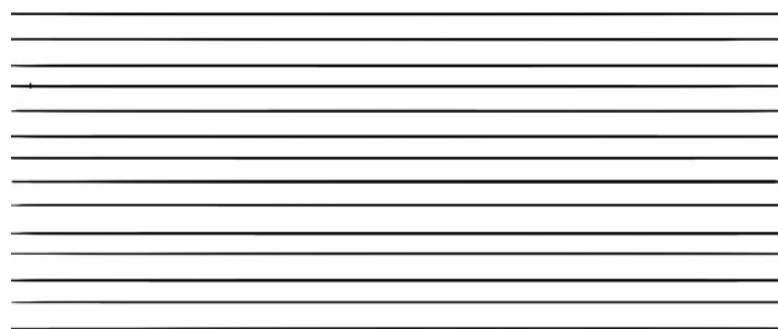


figure 3

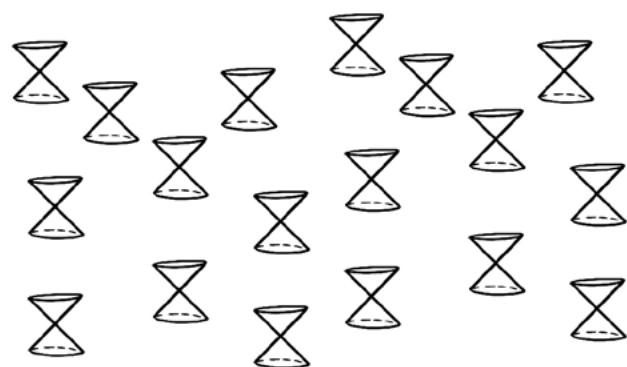


figure 4

SPECIAL RELATIVITY THEORY (Time Model)

This theory explain the relationship among past, now and the future. Our time in the universe is combined by a series of events, each of them is a different individual with different past, future and the current. We can not just draw them like these parallel lines (F_3). A parallel system means there is a common present, past and future, which do not have difference in time in the same dimension. The digram of time is more like thg crossing figure 1, we can imagine there are lots of individual cone in the universe(F_1). In fact, the angle of line is really small, because within the range that human can perceive, time passing is just like the parallel line system.

From the digram we can get an interesting information that is when we treat different intersections as different independent events, each of them has their own past, present and future. Due to the past, present and future of each event point are borderless area, if we superimpose them together, there will be a series of disordered time and space.

<<The Order of Time>> Carlo Rovelli, Riverhead Books; 1st Edition edition (May 8, 2018)

DELIMITATIONS

Before showing the work, let us make a summary.

The research I have done is within the category of narrative architecture. The starting point of the research is the original question: Architecture without architecture? If we break away from the physical space, how can we express architecture? And whether the architecture can really exist without physical space?

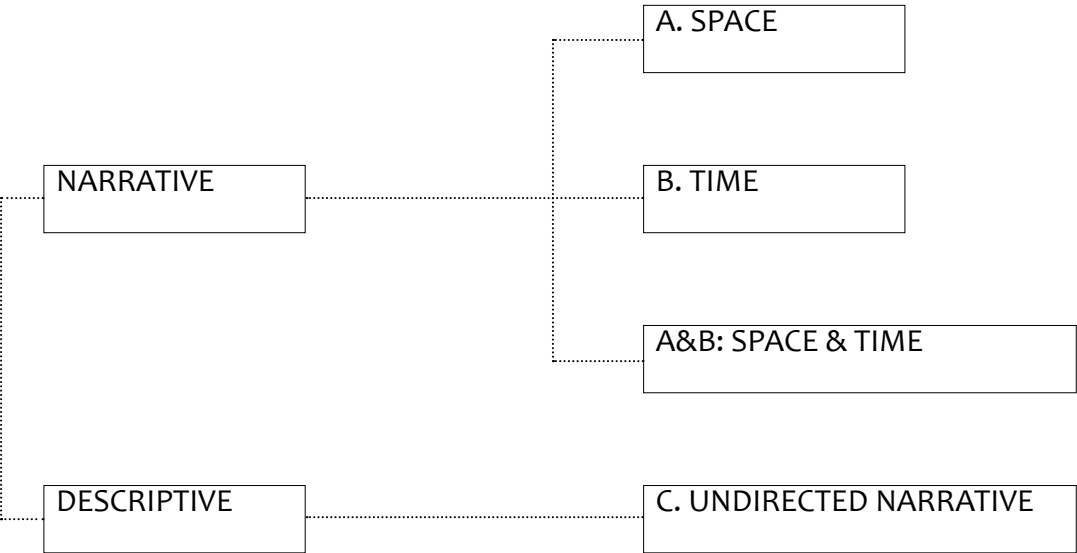
I always think that it is possible. The most interesting and intriguing part of many art forms is their narrative, as is architecture. Shuantan's picture books tell me that good stories can be produced through the combination of infectious drawings and a small amount of text, which will bring readers unlimited imagination; The process of reading "war and architecture" is to understand how Lebbeus Woods views architecture. He did not use any physical space to tell the story, but built a logical fictional world on two-dimensional paper; Escher's paintings have his own painting system, and the seemingly contradictory picture is obtained by strict grid system and proportional relationship. His painting is both rational and emotional.

After reading it, I narrowed down the question and turned it into a discussion about how to tell the story of architecture without physical space. But this is still a broad research topic. I need to find a main topic for the whole story to guide the following work. So I choose the refugee problem which is a hot issue all around the world as my main topic and all stories happen under this topic. I hope to build a virtual world like Woods. The framework of the whole world is the translation of the process of refugees fleeing their homeland and looking for new living land. The materials for constructing the framework are the various incidents encountered by refugees during their journey. The occurrence of events is inseparable from time and space, so I began to discuss how to express time and space with architectural drawing. After analyzing the existing images and drawings, and with the aid of the theory of time model, I finally want to discuss the issue of how to express time and space with a perspective line and parallel line system, which includes the passage of time and space Conversion.

STORY BOOK

DECONSTRUCTION (single drawing)

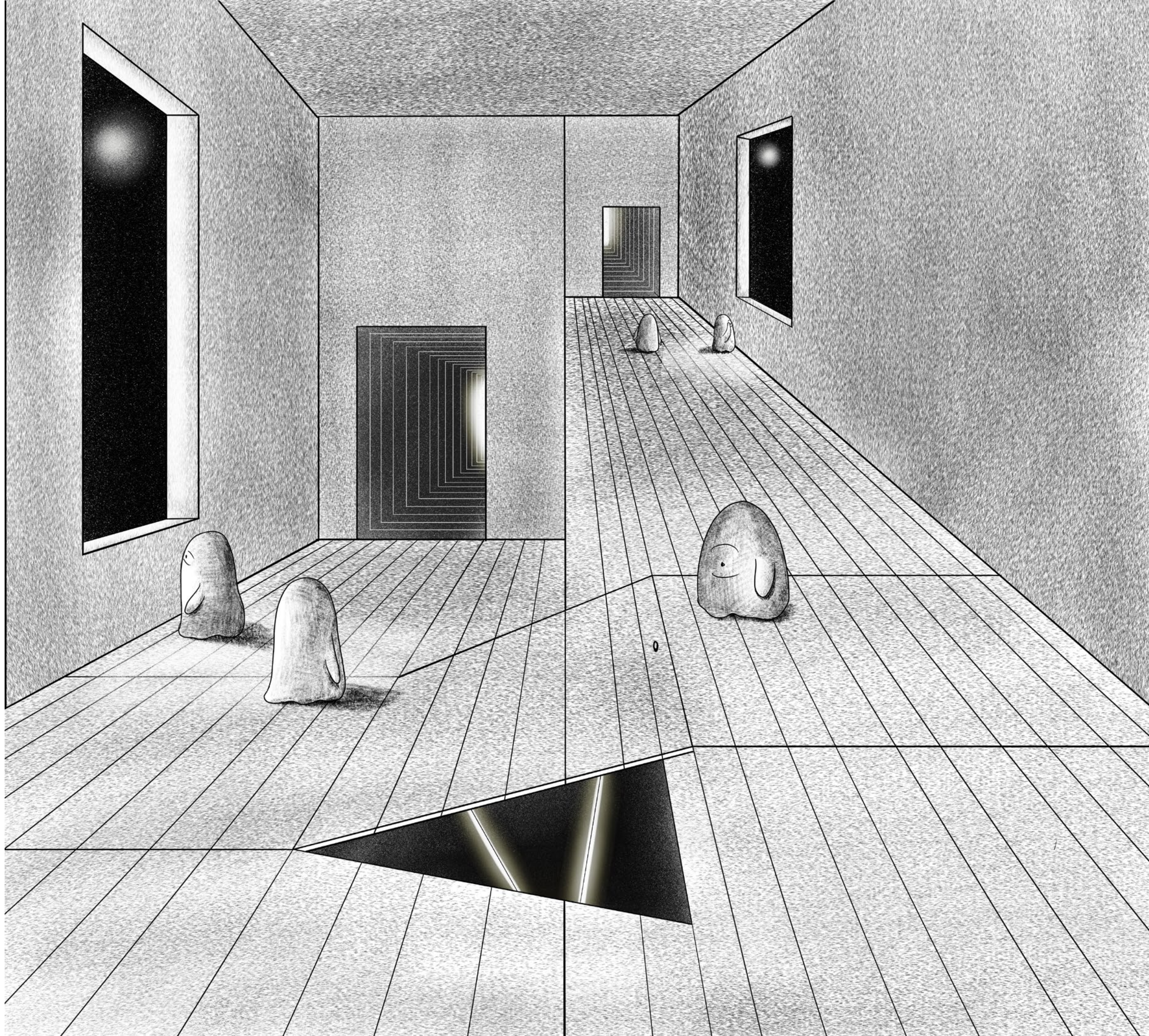
My final work is a story book combined by drawings and texts. The drawings are very conceptual, I will further explain my drawing method while displaying the work.
In order to better understand my drawings, I will select four of them in four cases to explain.



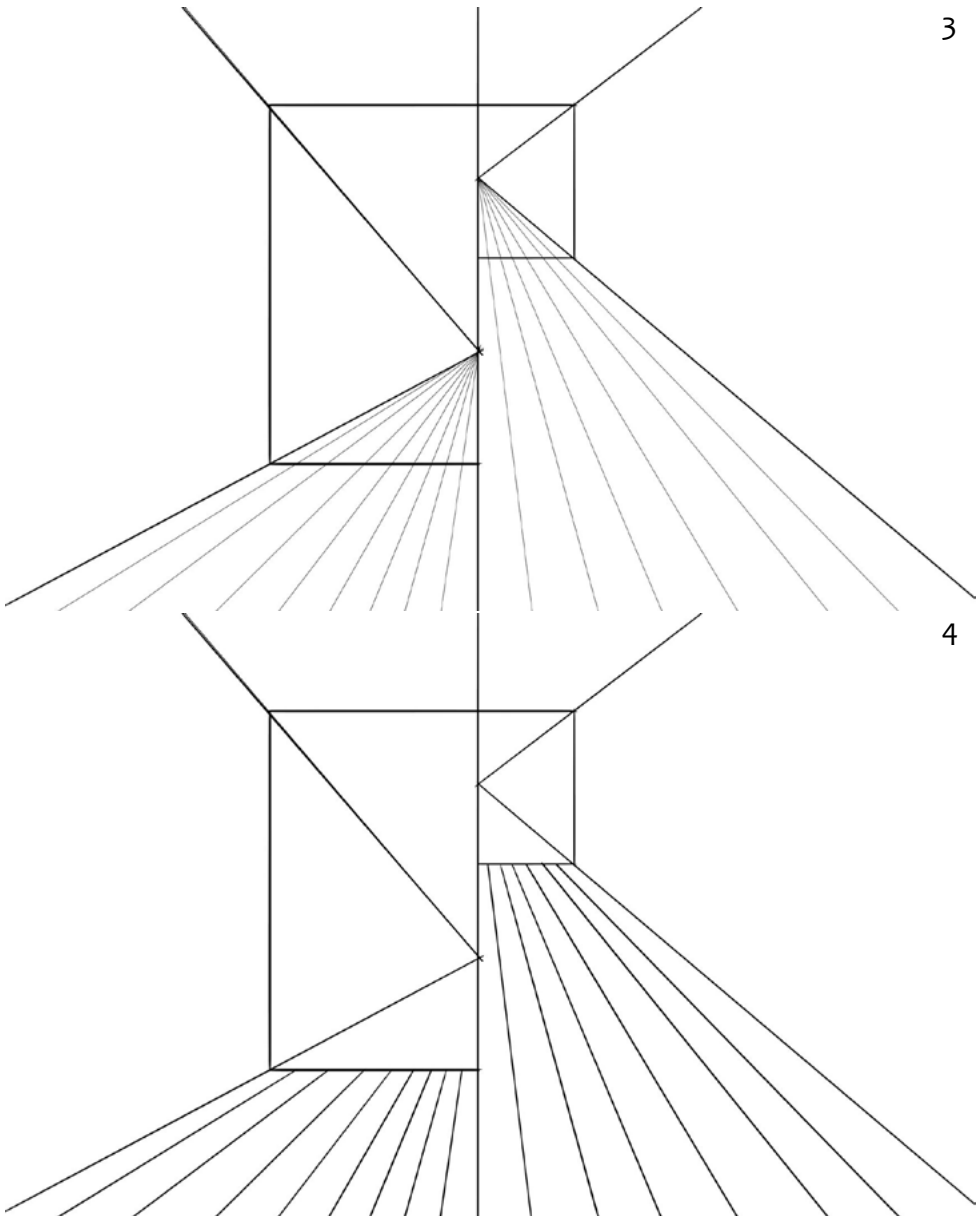
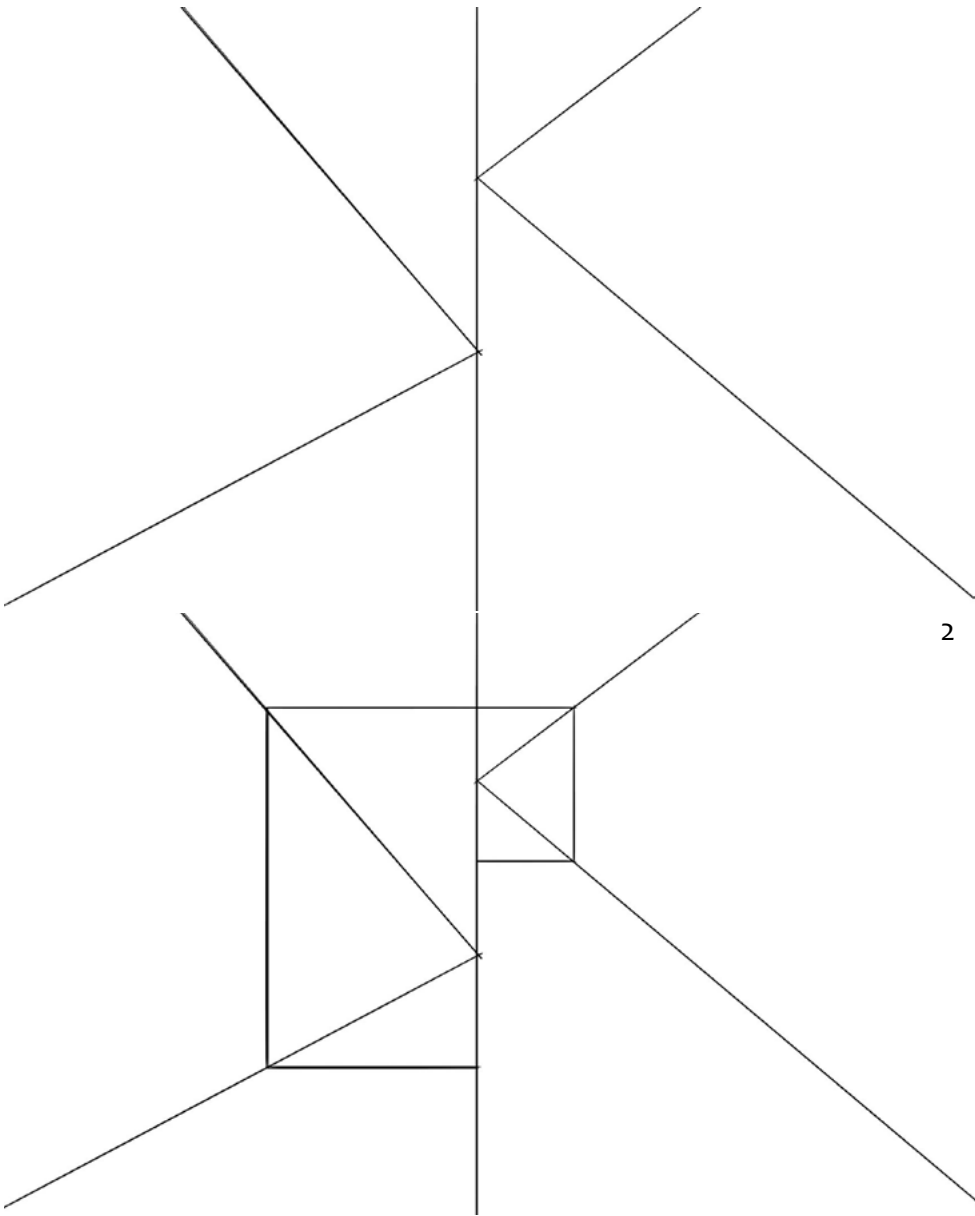
A. SPACE

It's time to leave, even if you are still nostalgic here.

In order to live better, at this moment you must leave



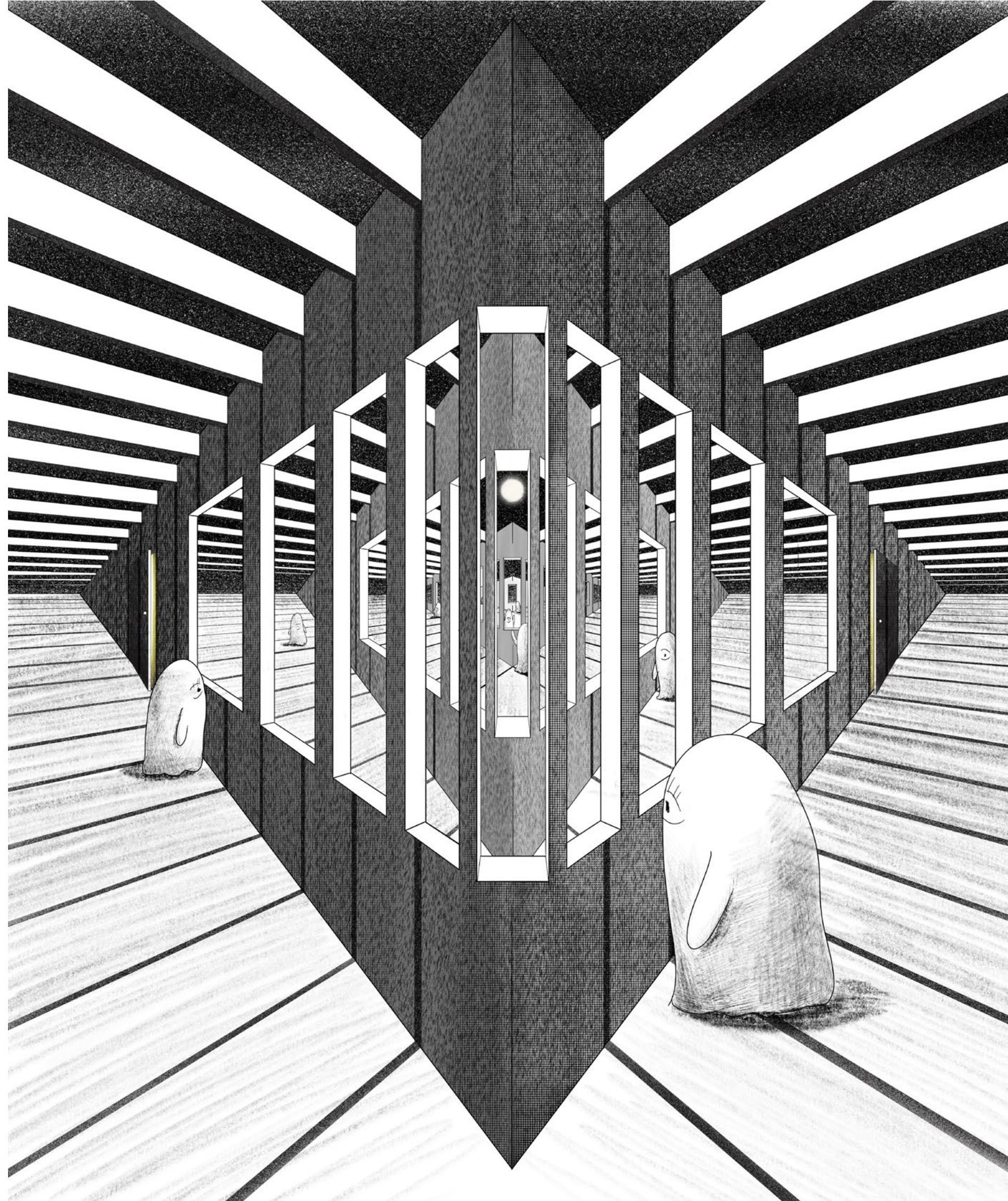
For this drawing, it is the combination of 2 one point perspectives, with different vanishing points at different heights on the same y-axis. Form a strong spatial contrast, two spaces in the same scene have the illusion of distance. Reading with the text of the drawing, this is using space to guide readers under the same time conditions.



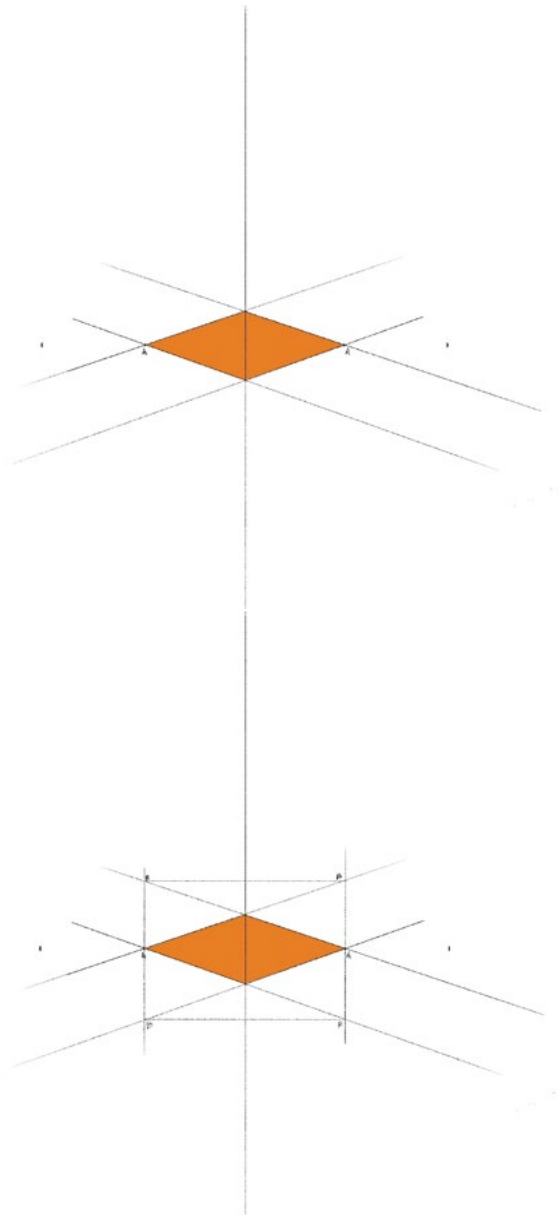
B. TIME

Do you choose to stay here?

You stand here, remembering the past, as if you can see the future at the same time. You are confused because it seems that there is an endless cycle of past, present and future

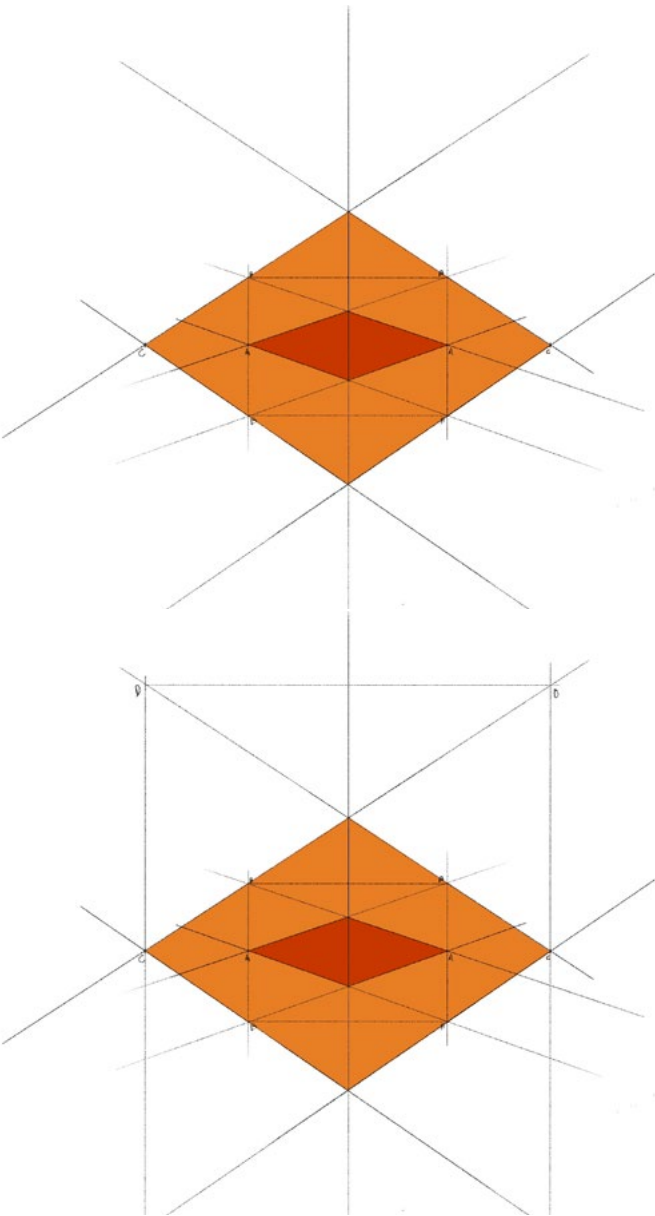


For this drawing, it is a continuous superposition of multiple two-point perspectives. First, determine the two innermost vanishing points, and use the extension line to find the vanishing points further out, and so on. The whole drawing is symmetrical. Reading with the text, this is to express the infinite loop in the current time and space. Reading with the time model, this drawing focuses the story between two vanishing points, which is the current part of the time model.



1

2

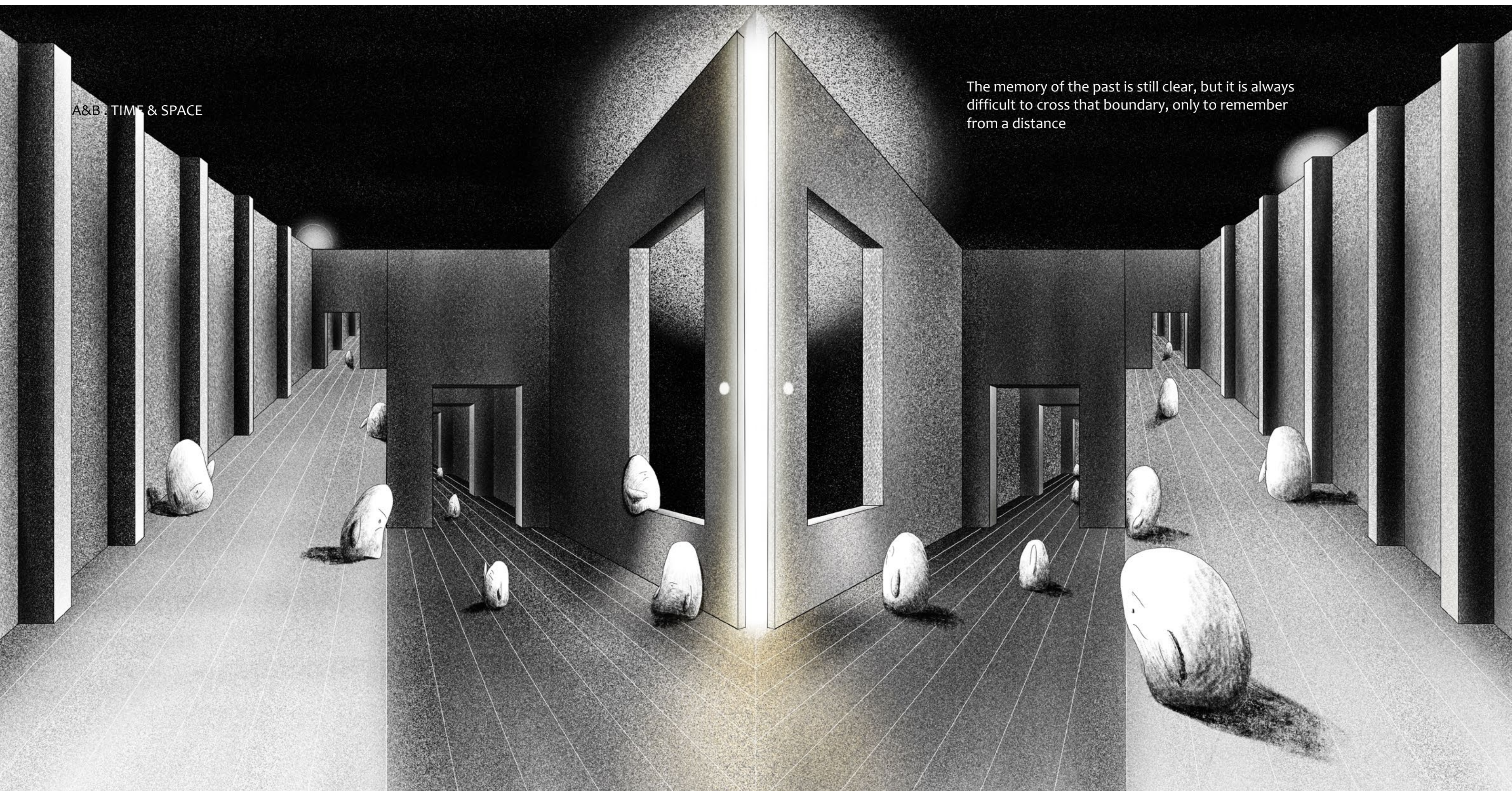


3

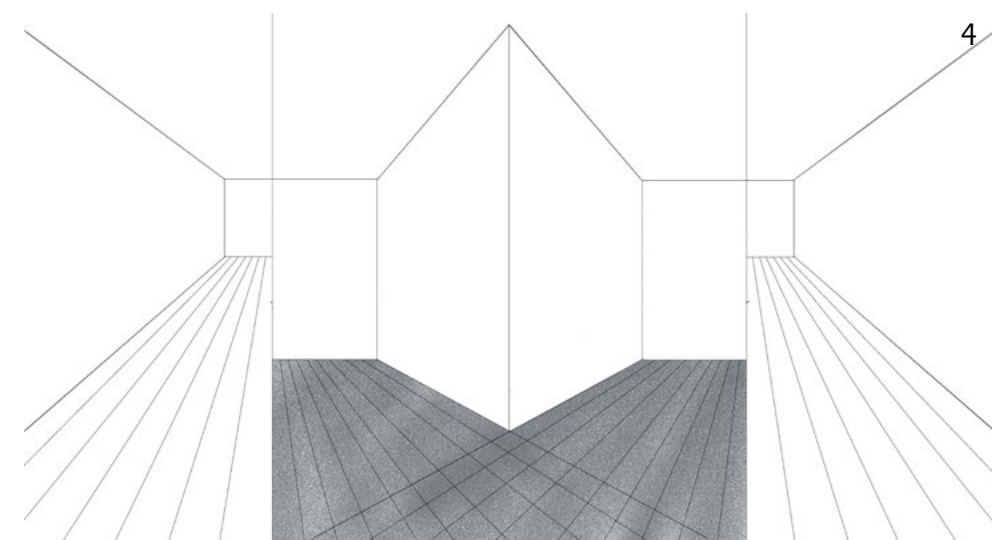
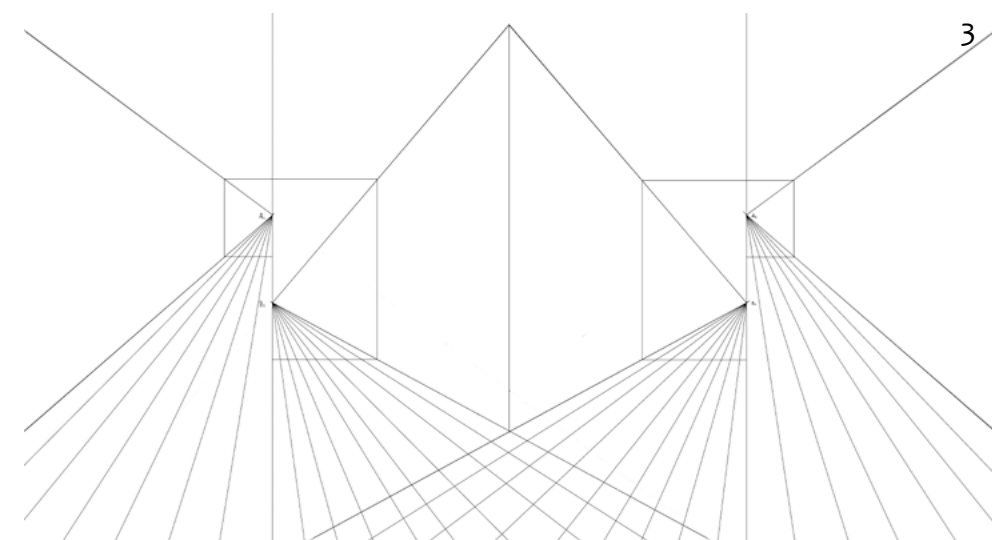
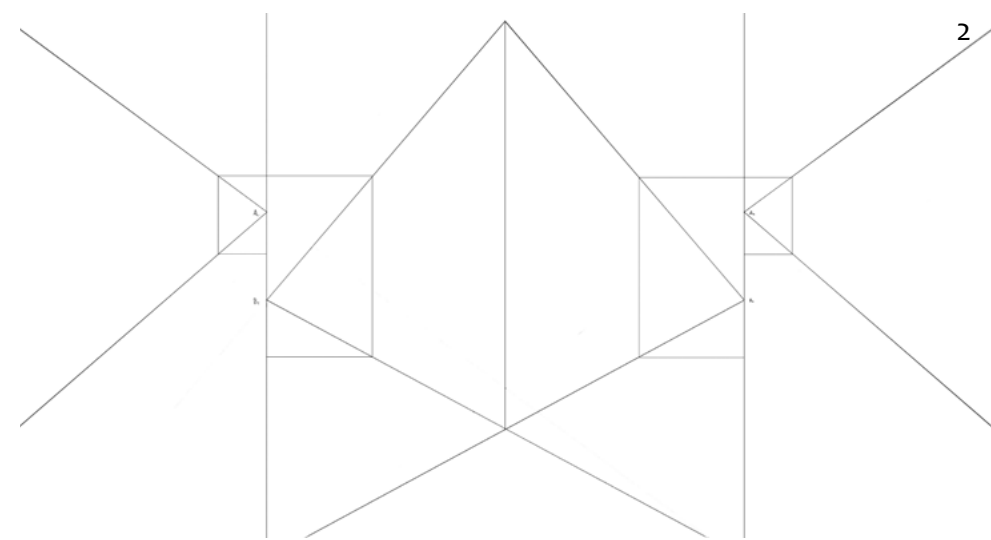
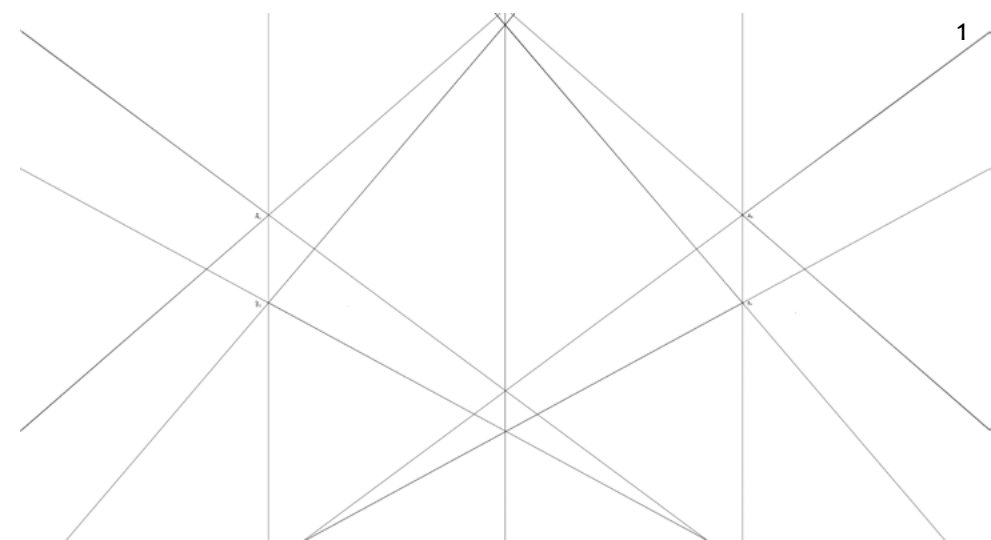
4

A&B TIME & SPACE

The memory of the past is still clear, but it is always difficult to cross that boundary, only to remember from a distance

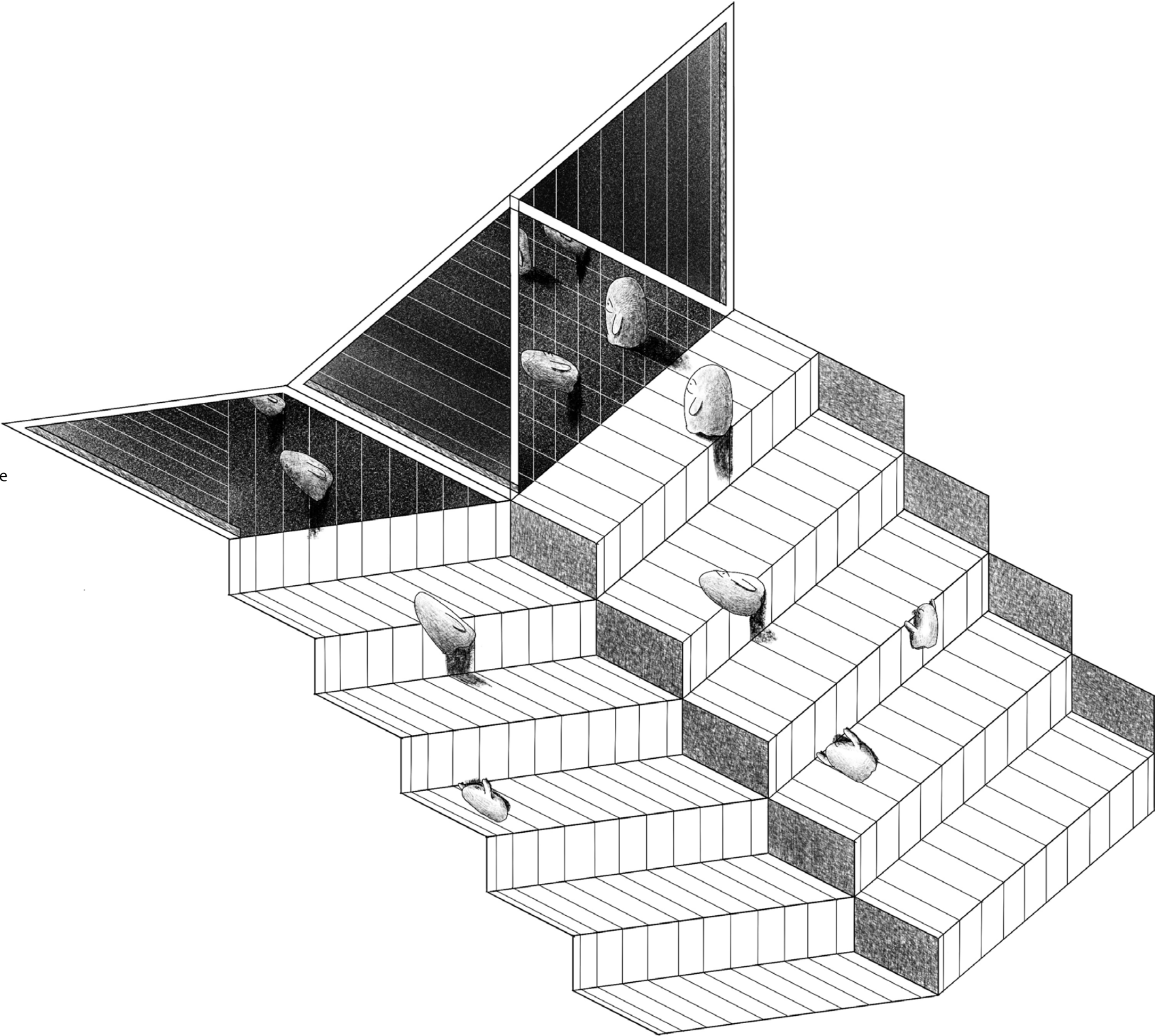


This drawing evolved from type A. The difference is that this drawing is a superposition of 4 one point perspective. The vanishing point differs not only on the x-axis, but also on the y-axis. The one-point perspective overlay on the left and right will form an effect similar to the two-point perspective. According to the time model, the lower part of the intersection area is an expression of the past. Reading the drawing with the text, it's the memory of the past.

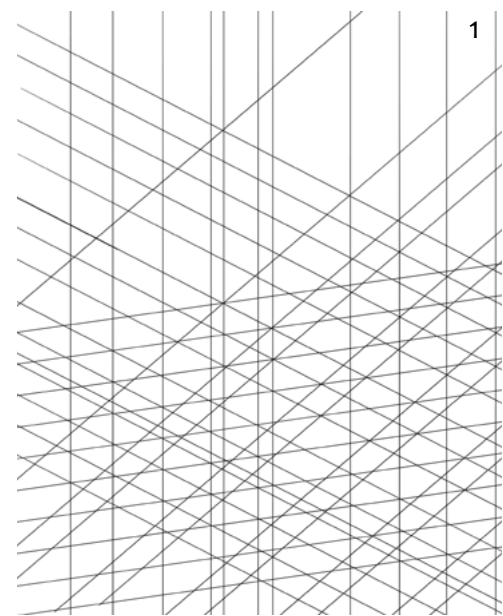


C. DESCRIPTIVE

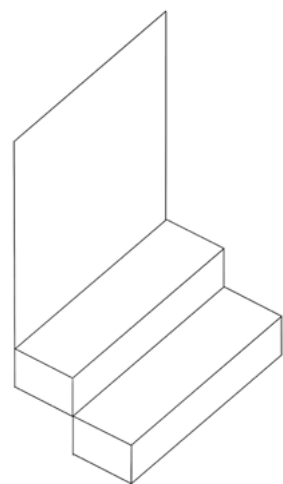
You seem to be on the right path, but at the same time an unknown path.



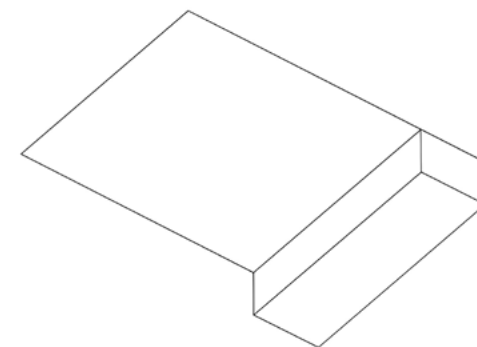
For this drawing, is composed entirely of parallel lines in different directions, and the visual deception is formed by the superposition of parallel line systems. All choices on the way seem to be equal and there is no difference. No guidance.



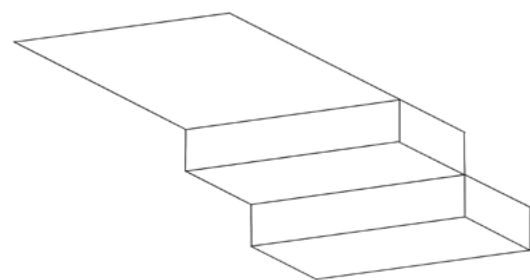
1



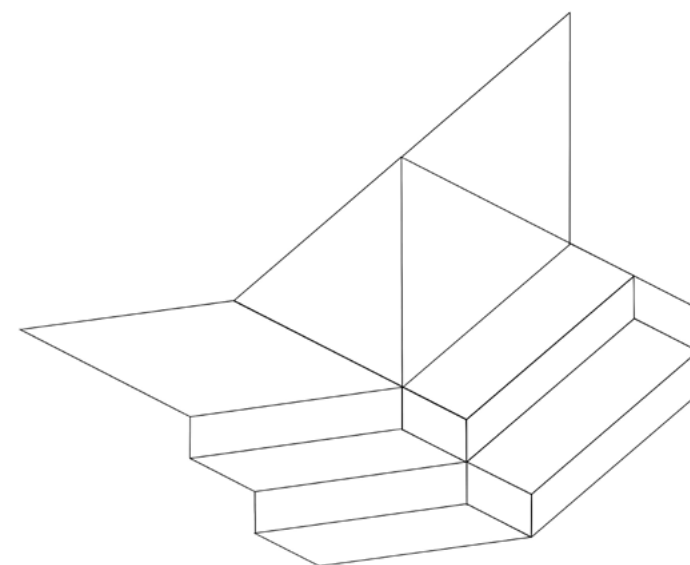
2



4



3



5

DECONSTRUCTION (whole structure)

The change of time and space is not only reflected in each imagine, but also in the whole structure of the book.

There are 3 types of reading order in the reading process of the whole book.

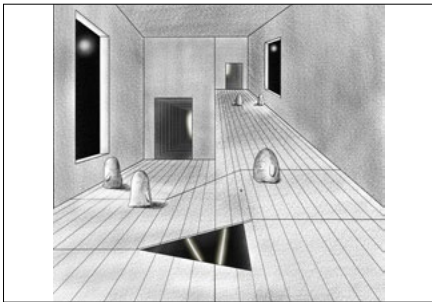
A.COMPLETE SEQUENTIAL READING: This means that the reader is very fortunate to choose all the doors correctly, and successfully fled from his hometown to the ideal destination.

B.SMALL LOOP TYPE READING: This means that the reader has chosen to return to the previous step in the reading of certain scenarios

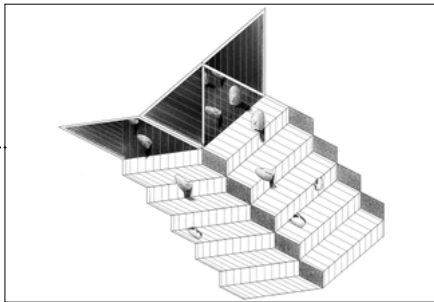
C.BIG LOOP TYPE READING: This means that the reader made a major mistake in the selection of a certain scene and directly returned to the original scene

A : COMPLETE SEQUENTIAL READING

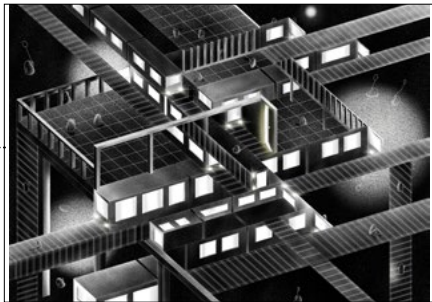
You will go through the journey very smoothly, but you will also miss many story scenes.



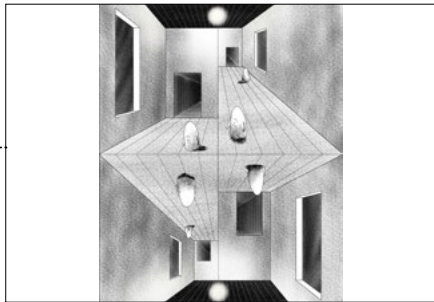
1 START



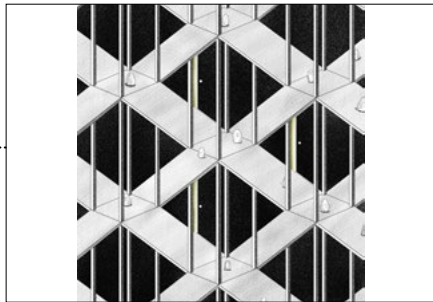
4 DEPATURE



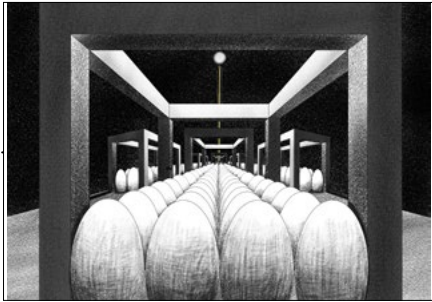
9 PUZZLE



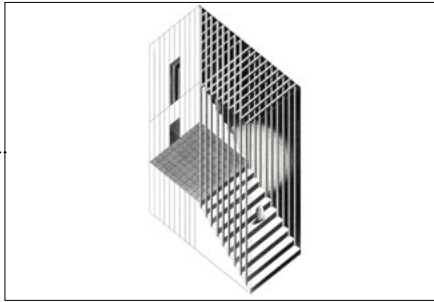
11 NEW



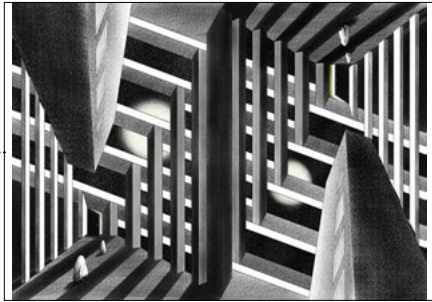
12 UNBOUNDED



14 WAITING



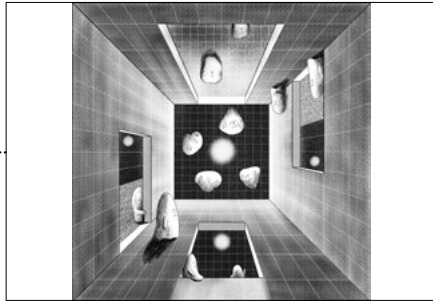
22 LAND



23 CHOICE



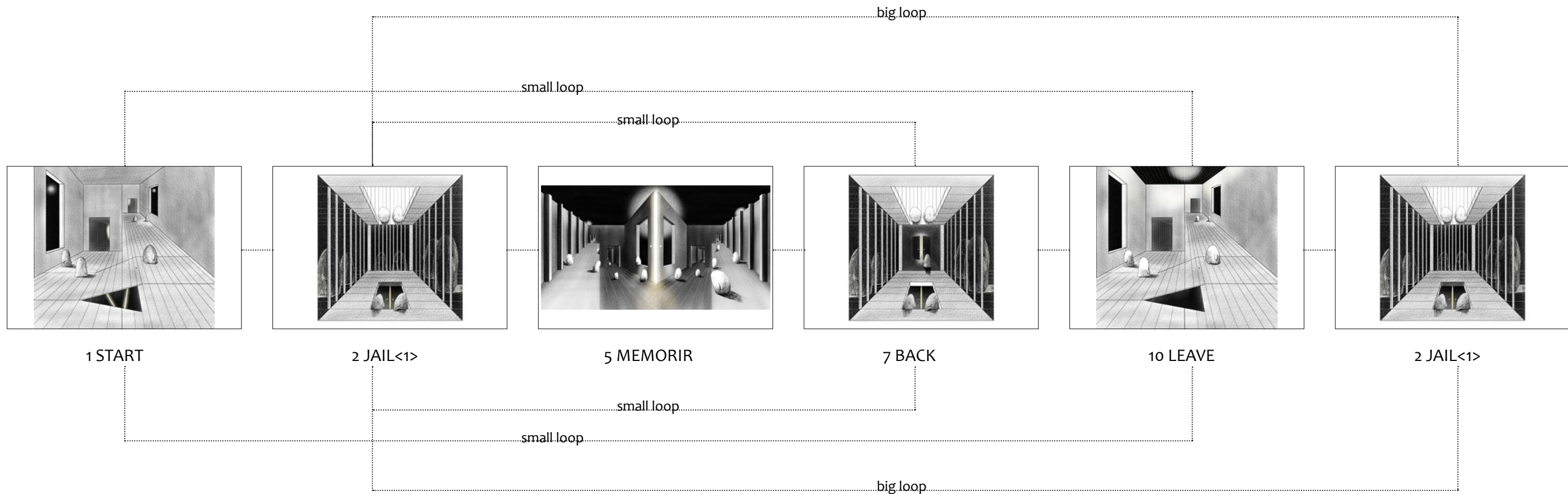
25 JOURNEY



27 REBIRTH

B&C: SMALL LOOP AND BIG LOOP

You will be caught in different degrees of circulation.



In a SMALL LOOP, you will find that you have returned to a similar scene, but the image has subtle changes. This means that in the process of reading the book, time itself is also elapsed, when you return to the same scene, the image changes due to time

In a BIG LOOP, you go directly back to the original state, you will find that this is an endless cycle of time and space.

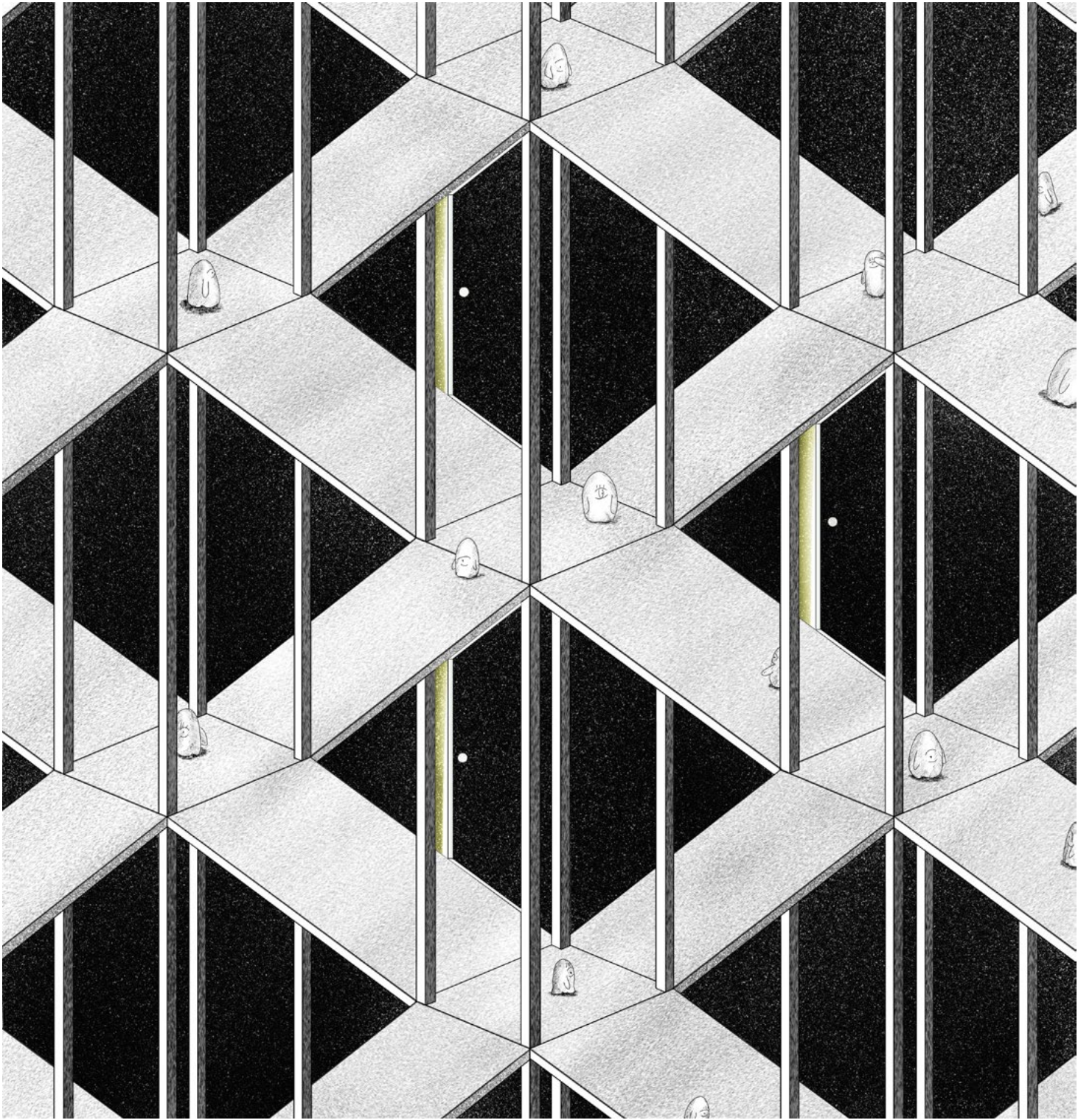
The display of time and space in the whole book is not only based on the system of parallel lines and perspective lines to draw single-read story scenes, the combination of all stories in the book, the reading order is also an important way to understand time and space.

GALLERY

Some of the works in the storybook will be displayed in this gallery. I don't show them in the order of the story because the final picture book has no fixed order. For the complete story, please see the story book "CHOICE".

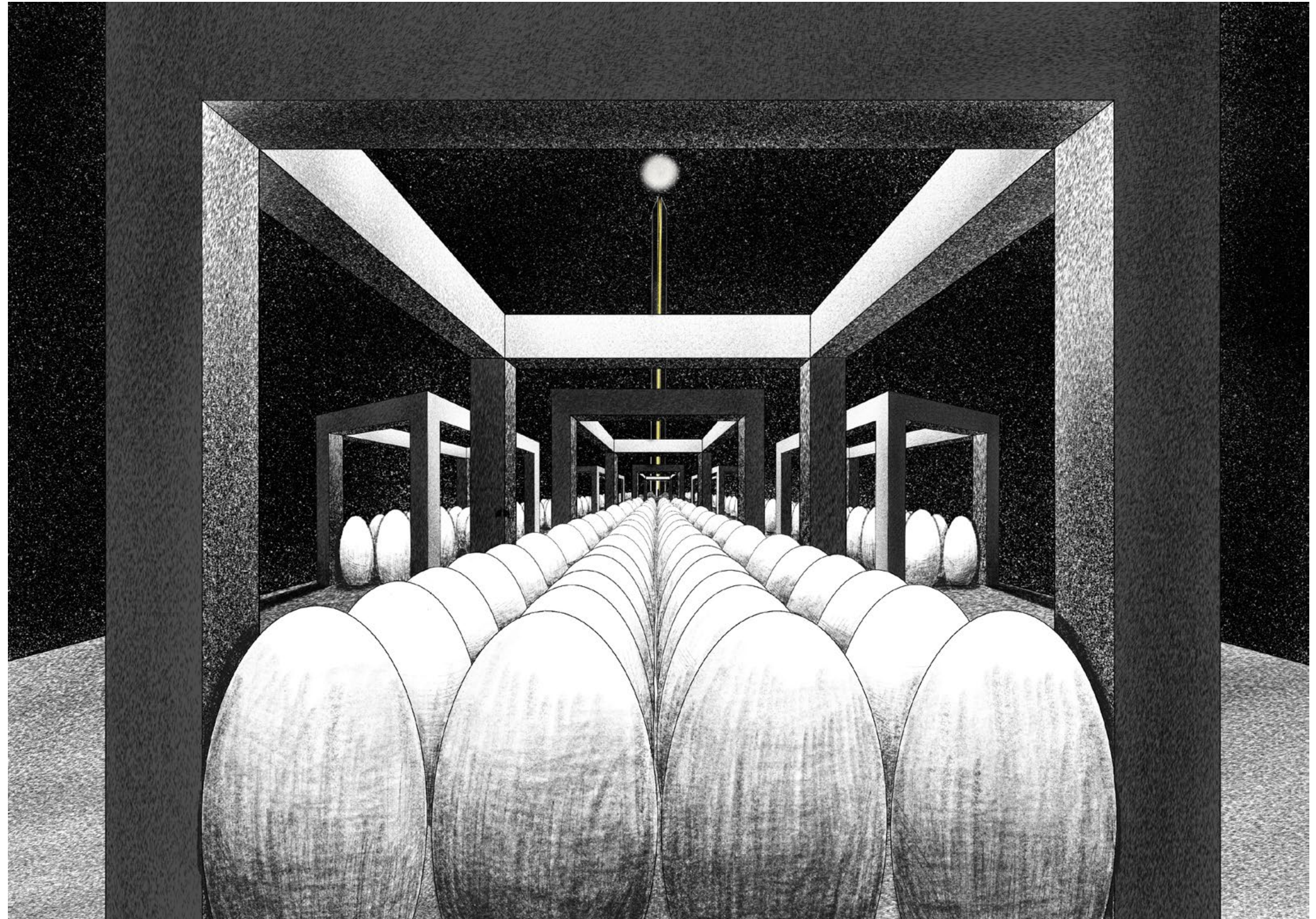
UNBOUNDED

You are lost again, this vast world seems to have no boundaries.



WAITING

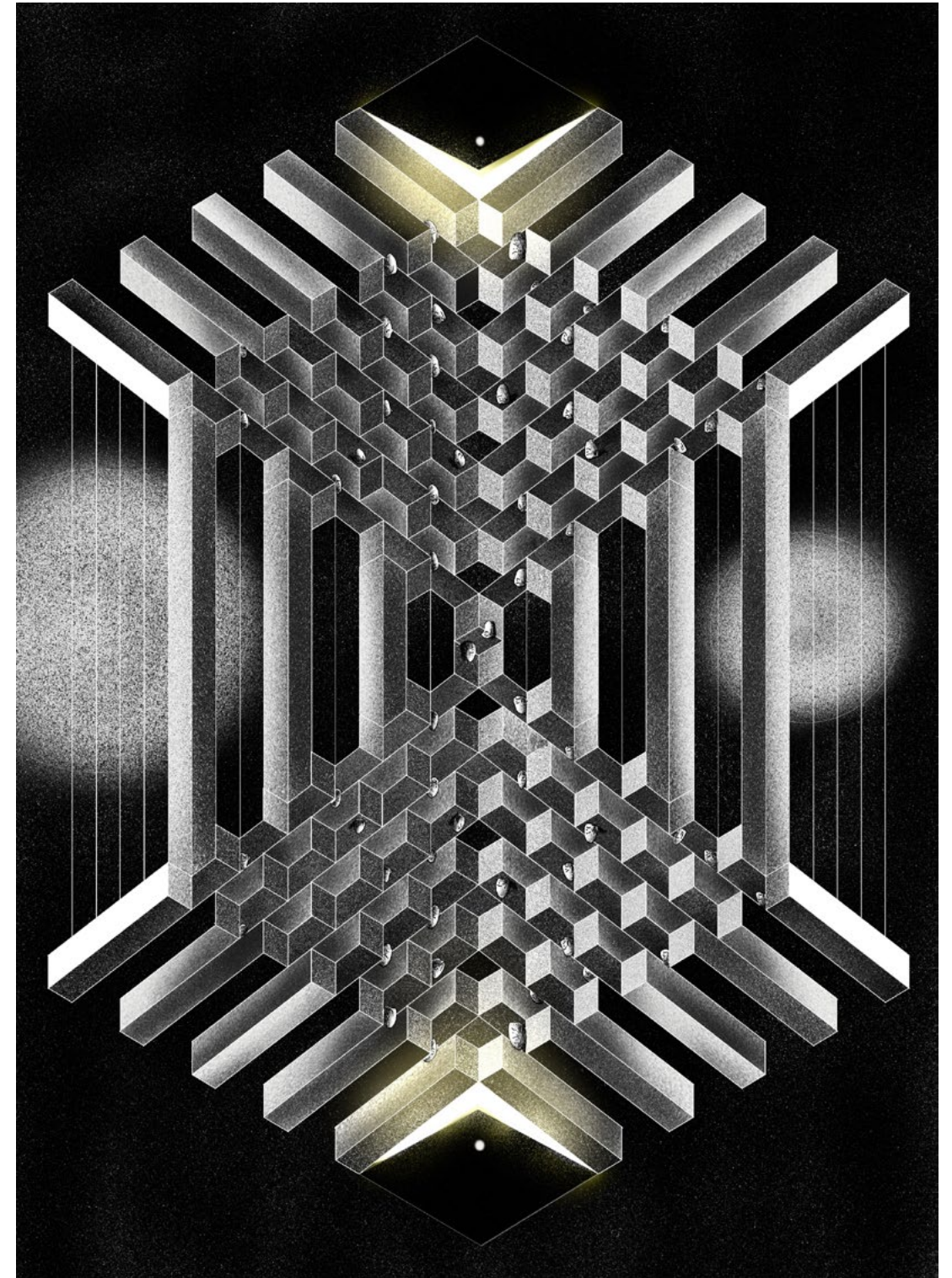
You come to an unknown place, where is full of elves,
and everyone is waiting for permission to pass.



SHIP

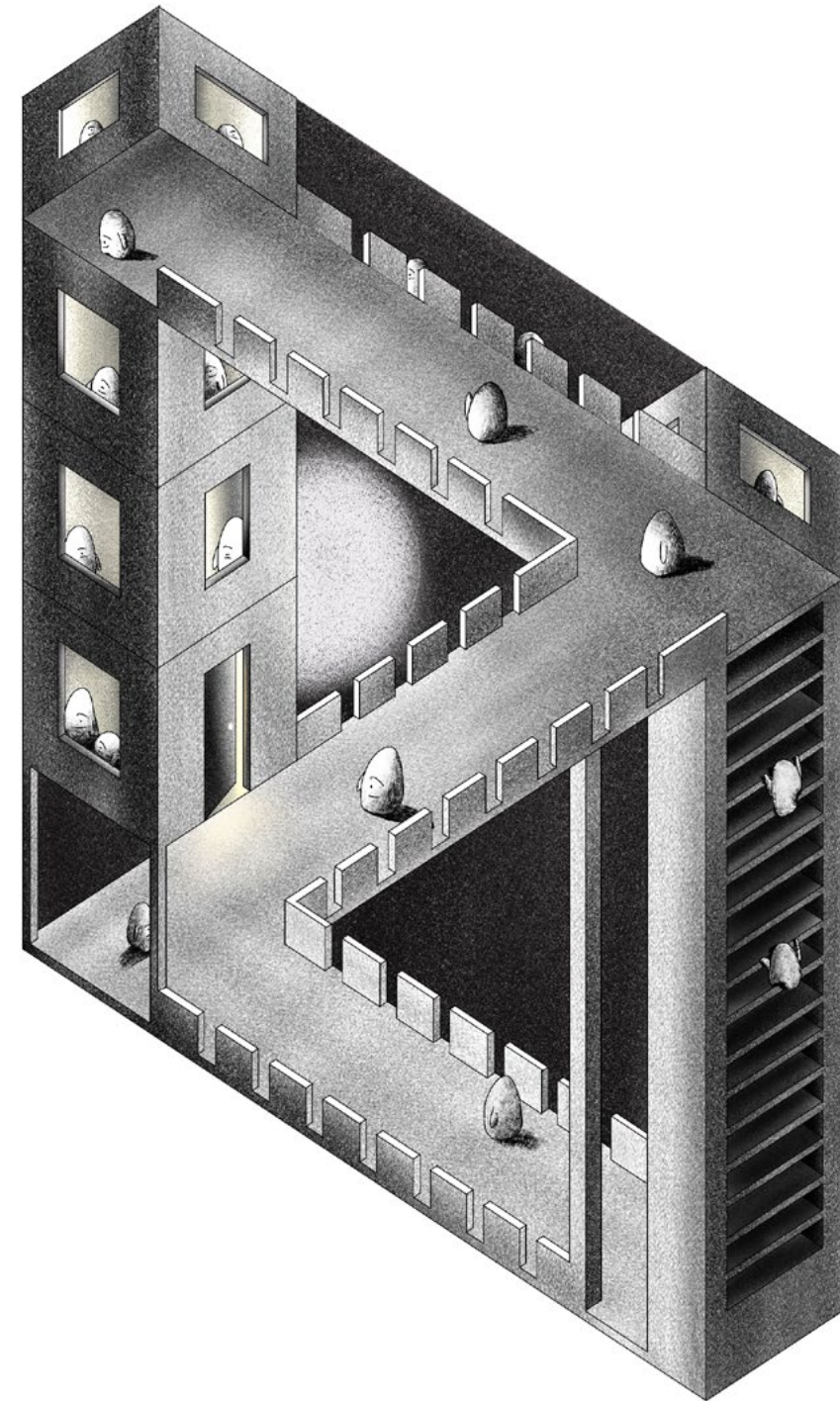
You swear that this is the worst situation you have ever encountered in your life.

You can only stay in the same room with the debris, tightly closed.



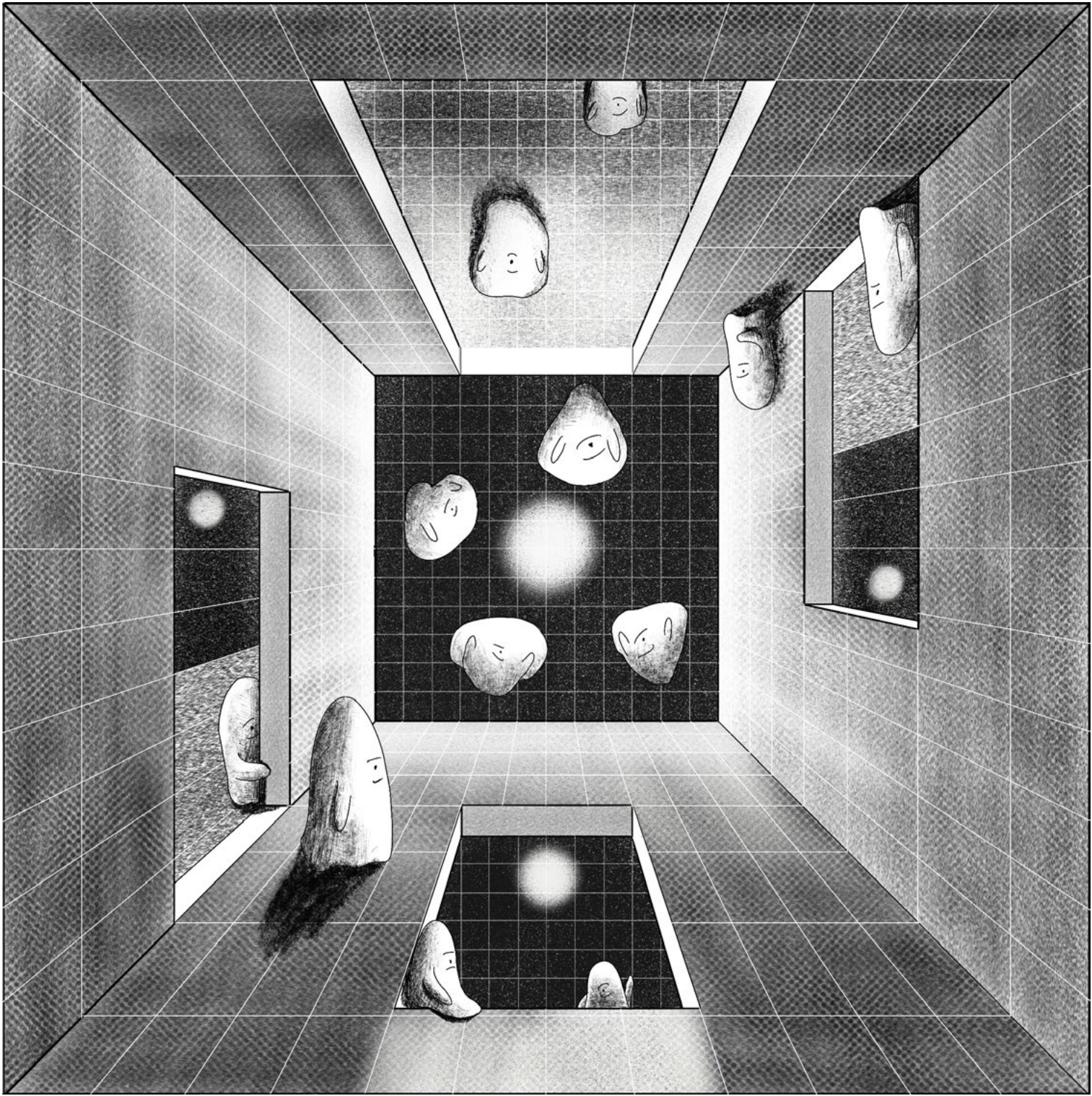
CURRENT

The endless cycle has made you tired, but you still don't want to give up, still looking for an exit.



REBRITH

You finally reach your destination in your heart, but new choices come with it.



DISCUSSION

Back to the original question, architecture without architecture, is this possible? As long as we no longer limit the definition of architecture to the physical space, the answer is entirely possible.

The language of architecture is very rich, and there are many ways of expressing the narrative of architecture. My master thesis is trying to express and understand narrative architecture by drawing. But drawing itself is just a method and a tool. My truly aim is to explore the different possibilities of architectural narrative.

The architecture I understand is not just houses and spaces in general, but a logical system that has its own life. Just like a tree can choose its own growth trajectory according to changes in the external environment, sprouting in spring and withering in winter. The life of architecture as I understand it is that it can form a complete world of self under a certain logic. All stories are connected and reacted under the rules of this world. That's the reason why I think architecture can really be a storyteller rather than a terminator. It can provide a set of logic system, let people participate in it, and when the time people experience according to the established rules, more ideas and feelings beyond the system will be produced.

What exactly is architecture? This is still a question without a clear answer. I spent a year exploring another possibility without using physical space, but there must be more and more answers.

DECONSTRUCTION (whole structure)

<<Rules of Summer.>> Shuan Tan
<<War and Architecture>> Lebbeus Woods, Princeton Architectural Press; 5th edition (December 1, 1997)
<<The Order of Time>> Carlo Rovelli, Riverhead Books; 1st Edition edition (May 8, 2018)
<< The New Odyssey>>: The Story of the Twenty-First Century Refugee Crisis Hardcover – January 10, 2017
<<Here>> (Pantheon Graphic Library) Hardcover – December 9, 2014



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COURSE PM ACE35, MASTER'S THESIS, SPRING SEMESTER, 2020