SEEING OF DARKNESS

Representations of Darkness and Various Approaches of Seeing

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Abstract

This research project focuses on the visual perception in between painting and physical space. The aim is to find method translating the phenomena captured by the painting to the one can be perceived in physical space.

I chose to work on the painting from Ming dynasty called <Gua Bi Fei Quan Tu>《挂壁飞泉图》as a demonstration of capturing phenomena in painting. It was painted by artist Gong Xian (1618-1689) in his late years. The most beauty of the painting is the growing experience derived each time to see it. There are so many approaches to see and get richer feelings. Although it is just a 2D image, it generates the infinite perception of space and time which makes it more like a container of phenomena linked to reality rather than a dead material object.

The great potential in architecture is to create physical spaces that could be engaged through different approaches, be precepted variously by different individuals repeatedly and they can get growing and diverse experiences each time.

Following this intention, I simplified the painting as collection of darkness, focused on several configurations of darkness. My pursuit is to translate the technique of drawing darkness on 2D surface into technique of building darkness based on architect's tools, such as models, drawings and spatial arrangement.

Structurally, the research process is separated into three chapters. Each chapter deals with one configurations of darkness. They are named as layers of darkness, contrasts of darkness and moving viewpoints. Then the design outcome is an architectural model based on the assemblage by the three configurations.

The model is a sketch to approach the similar quality of the painting. It contains different viewports, darkness is layered by several screens and light contrasts can be controlled by covers. It is a transformation of <Gua Bi Fei Quan Tu>.

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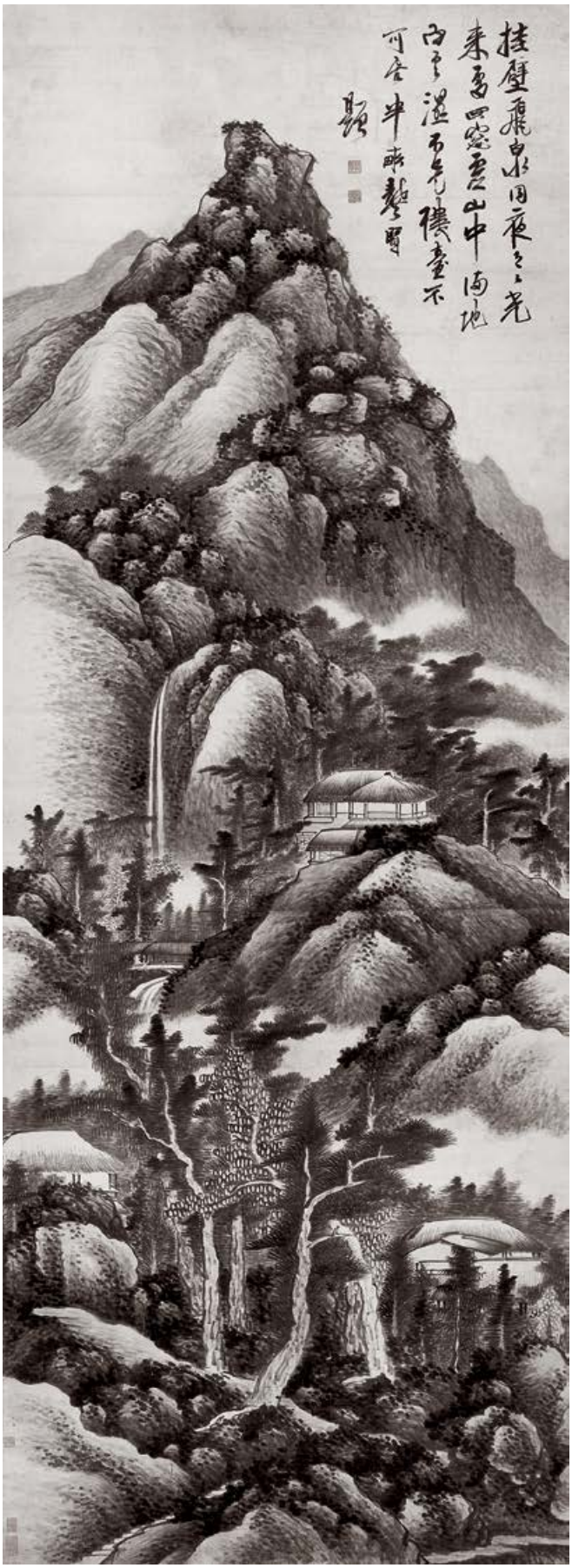
The Painting

Introduction & Stucture



<Bi Gua Fei Quan Tu>
GONG Xian

Introduction

The image in the previous page is a small-scale copy of the painting <Gua Bi Fei Quan Tu>《挂壁飞泉图》. It was painted by artist Gong Xian (1618-1689) in his late years. The full size is 99cm*273cm.

The research simplified the painting to the collection of darkness as a starting point. It classified the collection into three configurations in order to discuss in an isolated condition.

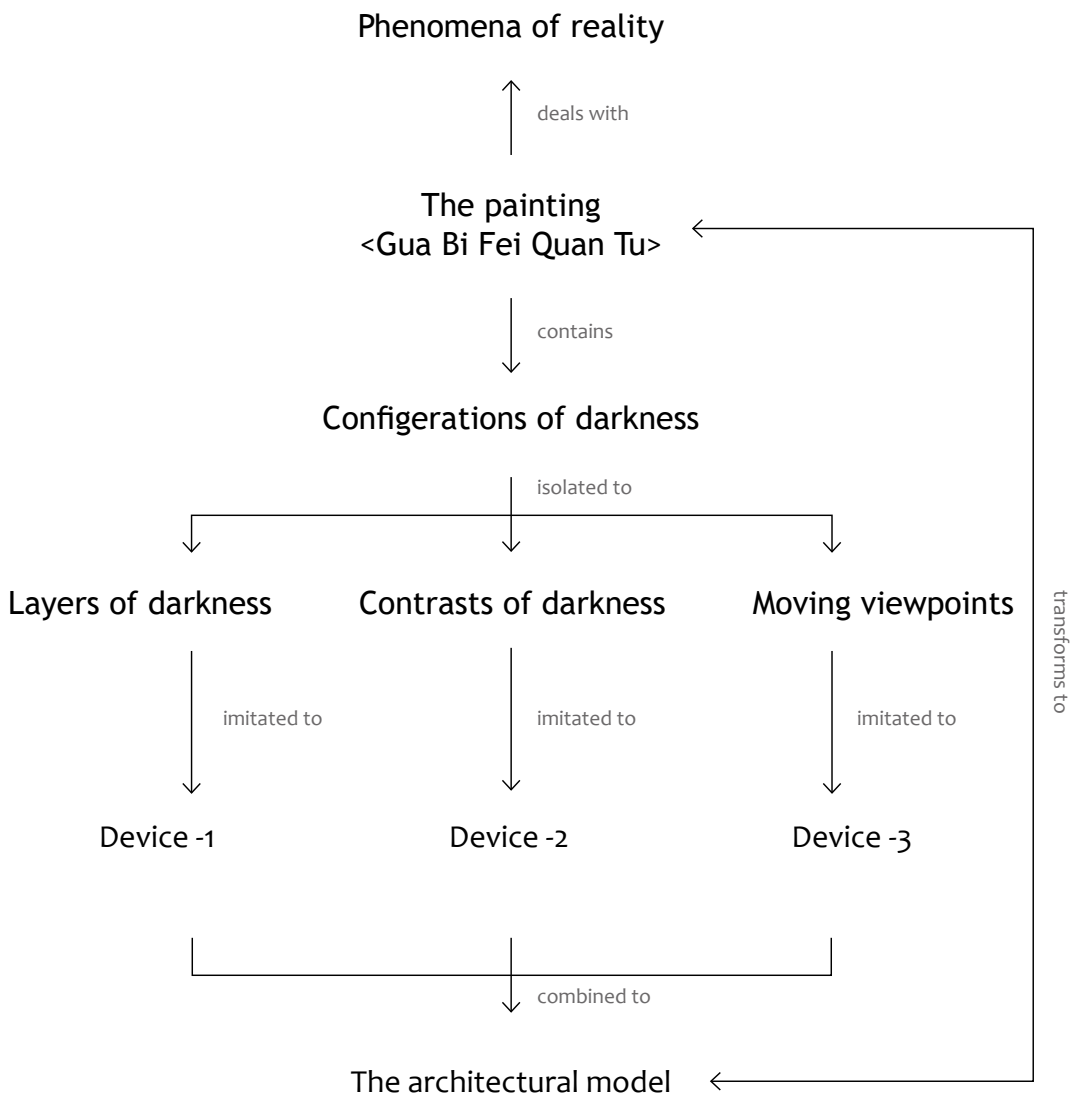
So totally there are three research chapters. Each research chapter started with extracting fragments from the painting, then I came up with observation device to imitate these fragments. Each device is a reduction of painting focusing on isolated configuration.

Following the extraction and imitation part, there are some other developments based on the cognitions from the device. The final model tries to assemble all the previous outcomes into a complex representation of darkness as a transformation of the painting,

So, generally, the research structure can be simplified as this diagram in the next page.

The project is directly inspired by artist Gong Xian, also the book <Painting and truth: Merleau-Ponty and Chinese Landscape Paintings>plays a fundamental role in the research. In the later part of the research, the book<Secret Knowledge>helped me clarify some key points about painting and camera image. Before I start with this thesis, I spent more than half a year study Kazuo Shinohara's work. There must be strong influence by him although I cannot tell the clear trace.

Structure


Phenomena of reality
deals with
The painting
<Gua Bi Fei Quan Tu>
contains
Configerations of darkness
isolated to
Layers of darkness
Contrasts of darkness
Moving viewpoints
imitated to
imitated to
imitated to
Device -1
Device -2
Device -3
combined to
The architectural model
transforms to

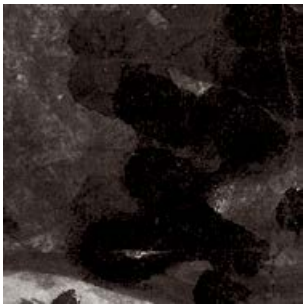
二

Layers of darkness

Research Chapter One

Extraction

Fragments from the painting

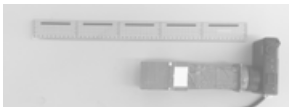


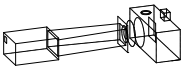
There are overlapped points drawn in several times using different density of ink. Sometimes paper was in different humidity.So, the shape of the points is very different.
Some are sharp, some are diffused.

Imitation

Capturing layers of darkness in Device-1

1





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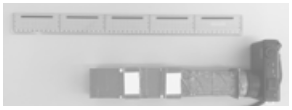

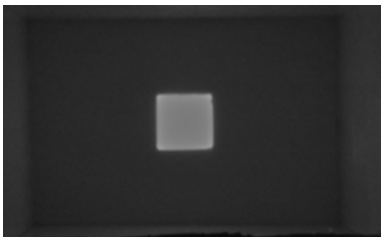

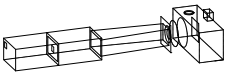

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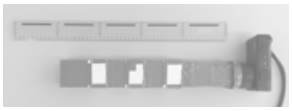

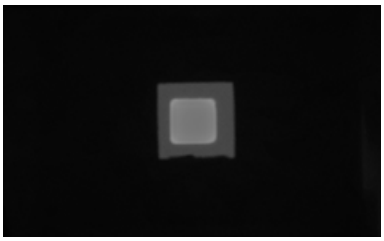

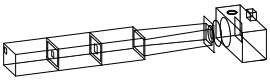

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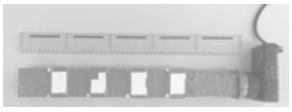

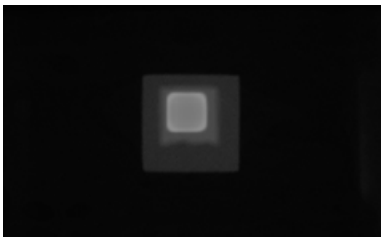

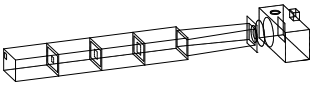

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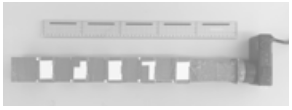

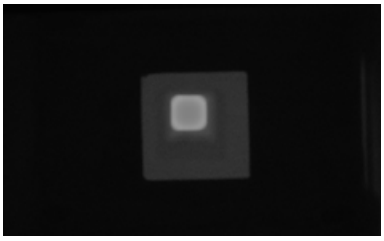

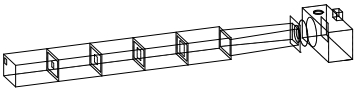

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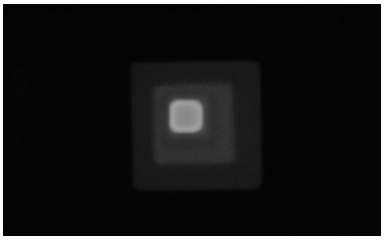
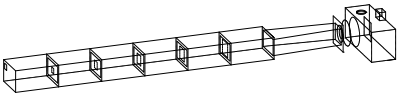
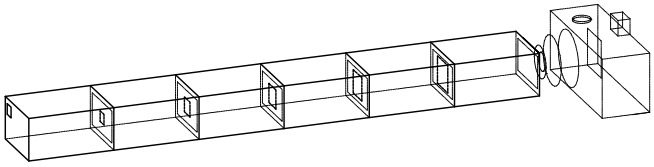
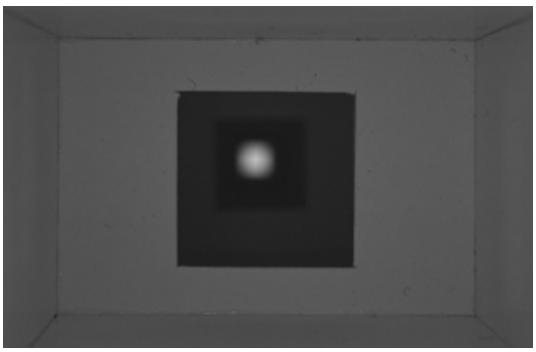
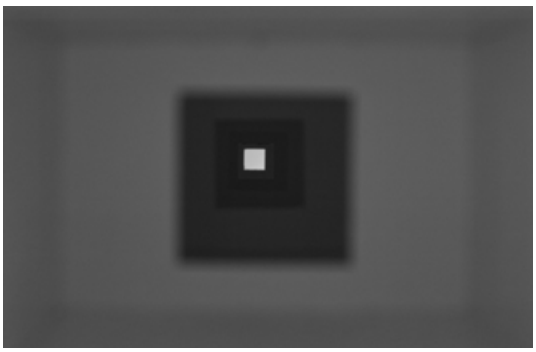


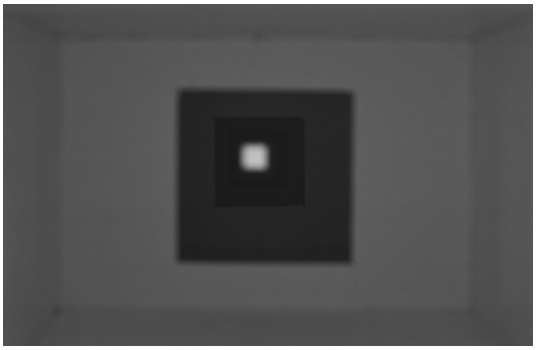


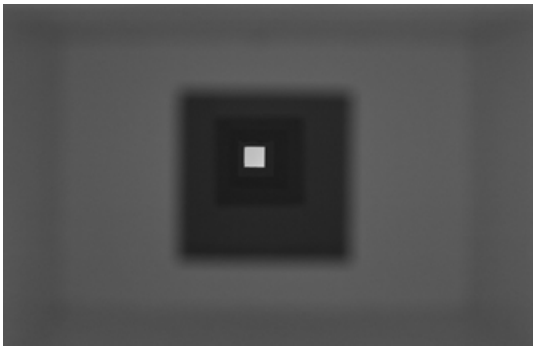
The change of focus point in Device-1

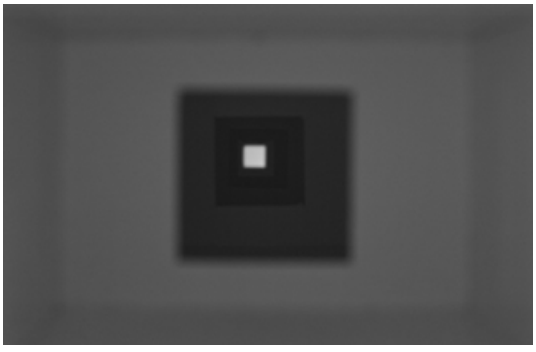


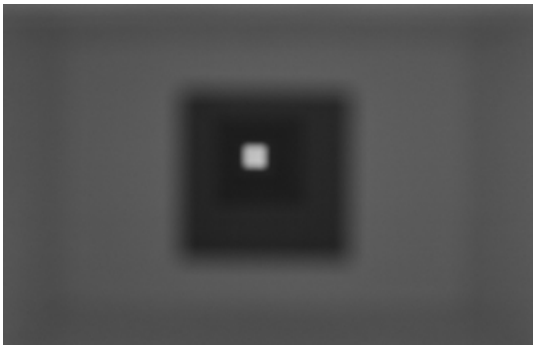


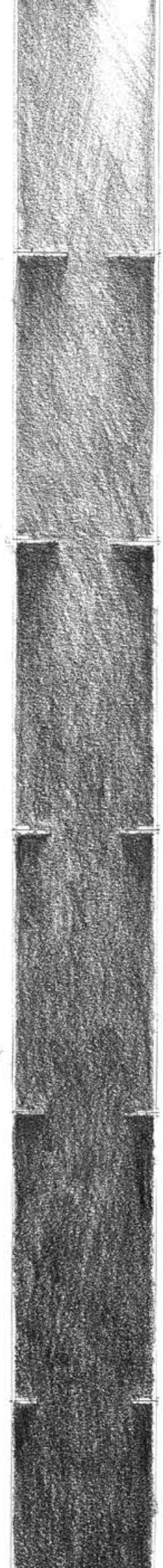








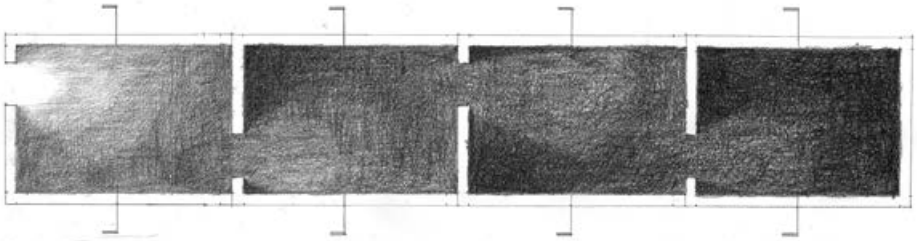




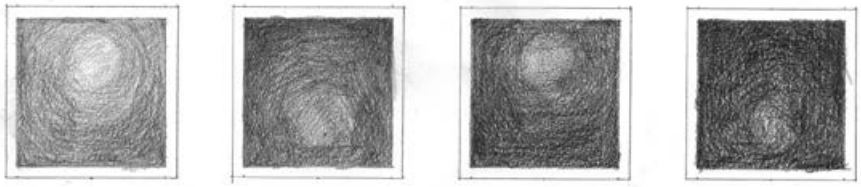
Section Surface of Device-1

Drawing

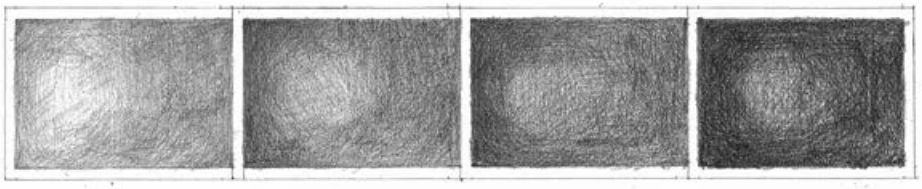
Drawing as a way of cognizing the darkness in accumulated space



Long Section Surface



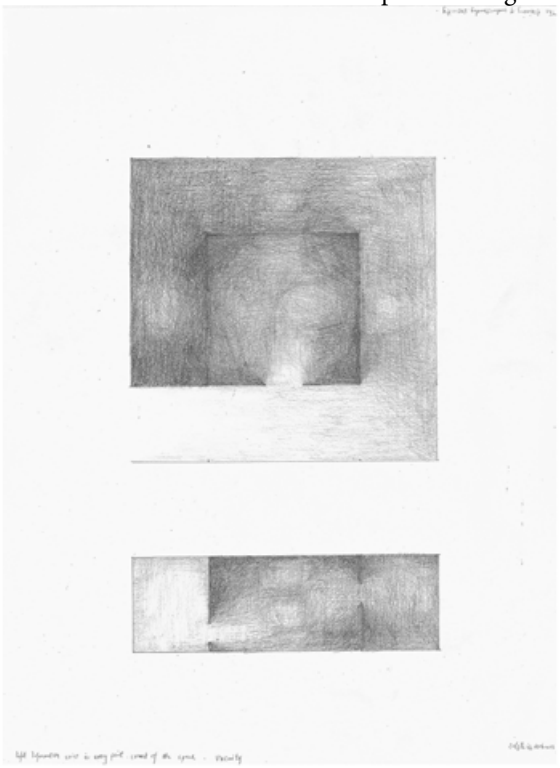
Short Section Surface

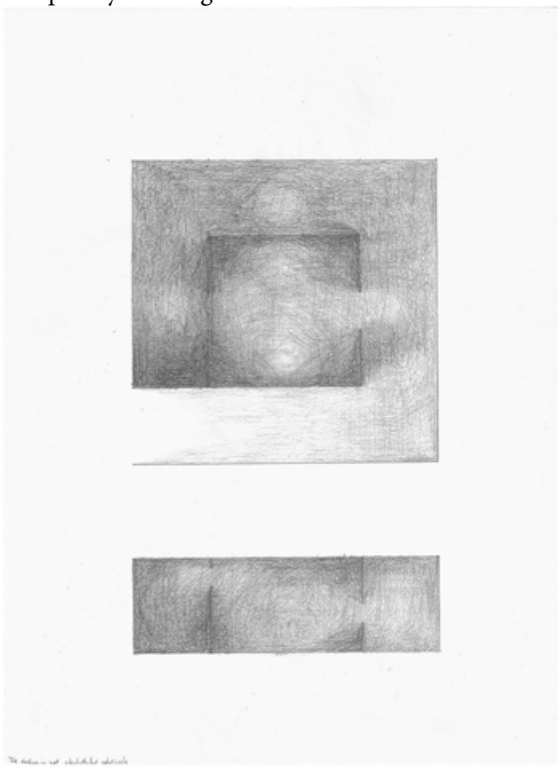


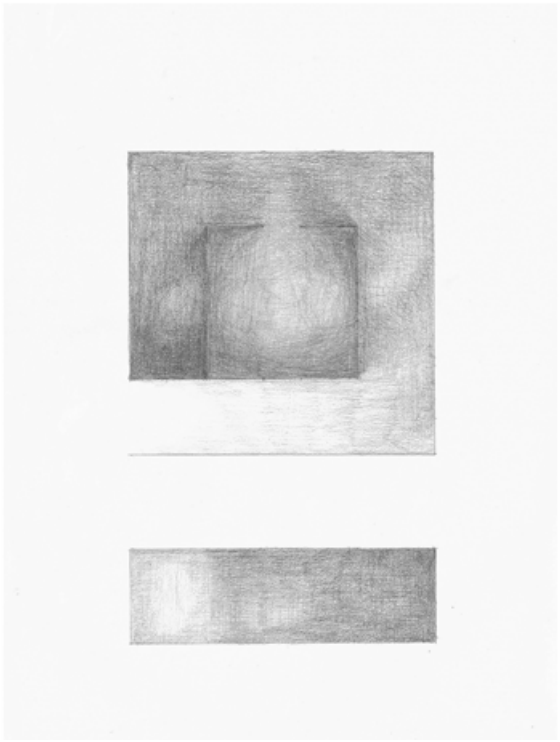
Plan Surface

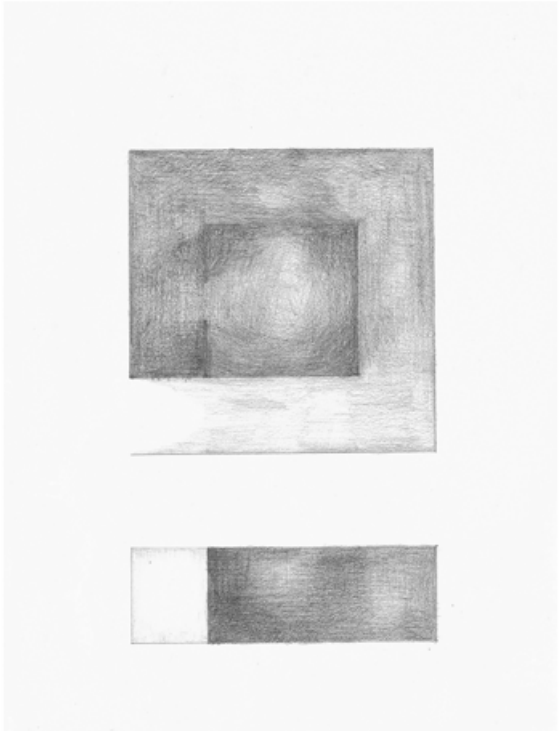
Arrangement

A spatial arrangement developed by drawing

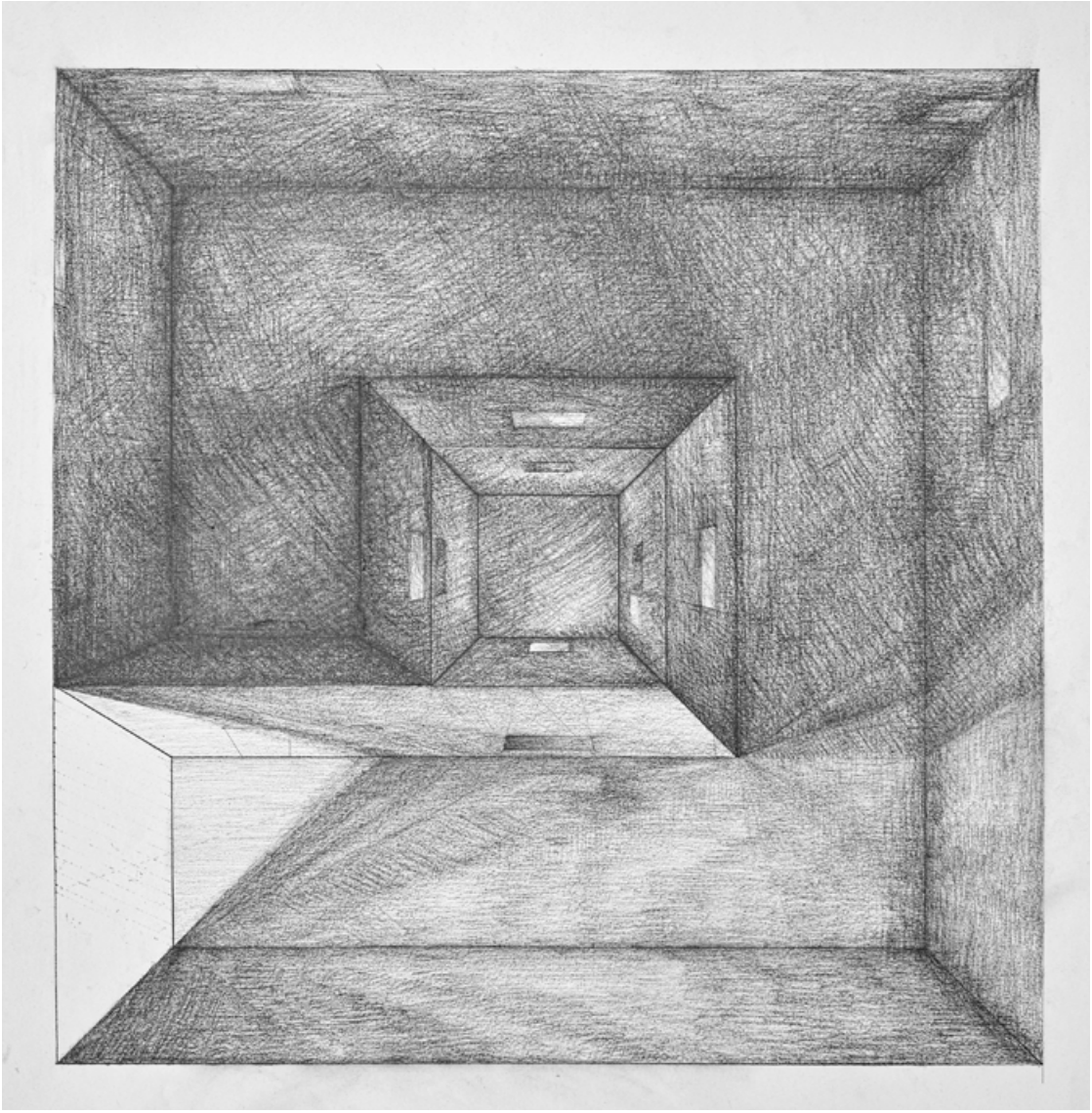








Sections & Plans



Perspective Plan

三

Contrasts of Darkness

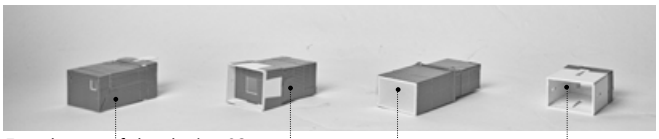
Research Chapter Two

Extraction

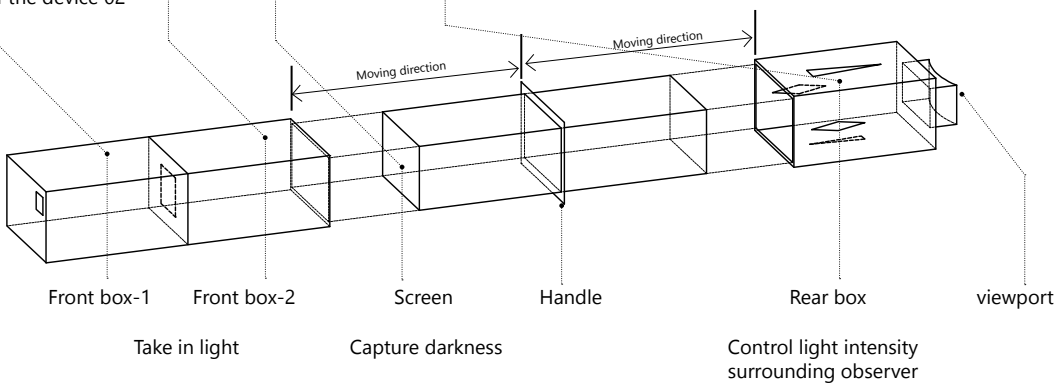
Some part of the mountain looks very flat, seems like shadow. The boundary of the cloud is very blurred. It contains the feeling which cloud slightly covered the mountain. The roof of the house is curved because the gradual contrast. These leaves of the tree are blinking. Because of the clear circular shape and strong contrast.

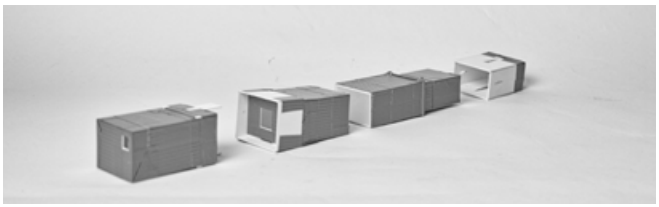
Imitation

Device-2

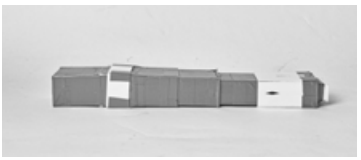


Four boxes of the device 02





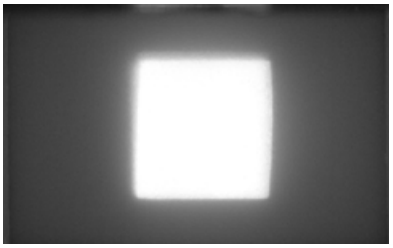
The sequence to connect the four boxes

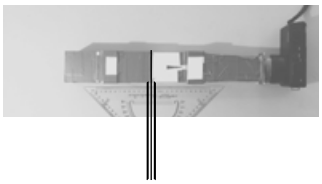


The adjustment situations of device 02

Capturing contrasts of darkness in Device-2

1





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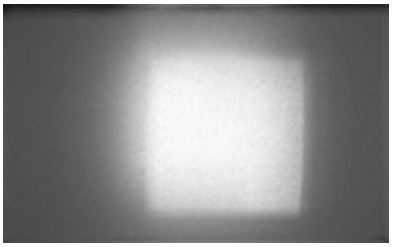

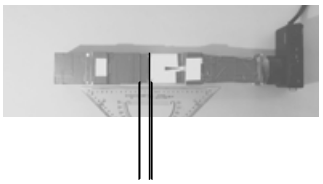

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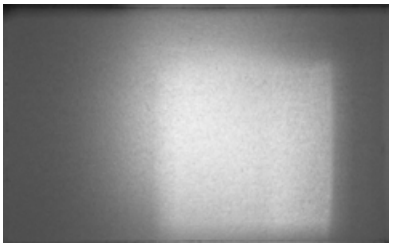

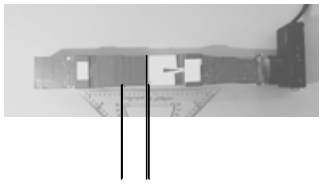

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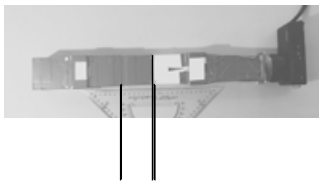

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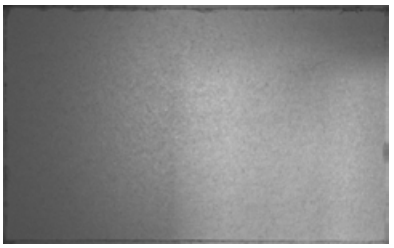

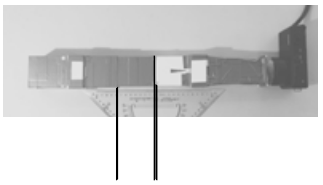

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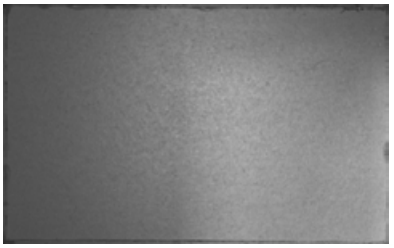
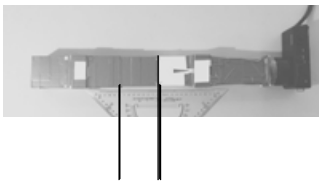
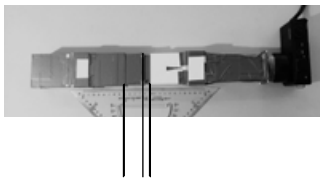


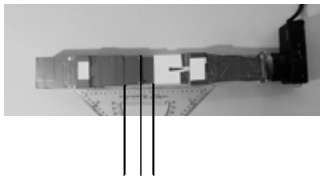


Drawing & Compare

Compare different contrast of darkness under the same setting of Device-2
between camera image and eyeball drawing



1



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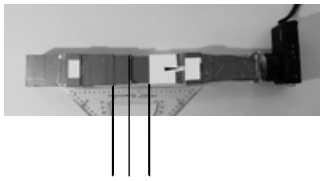

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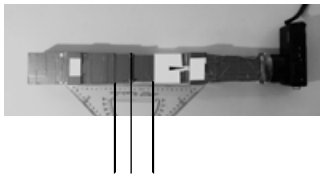
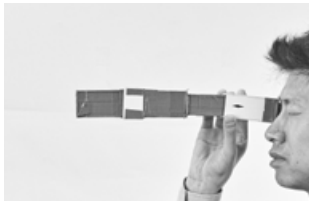
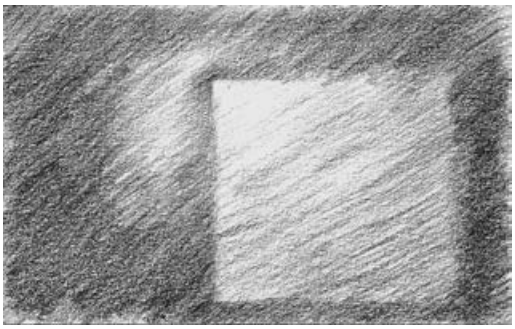
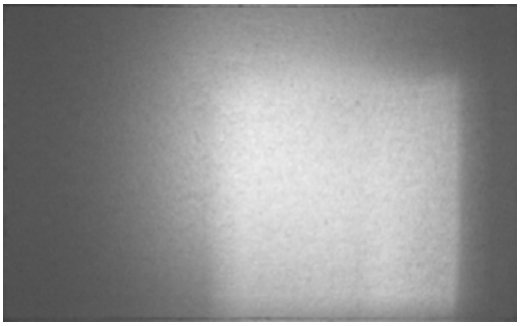
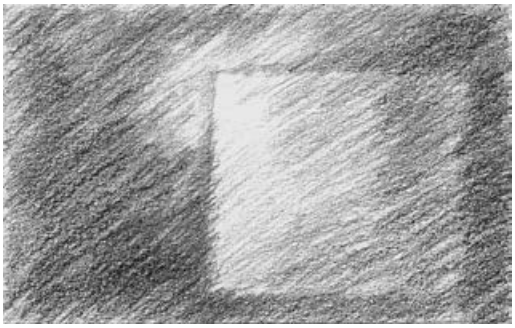
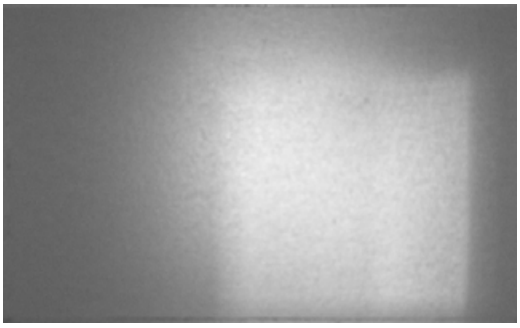
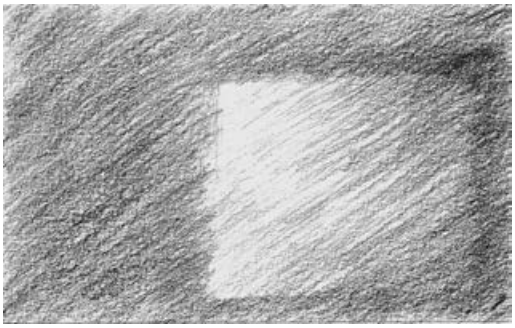
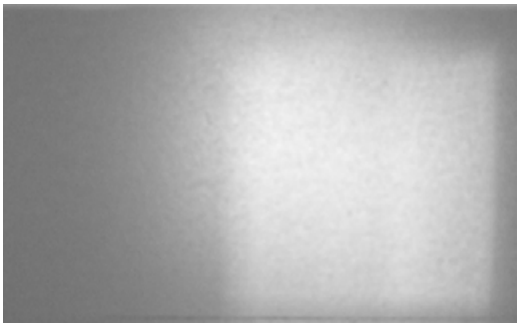
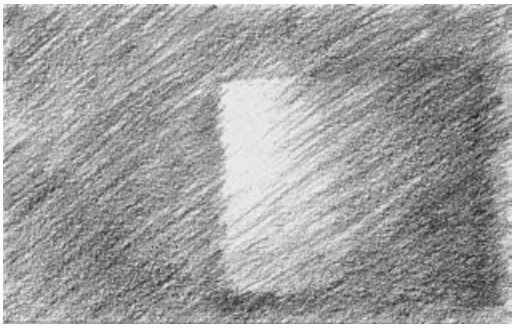


4

Camera image situations



Eyeball situations
(same setting with camera image)

	Camera image	Eyeball drawing
1		
2		
3		
4		

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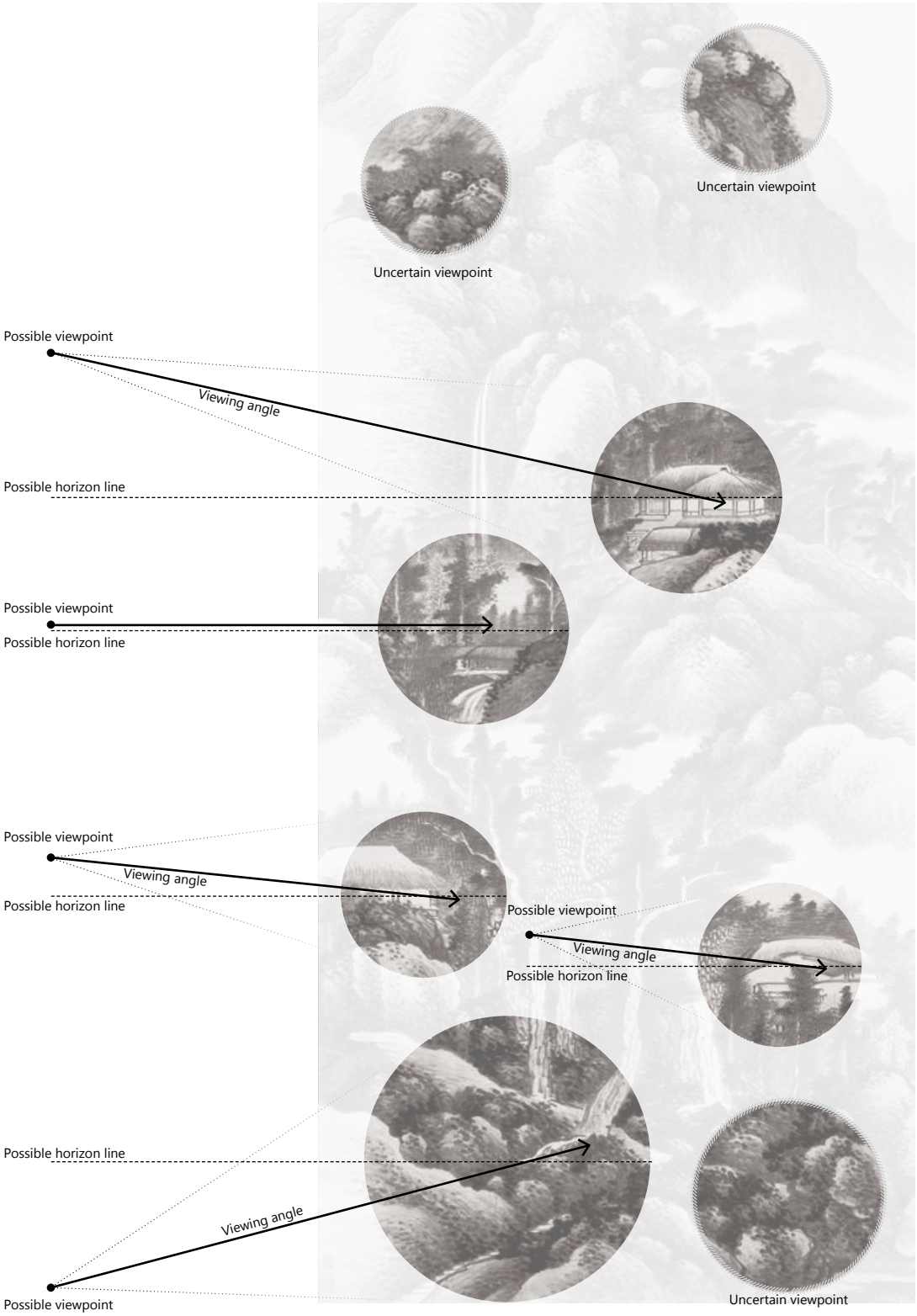
Moving viewpoints

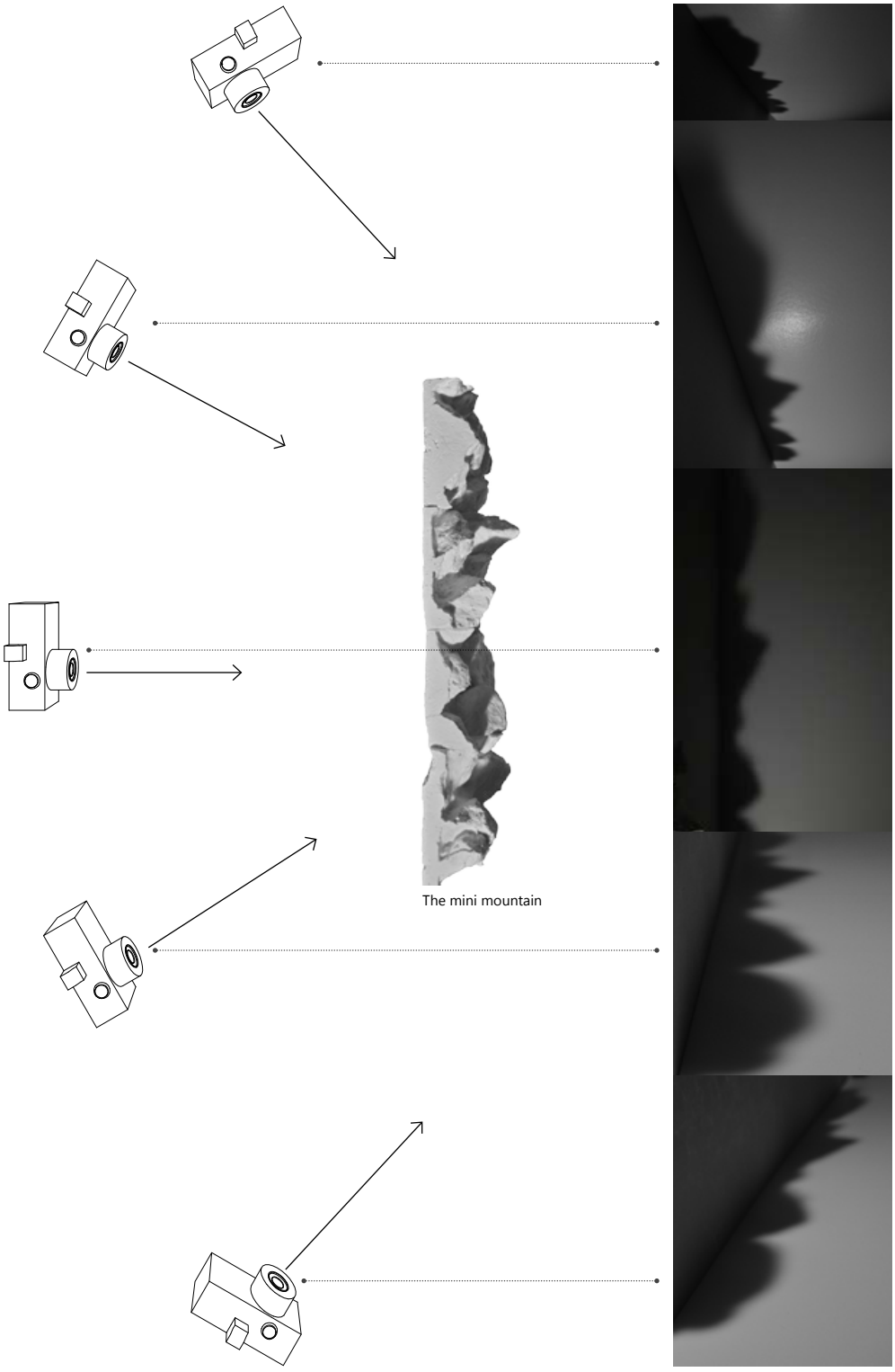
Research Chapter Three

Extraction

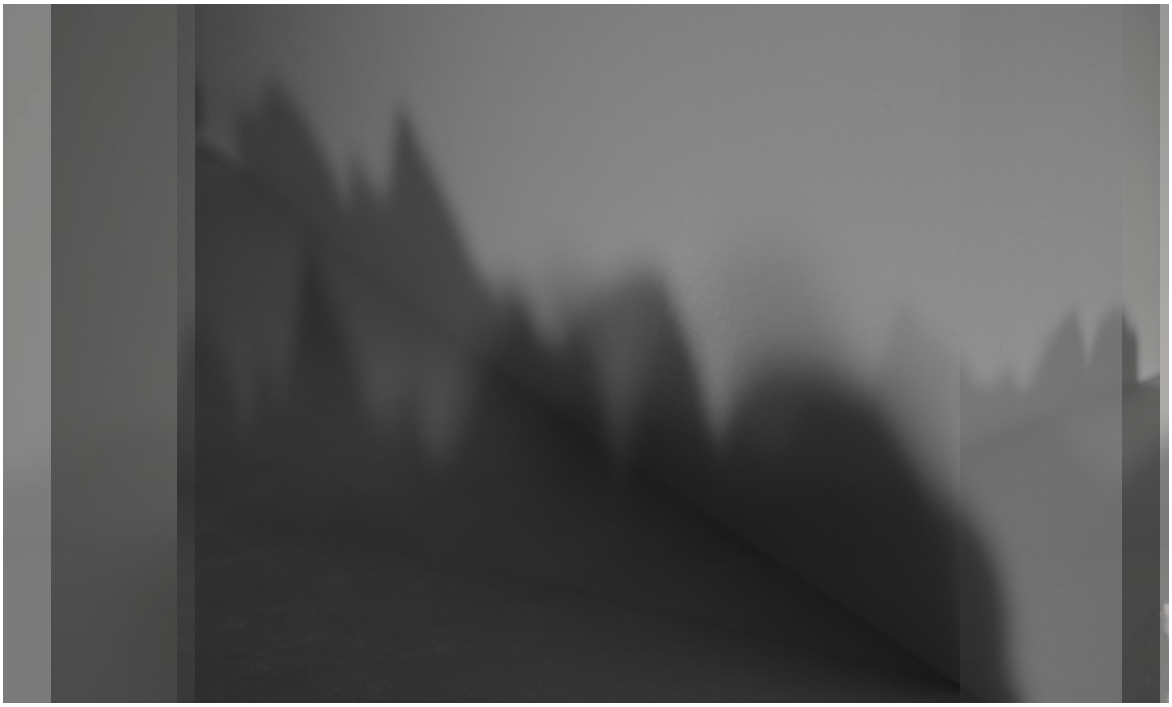

Uncertain viewpoint
Uncertain viewpoint
Possible viewpoint
Viewing angle
Possible horizon line
Possible viewpoint
Possible horizon line
Possible viewpoint
Viewing angle
Possible horizon line
Possible viewpoint
Viewing angle
Possible horizon line
Possible horizon line
Viewing angle
Possible viewpoint
Uncertain viewpoint

Imitation

Photos of the same shadow by a mini mountain from different directions

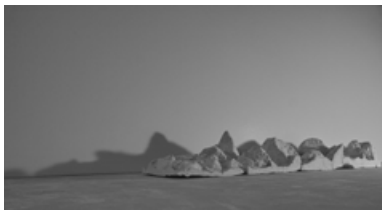


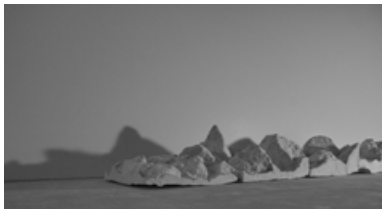
Five images ovelapped through different transparency



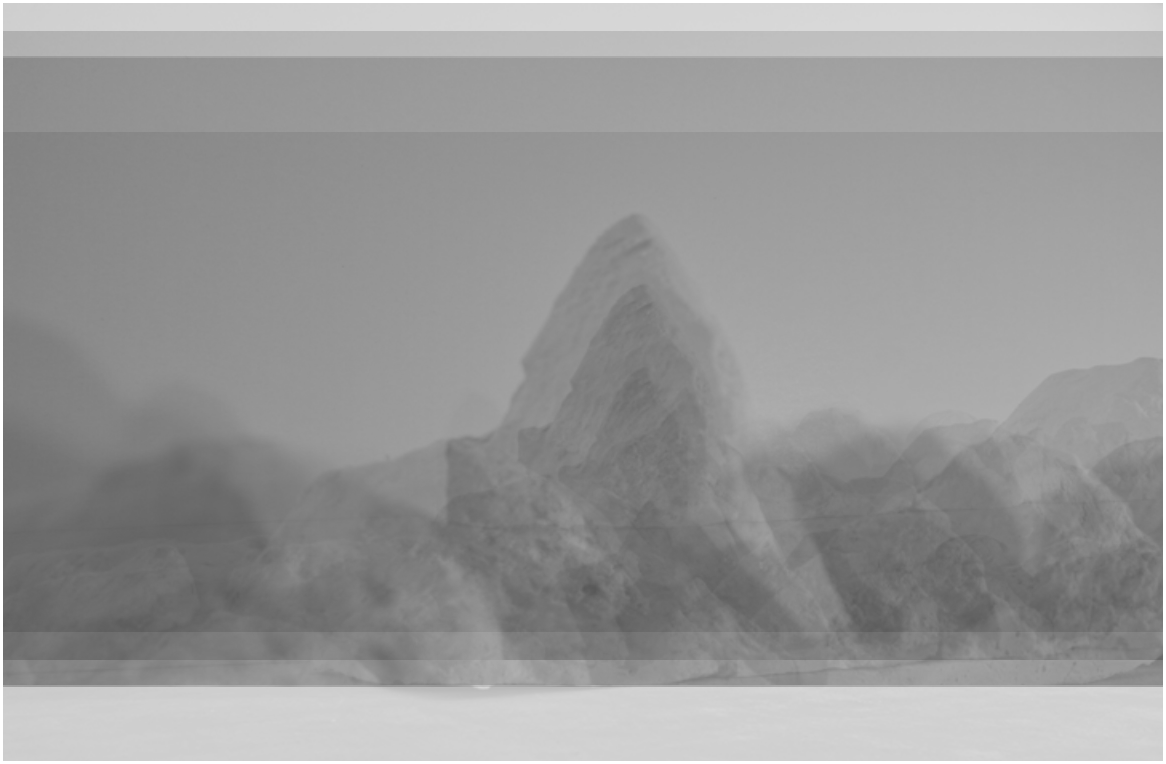
Imitation

Photos of the same mini mountain in various distances





Six images ovelapped through different transparency



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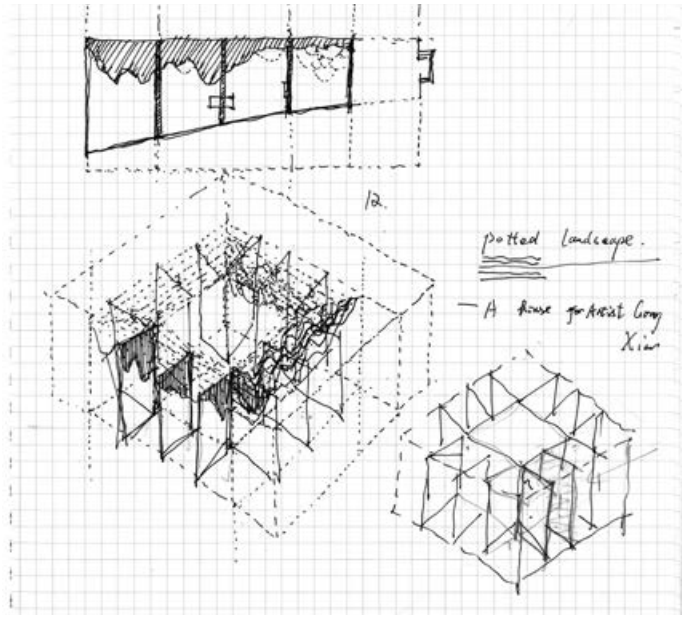
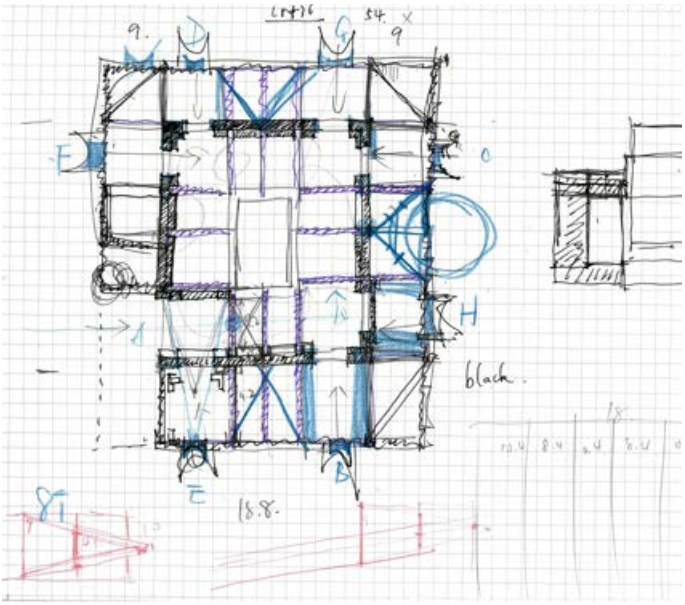
The Architectural Model

Design Sketch

The Assemblage



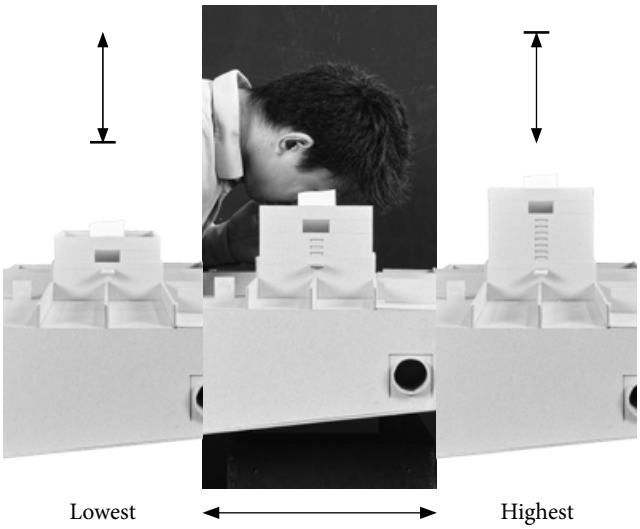


This architectural model is a assemblage of previous outcome.

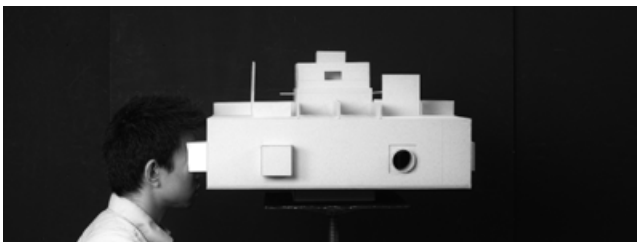
The spatial arrangement comes from the first research chapter. The moving viewport in the center and the switch screens come from the second research part. The ceiling of the corridor space comes from the third chapter.

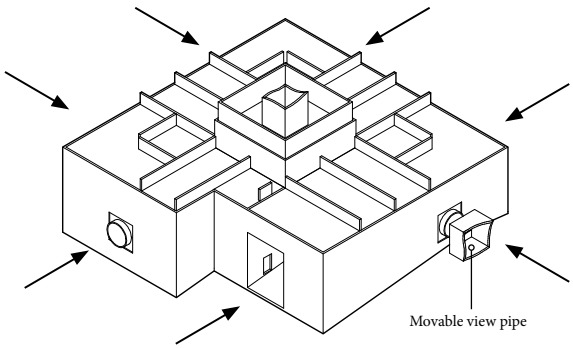
The Seeing

Through a Movable Vertical Viewport



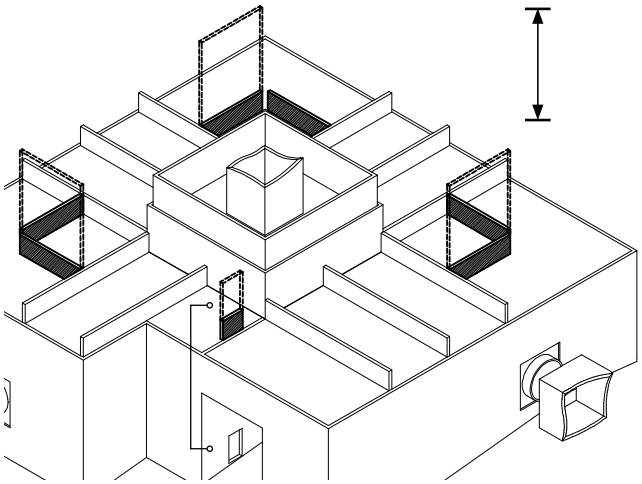
Through Seven Horizontal Viewports



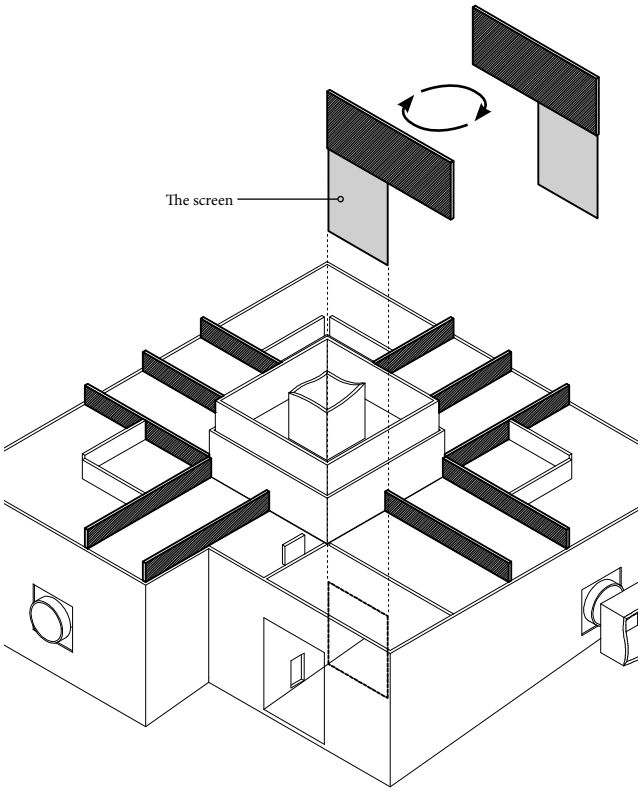


The Setting

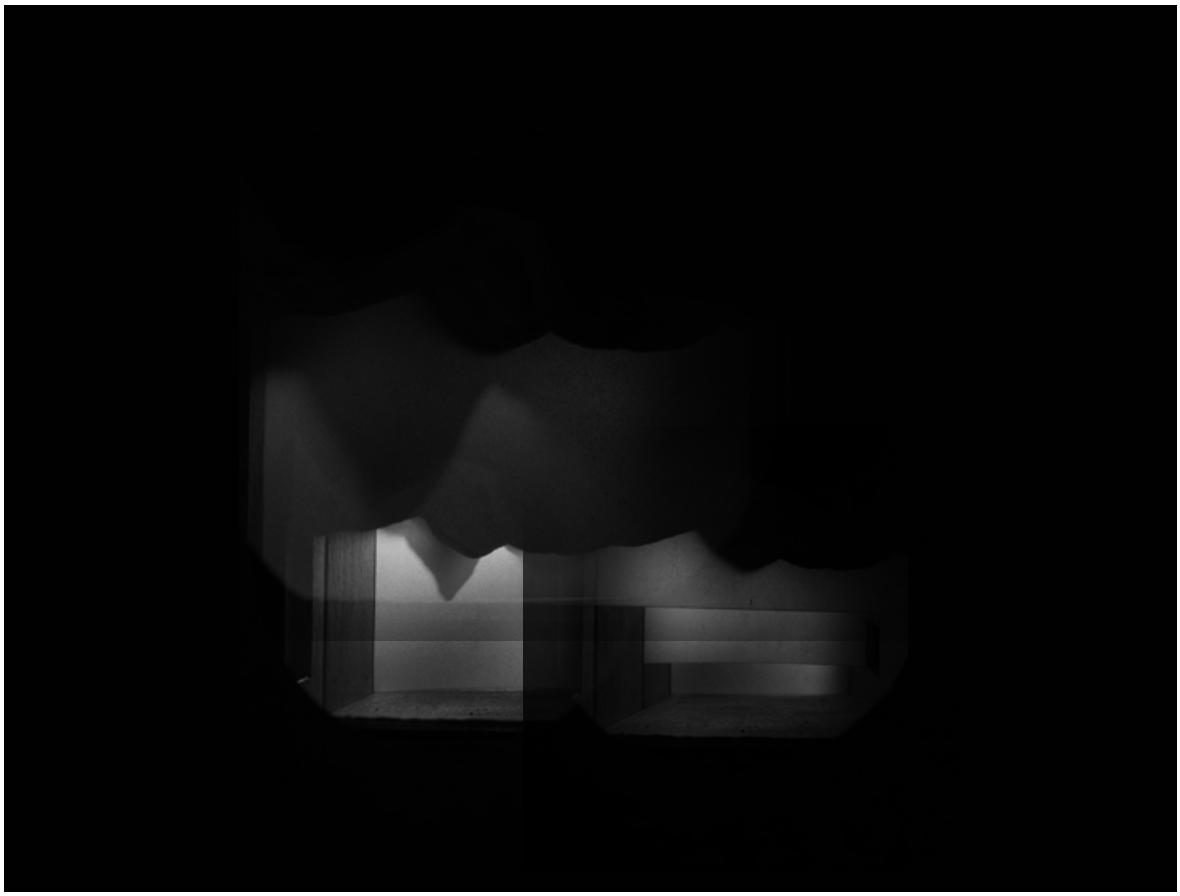
Pulling up and down to open gates and control light directions

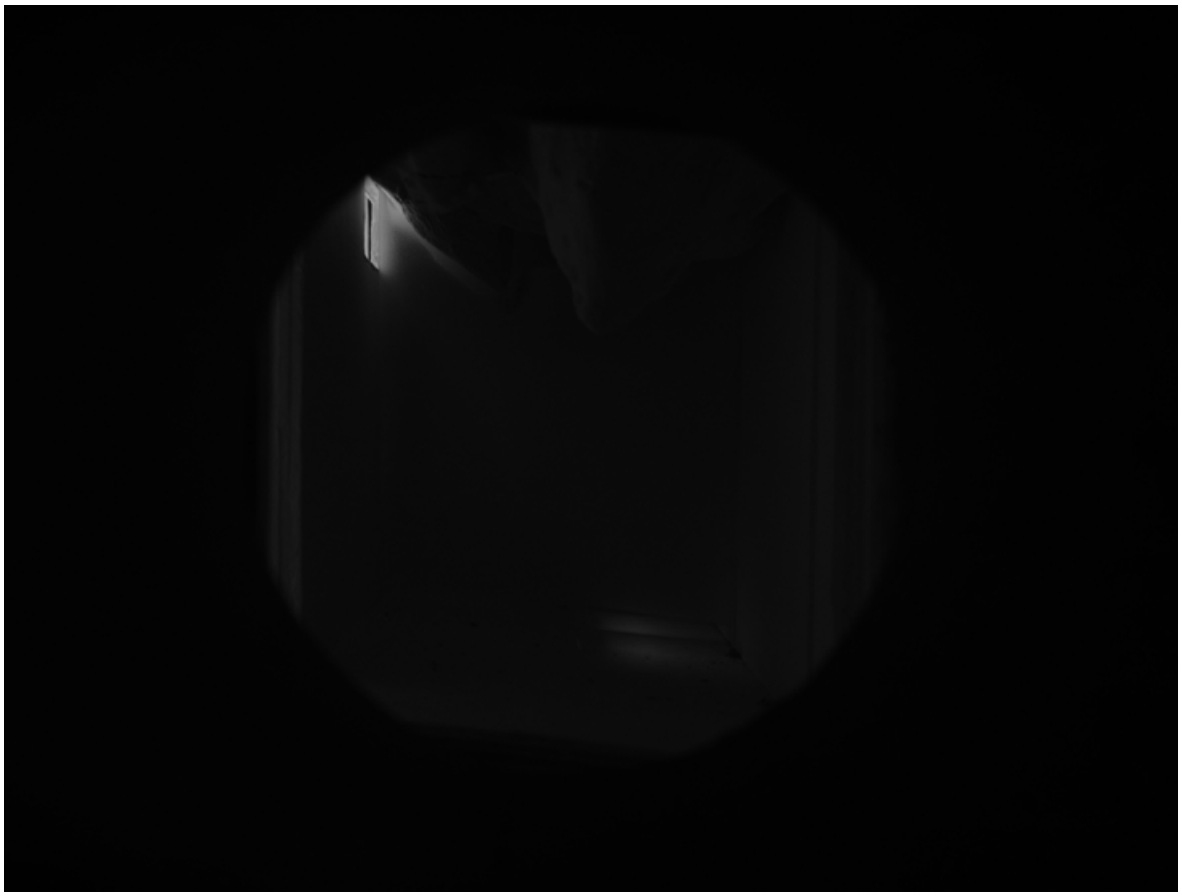


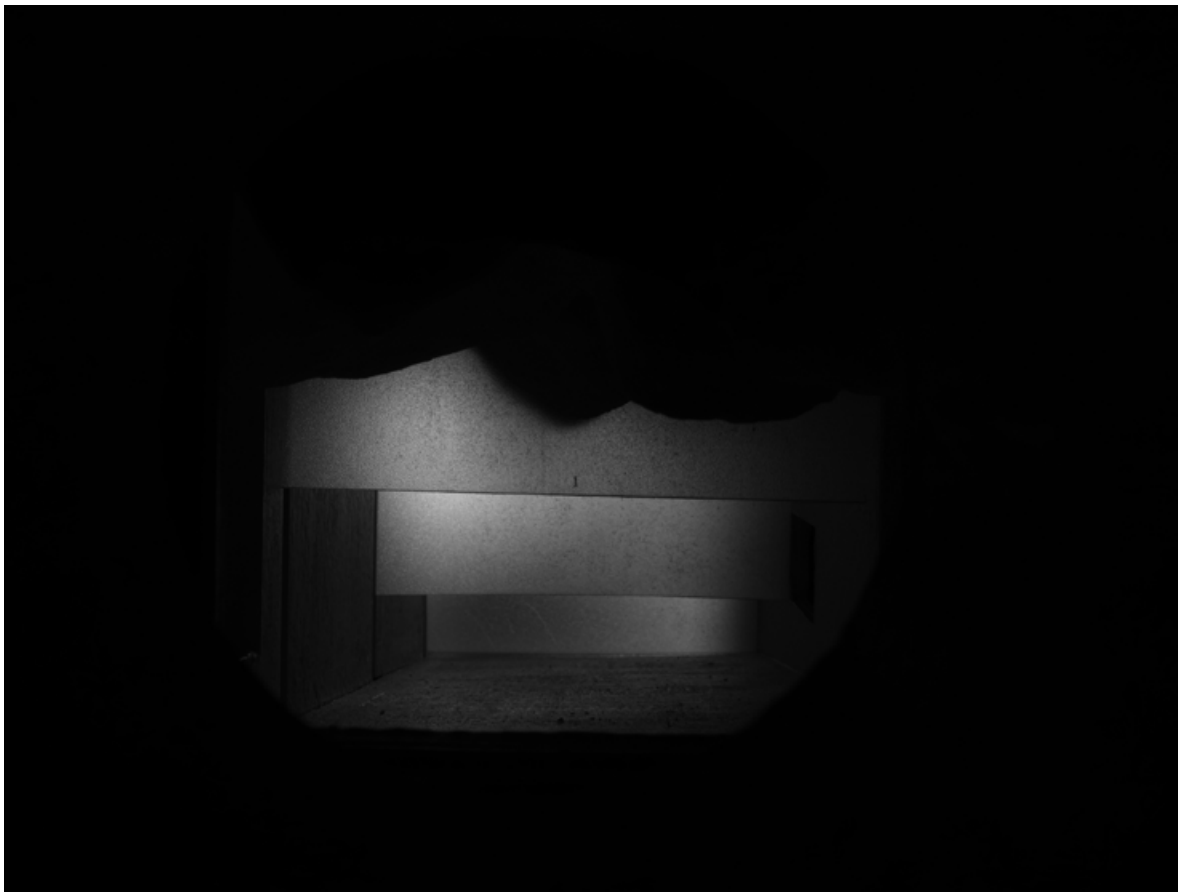
Putting the screens in or out the seeing area through flipping

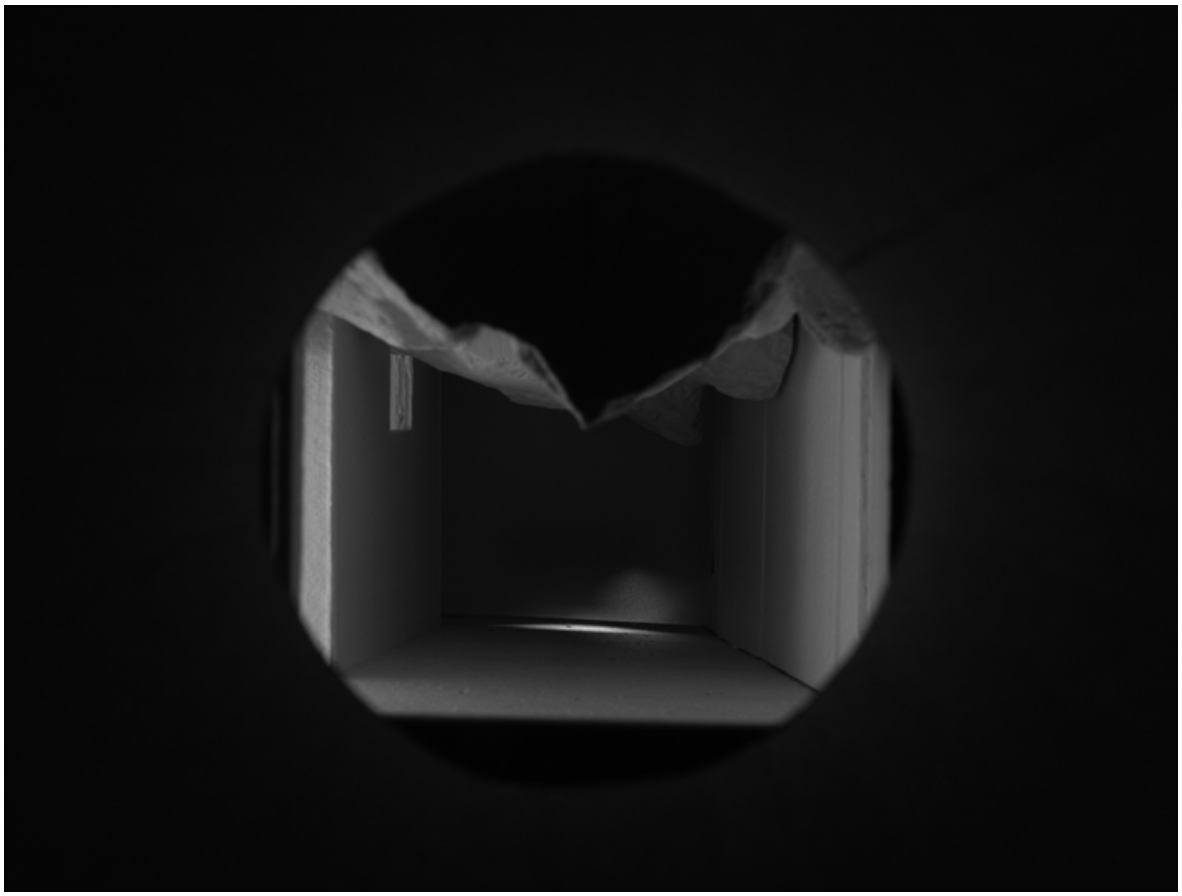


The Darkness Inside









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Appendix

Discussion

The painting can be seen infinitely, I want my project can raise different interpretations. The project will still alive when ideas and discussion continue.
The architect's tools I used in this project is more aiming to the cognition of reality rather than expression although they are interweaving to each other.

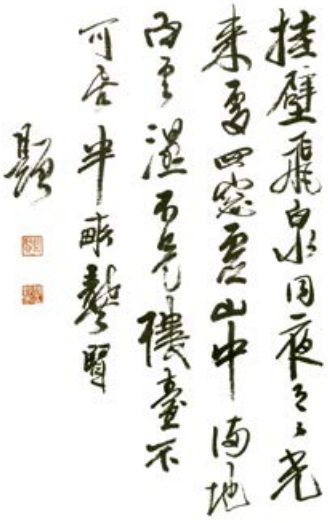
Translation of the poem in <Gua Bi Fei Quan Tu>

Flying waterfall hangs on the cliff night by night

Lunar light lights up four sides

Mountainous ground wet by cloud

Livable place is the platform dwelling



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