

# I Remember When the World was Thicker

By

Paul McDonnell

BES (Bachelor of Environmental Studies), University of Waterloo 1999

MArch (Master of Architecture), University of Waterloo 2001

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Fig. 1 - stills from simulation, *I Remember when the World was Thicker*, 2024.



## Abstract

This MFA thesis, *I Remember when the World was Thicker*, is an exploration in the use of simulacra and simulation, while at the same time, it is a critique of their limits and inherent emptiness. It is practice-based research into a slow, meditative, observational process that led to the question; how can a mediated response to solistalgia provide some understanding of the defuturing of the natural world that is happening all around us? Sitting within the discipline of new media, the thesis employs projected animation to remind the viewer of a world when the trees were forests, the fish and the fisher weren't separate, and the moths weren't trapped. It presents as digitally projected computer-generated images. Principally, the work is an expression of grief for the loss of the natural world and its replacement with the simulated. It is also an attempt to shift the viewer towards a deeper feeling of the interconnectedness of the natural world. Although the work might look like cinema, it is not from that tradition, as there is no lens-based record within it. It is in effect, a gallery installation that simulates a gallery installation of three simulacra that contain the projected digital shadows of animal, insect, and plant forms. These animations were created through research into techniques and processes that use 3D computer and A.I. image creation, including text to image software, advanced computer animation software, generative 3d forms, 3D printing and CNC machining, high resolution projection and projection mapping. *I Remember when the World was Thicker*, contains research that fosters innovation in the use of advanced computer software and digital projection as a method of artistic production. It is also research into an artistic process that involves walking and seated observation and meditation as a form of artistic inspiration and knowledge gathering.



Fig. 2 - still from the simulacra, *I Remember when the Trees were Forests*, 2024.

## Introduction

The complexity and interconnection of the natural world is degrading. Degradation is the process of something becoming worse or weaker, or something being made worse or weaker. This thesis exists in the context of the anthropocene, the current geological age, ‘viewed as the period during which human activity has been the dominant influence on climate and the environment.’<sup>1</sup> We live in a time during which once abundant species are now common, common species are now rare, and rare ones are now gone. Living in the anthropocene brings up new and disturbing emotions. Witnessing the wanton destruction of the natural world leaves me with feelings of grief, anger, and a general sense of loss. Australian environmentalist Glenn Albrecht describes these types of feelings as solastalgia; a form of emotional or existential distress caused by negatively perceived environmental change. (Albrecht)

This thesis is a reaction to these emotions. It is practice-based research into a slow, meditative, observational process that has led to the question; how can a mediated response to solistalgia provide some understanding of the defuturing of the natural world that is happening all around us? Entitled, *I Remember when the World was Thicker*, the thesis consists of a projected digital simulation of a white box installation of three digital simulacra whose subject matter is the defuturing of the natural world. This thesis support paper is divided into three chapters that provide context and description of the thesis and the artistic process used in its creation.

“Chapter One – Solastalgia and Defuturing,” expands on the environmental issues introduced here. This chapter considers the subject of the thesis, the ‘why’ for it. It introduces the concept of the great thinning, and the feeling of solidarity with the natural world which underpins the thesis. “Chapter

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<sup>1</sup> Google’s English dictionary: Oxford Languages, (<https://languages.oup.com/google-dictionary-en>)



Fig. 3 - still from the simulacra, *I Remember when the Moths weren't Trapped*, 2024.

Two – Simulation and Simulacra,” documents the simulation, *I Remember when the World was Thicker* (fig. 1) and its component parts; *I Remember when the Trees were Forests* (fig. 2), *I Remember when the Moths weren’t Trapped* (fig. 3), and *I Remember when the Fish and Fisher weren’t Separate* (fig. 4). This chapter details the discipline and medium of the thesis, the ‘what’ of it. It positions the thesis in relation to other new media artists working with simulation and simulacra. It expands on how the above pieces were created through practice-based research into a digital animation process that combines Blender 3D animation software with text-to-image AI. A process that was developed to create slow meditative projected patterns that feature shadowy moth, fir tree, fisher and fish forms; simulacra of our defutured world moving towards us. The thesis support paper closes with “Chapter 3 – Meditation and a Series of Studies.” This chapter details the processes used to create the thesis, the ‘how’ of it. It discusses a form of practice-based research into an artistic process that employs walking and seated meditations. It shows how these meditations were developed into a series of studies that include the use of projection bombing in the urban realm and projection mapping in the studio. Finally, this paper concludes with a summation of what has been learned and a look forward to what will come next in this line of artistic enquiry.

## Glossary of Key Terms

Nature: When I use the term the natural world, I speak of the timeless living world that existed before most of humanity separated ourselves from it. A world where the sum of the parts is greater than the whole. I speak about the forests, not the trees. In previous writings I have also referred to this world as the wild, as Oneness, and as the living patterns. However, all these expressions carry their own baggage and can signify different ideas to different readers. As a result, this thesis support paper attempts to employ a more neutral a term, 'the natural world,' to describe the place that I am speaking of.

Simulation and Simulacra: In contemporary parlance the words simulation and simulacra are used nearly interchangeably. Simulacra has many nuanced definitions; Google's Oxford Languages dictionary defines it as a 'unsatisfactory imitation or substitute.'<sup>2</sup> Merriam-Webster Dictionary defines it as a "superficial likeness or representation of something." It defines simulation as, "to look, feel, or behave like something. Both words come from simulare, a Latin verb meaning "to copy, represent, or feign."<sup>3</sup> For the purposes of this thesis support paper, the animation of the RBC art installation is considered a simulation because it is designed to be perceived to be as true to the real as possible, to the point of deception. Whereas the paper considers the three projected pieces as simulacra because they share almost no resemblance to the real. They are moving patterns that contain abstracted natural forms which are completely out of time and context.

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<sup>2</sup> Google's English dictionary: Oxford Languages, (<https://languages.oup.com/google-dictionary-en>)

<sup>3</sup> Merriam Webster Dictionary, <https://www.merriam-webster.com/dictionary/simulacrum>, accessed February 8, 2024

Meditative: Meditation is a way of accessing the sense of interconnectedness with the natural world directly. The meditative approach and techniques that I employ come out of the Californian Zen Buddhist tradition that has developed and flourished in California, since the 1950s. This tradition emphasizes the integration of Zen practices within everyday life, which include seated and walking meditation, mindfulness, and mindful eating. It also places importance on community, social engagement, and social and environmental justice. The Californian Zen Buddhist tradition is open to the integration of other spiritual traditions, such as yoga or Tibetan Buddhism, and my understanding of meditation is heavily influenced by the writings and teachings of many other distinct but related spiritual traditions. These include the teachings of Californian spiritual teacher Ram Dass, which are more closely associated with the Hindu and yogic traditions. Yogis Erich Schiffmann and David Swenson. The writings of Buddhists Jack Kornfield and Thich Nhat Hanh. It also leans heavily on the Advaita Vedanta tradition, as accessed through the writings of British-born philosopher and writer Alan Watts and Californian Adyashanti. Advaita Vedanta is a non-dualistic school of Hindu philosophy that emphasizes the Oneness of all things.



Fig. 4 - still from the simulacra, *I Remember when the Fish and Fisher weren't Separate*, 2024.



## Chapter One - Solastalgia and Defuturing

Living in the anthropocene fills me with a profound sense of grief. Brought on by chronic and expanding environmental crisis, this solastalgia expresses as the experience of depression, grief, anger, chronic fatigue, despair, stress, guilt, and hopelessness. Solastalgia is the cause of this artistic research. My desire to convey a feeling of it drives this artistic work as a form of personal catharsis, a type of bearing witness to the grief. At the same time, I believe that many others feel like I do. I think that there is a role for artistic work to play in the public realm, so that this sense of solastalgia can be collectively acknowledged. Clinical psychologists Jasmine Kieft and Jem Bendell indicate that research shows that feelings like solastalgia can have an adaptive function when they lead people to speak about it together. Like other climate-related emotions, when processed collectively, solastalgia can lead to resilience and growth. (Kieft, Bendell)

This growing solastalgia is most acute when it is connected to thoughts and discussions centered on the defuturing of the natural world. Defuturing can be simply understood as the act of removing something's future. Anne-Marie Willis, in the article *Designing Time* refers to it as, 'an historical and ongoing process in which the futures of human and non-human collectives are taken away.' (74) She continues;

*Defuturing happens in the context of a global economic system infused with a mythology of progress which is nothing to do with noble ideas about curing diseases, eliminating poverty, etc., and everything to do with gratuitous innovation, novelty, and the generation of millions of 'solutions' to non-problems ... To defuture is to attack the duration of things that should endure, to prolong the duration of those that shouldn't. To defuture is to terminate the continuity of species, to turn earth, water, and sky into toxic waste. These are the effects of defuturing, and*



Fig. 5 - digital photo documentation of projection bombing installation of *Moth Projection Bombing 2*, 2023.

*most significantly, they are not instantaneous, obvious or immediately visible. Defuturing is a process happening in time. The effects seen now – melting glaciers, fire-ravaged land, devastating floods and cyclones, lives displaced and disrupted (and that which is no longer seen – the disappeared species) are the result of aggregated past actions. This is what is meant by ‘the defurured future travelling towards us. (76)*

In, *Alterlife and Decolonial Chemical Relations*, Michelle Murphy discusses, through the lens of defuturing, the persistence of PCBs in the Great Lake watershed as a form of continual chemical violence perpetrated by the capitalist, colonial system. Persistent chemicals enter the world and permanently alter it, ‘life is recomposed by the molecular productions of capitalism in our own pasts and the pasts of our ancestors, as well as into the future. It is a figure of life entangled within community, ecological, colonial, racial, gendered, military, and infrastructural histories that have profoundly shaped the susceptibilities and potentials of future life.’ (497)

The concept of defuturing drives the feeling of solastalgia within me. It informs the direction of this artistic research and pushes its aesthetics. The thesis employs projected shadow as its medium, which in turn is connected to themes of haunting and loss. In a study for *I Remember when the Moths weren’t Trapped*, entitled *Moth Projection Bombing 2* (fig. 5), the moths depicted in this piece are shadows, a form of bearing witness to our degraded world. The shadow of a moth is not the moth itself but a lesser, derivative form. The original has been lost. In this piece, I saw in the fragility and delicateness of the moth an analogy to the fragility of the natural world. I wanted the piece to highlight light pollution, a specific cause of the moth’s decline. It is widely understood that moths navigate by use of the moon and confuse it with sources of artificial light, thus trapping them circling in the artificial light, to die from predation or exhaustion. In this manner, the choice of the projected shadow material, is directly related to the content of the piece.



Fig. 6 – detail of still from, *I Remember when the Moths weren't Trapped* - Study 3, 2023

This thesis is produced in solidarity with the natural world and the plants, insects, birds, fish, and animals that comprise it. These forms are an acknowledgment to the countless individual expressions of life that we share this world with. Timothy Morton, in his book *Humankind, Solidarity with Nonhuman People*, expresses this sense of solidarity in the term ‘Human-kindness’ of which he writes;

*‘Human-kindness goes beyond tolerance ... [it] entails the possibility not of refraining from pleasure ... but of allowing other beings to have pleasure. For some reason, this part of your house is where sparrows, not you, get to have fun. You become fascinated by enhancing and expanding nonhuman pleasure modes. In this way, vegetarianism (for example) is not about opposing cruelty or minimizing suffering, or enhancing one’s health by returning to a more natural way of eating, but about a pleasure mode designed to maintain or enhance the pleasure modes of pigs or cows or sheep and so on. The point would not be to create a society where pigs no longer existed, but one in which actually existing pigs get to enjoy themselves more, to go about their piggy business.’ (144)*

In the thesis, I am driven to express the uniqueness of individual trees, insects, and birds. To continue with the example of *I Remember when the Moths weren’t Trapped*, I strove to voice the inherent mothyness, of the moths. I wanted to find a way to capture their beautiful delicateness and fragility. The heavy plumpness of their bodies compared to the thin lightness of their wings. To find a way to describe their ephemeral nighttime existence (fig. 6).



Fig. 7 - enlarged detail of still from *MothStudy2*, 2023

The great thinning is a phrase connected to the worldwide loss in the density of insects and smaller animal populations. This loss is so gradual that it has gone largely unnoticed. The thinning is referenced in, *The Moth Snowstorm: Nature and Joy*, by Michael McCarthy, in which the author discusses the memory of driving at night and seeing so many moths in the headlights that they looked like a snowstorm. As McCarthy writes,

*'It's the loss of abundance itself I mourn ... people over the age of fifty can remember springtime lapwings crying and swooping over every field, corn buntings alert on each hedge and telegraph wire, swallow aerobatics in every farmyard and clouds of finches on the autumn stubbles: they remember nettle beds swarming with small tortoiseshell and peacock caterpillars, the sparking pointillist palette of the hay meadows, ditches crawling and croaking with frogs and toads and even in the suburbs, song-bird speckled lawns and congregations of house martins in the dashing navy-blue elegance ... but most vividly of all, some of them remember the moth snowstorm.'* (23)

This thesis is a reflection on and reaction to, similar memories that I have from my childhood in Northern Ontario. I am a settler, the decedent of generations of settlers that labored in resource extraction and subsistence farming along the Ottawa River. They were of French and Irish descent from both sides of the provincial border of Ontario and Quebec, all Catholic. Growing up, I spent my summers in a canoe paddling lakes and rivers, and winters on cross-country skis in hardwood forests. I was taught a deep respect and love for the natural world. This thesis is a reflection on my memories of the abundance of the natural world when it teemed with life; the flicker of glow bugs, the chorus of crickets





Fig. 8 - still from *MothRedLightStudy2* , 2023



and frogs. The titling of the thesis, *'I Remember when the World was Thicker,'* is a direct reference to the gradual thinning on the natural world which I have witnessed in my lifetime, and which fills me with sadness.

In my twenties, I worked for Greenpeace and was involved in environmental activism at large. One of the core tenets of Greenpeace's activism is 'bearing witness.' It is at the heart of Greenpeace's mandate. It manifests as non-violent direct action that confronts environmental degradation, head-on. It is the moral underpinning for the climbing of oil platforms, the challenging of whaling ships, and the blockading of petrochemical plants. It was believed that if people, through mass media, could bare witness to the damage to the natural world, they would act to stop it. Twenty-five years later, despite trillions of images of the wanton exploitation and depletion of the natural world, the environmental collapse continues at breakneck speed.

Environmental activism led me to pursue a career as a professional architect to design sustainable buildings, to do my part in helping to stop the degradation of the natural world. Over twenty years I worked on the design of countless projects that were considered leaders in sustainable design. As an intern architect I worked on the design of commercial office buildings that were pioneers in developing systems of third-party assurance for sustainable design. These systems eventually coalesced into the industry standard LEED sustainable design accreditation process. As a design architect working for larger firms, I employed these sustainable design methods in the design of larger public buildings. This included the design of many buildings for Kwantlen University, UBC, and the federal government; Kwantlen Coverdale's Trades and Technology building, UBCO's Engineering and Management Building, and the Peace Arch Border Crossing being notable examples. Later, as a principle in my own practice, I worked exclusively on smaller sustainable buildings in the lower mainland and across the northern interior of the province. Unfortunately, despite all the effort, I am left with the felling that there is little that is truly sustainable in these complex buildings made of concrete, steel, plastic.

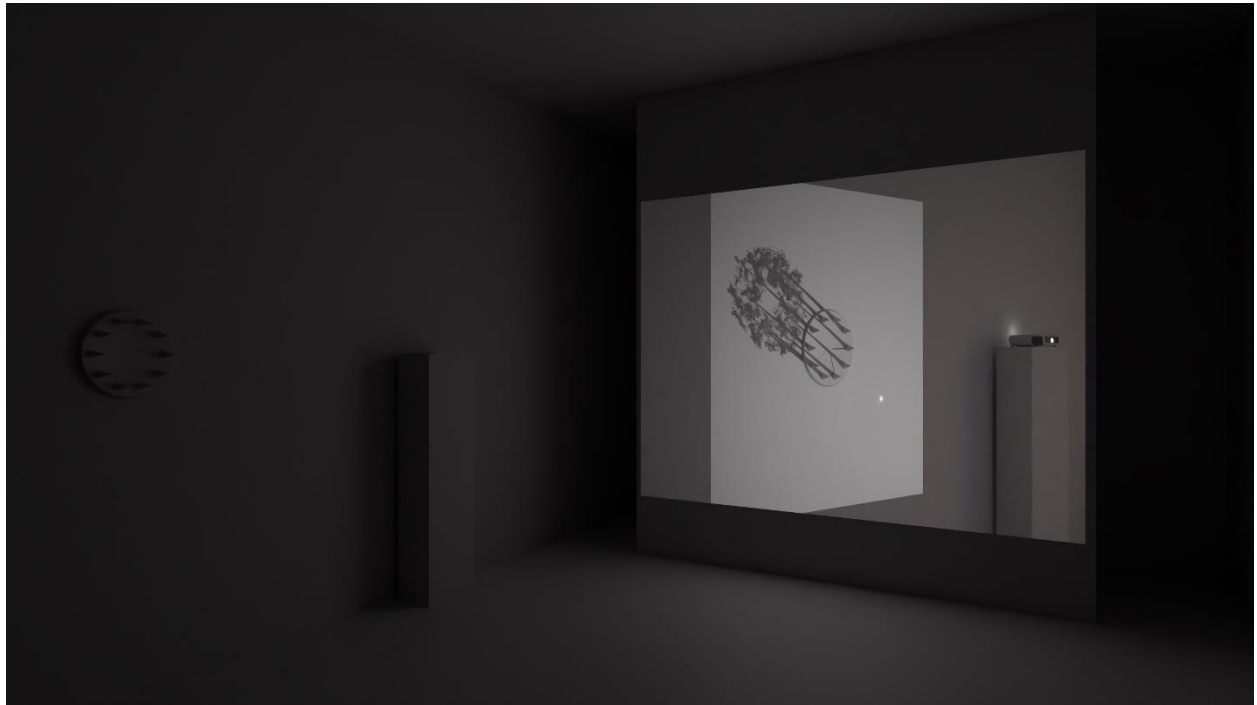


Fig. 9 – [Photographic documentation of RBC media room pending March installation]

*Placeholder stills above from 3D mock up of RCB Media Room installation*

## Chapter Two – Simulation and Simulacra

The thesis, *I Remember when the World was Thicker*, consists of two nested parts. The first piece is a simulation of an art installation in the RBC media room located on the main concourse at Emily Carr University of Art and Design. This simulation is projected by an overhead digital projector onto the back south wall of the room (fig. 9). It is made of 3D computer animation. Some of the elements in it are also physically built and displayed in the room; the three plinths that the simulated projectors sit on, along with the curtain, and the white painted plywood projection mapped prop for the simulacra, *I Remember when the Trees were Forests*. This results in the creation of a simulation of the very room that the simulation is shown in. The second part of the thesis is the virtual art installation itself. This installation consists of three digitally projected simulacra in the RBC room, one projected onto the east wall entitled *I Remember when the Trees were Forests* (fig. 10), one projected onto the back south wall entitled *I Remember when the Moths weren't Trapped* (fig. 11), and one projected on the west wall entitled *I Remember when the Fish and Fisher weren't Separate* (fig. 12). The virtual installation includes the projected simulacra as well as all the projectors, cabling, plinths, and curtains required for the simulated installation. This thesis support paper will start with a discussion of the overall simulation and then progress to a more detailed description of the three main component parts, the simulacra.

To situate this thesis amongst other contemporary artists working in new media I started by searching for artists that are working in a manner that I am striving to achieve. In general, I was looking for artists that demonstrate technical excellence in the employment of innovative and sophisticated new media technology. Artists whose work is precise. Work that is simple without being simplistic, that displays an economy, a restraint, to its form and structure. Work that is meditative, contemplative, and slowww. Art that creates space and yet has tension and affect. Lastly, I am interested in artists whose work explores similar themes of spirituality, threshold, and environmentalism.



Fig. 10 – Stills from the simulation, *I Remember when the World was Thicker*, 2024

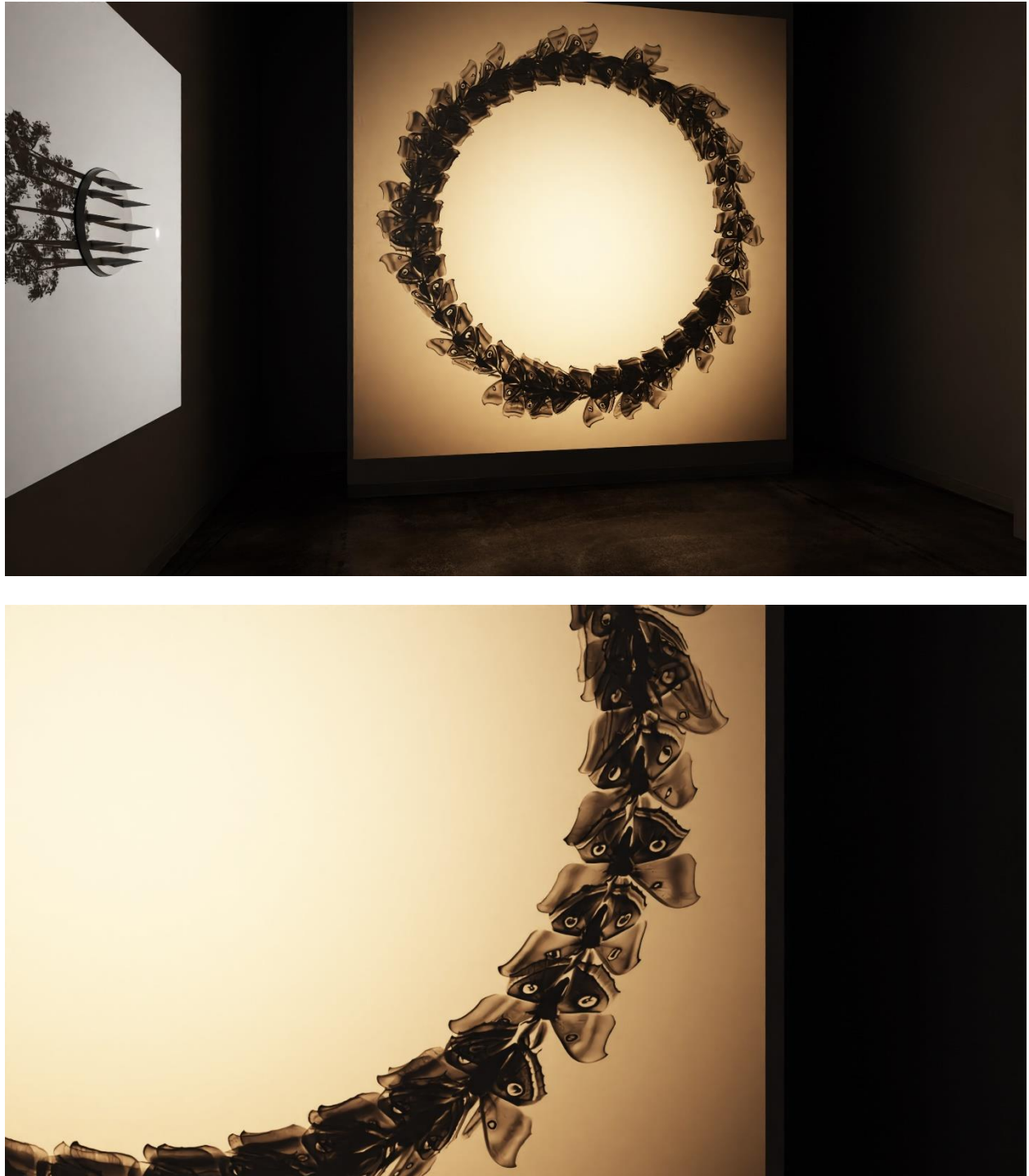


Fig. 11 – Stills from the simulation, *I Remember when the World was Thicker*, 2024



Fig. 12 – Stills from the simulation, *I Remember when the World was Thicker*, 2024

The simulation, *I Remember when the World was Thicker*, was inspired by the work of the contemporary new media artist John Gerrard. Gerrard works predominantly in the medium of simulation. Like the subject of this thesis, much of Gerrard's body of work is related to environmentalism. I am strongly attracted to Gerrard's piece *Farm*, 2015. In this work he creates a simulation of an existing sow farm in Oklahoma, shown in the gallery on a large format LCD display (fig. 13). The simulated farm is an exact replica of an existing pig farm. The camera in the simulation slowly rotates around the farm at walking speed. The work uses an engine that displays the simulation in real-time. It is not a video. Gerrard attempt to build as photoreal a version of the farm as possible, gives the illusion that the video taken of the real farm. However, there is something not quite right about it, it is too crisp, too smooth. The viewer is left with an unnerving feeling, as they are not sure what they are looking at. Garrard was able to access the site and take the thousands of photos required to build the work because the farm is not fenced, there are no people working there. A few times a week trucks show up to attach to the machinery of the farm building to drop off supplies and collect the product, farmed pigs. Garrard describes it as post-human farming.

*I remember when the World was Thicker* takes cues from Gerrard's piece. There are no people in the installation. I wanted to create an empty place, out of time. To heighten this sensation, the simulation is displayed along with some elements of the simulation physically in the room, as described above. I am hoping to give the viewer the unnerving feeling that the installation had already taken place. Had they missed it? Did it happen yesterday, or last year, or ten thousand years ago? I wanted it to feel empty, lost, a shadow of the original. Also, I worked to create as photoreal a simulation as possible, so that, like Gerrard's piece, the viewer questions what they are actually looking at. This impulse is expanded upon later in this chapter in the discussion of the writing of Jean Baudrillard and his concept of the 'hyperreal.'

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Fig. 13 – Farm (Pryor Creek, Oklahoma) UCCA, John Gerrard, 2015,



Nested within the thesis are the three simulated simulacra mentioned above. Although all three pieces, *I Remember when the Trees were Forests* (fig. 14), *I Remember when the Moths weren't Trapped* (fig. 15), and *I Remember when the Fish and Fisher weren't Separate* (fig. 16) share the subject of defuturing and its related shadow aesthetic, each piece is also intended as a standalone work. *I Remember when the Trees were Forests* speaks to the mechanical farming of the forests. The symmetrical positioning of the trees, the straight edged cuts that are perceived to open and close on the surface of the prop disk, and the plywood texture that appears during the revealing red light, are all indications of a defutured world. The simulacrum is not of a complex forest, but of a simplified tree farm. Only the shadow images remain to remind the viewer of the old forest's trees moving in moonlight.

The Light and Space tradition started in California in the late 1950's and is connected to a loosely affiliated group of artists including Larry Bell, Craig Kauffman, Mary Corse, Helen Pashgian, Robert Irwin, and James Turrell. I have found this artistic tradition to be highly influential on both my architectural and artistic practices. This is especially true of the work of James Turrell, whose exhibition *Light, Space and the Art of Perception* I recently experienced. Turrell's use of pure colored light was inspirational in the development of the red 'revealing' light that is inserted into the simulacra animations. During the simulation, the simulacra switch into a 'glitch' mode where the projected light turns a vibrant red. (fig. 18, 19, 20) This light is a reference to our defutured future moving towards us. Over the course of this research, I have resisted the introduction of overt references to the death of the individual moths, trees and fisher depicted in the works. Instead, the red 'revealing' light stands in for this defuturing. I rely on the colored light to create the experience of the defuturing. I wanted it to be physical, not intellectual. Again, like much of Turrell's art, the artistic research in this thesis studies the creation of simulacra as a vehicle that moves the viewer toward a meditative state. A state in which the viewer can experience a greater sense of interconnectedness with the natural world.

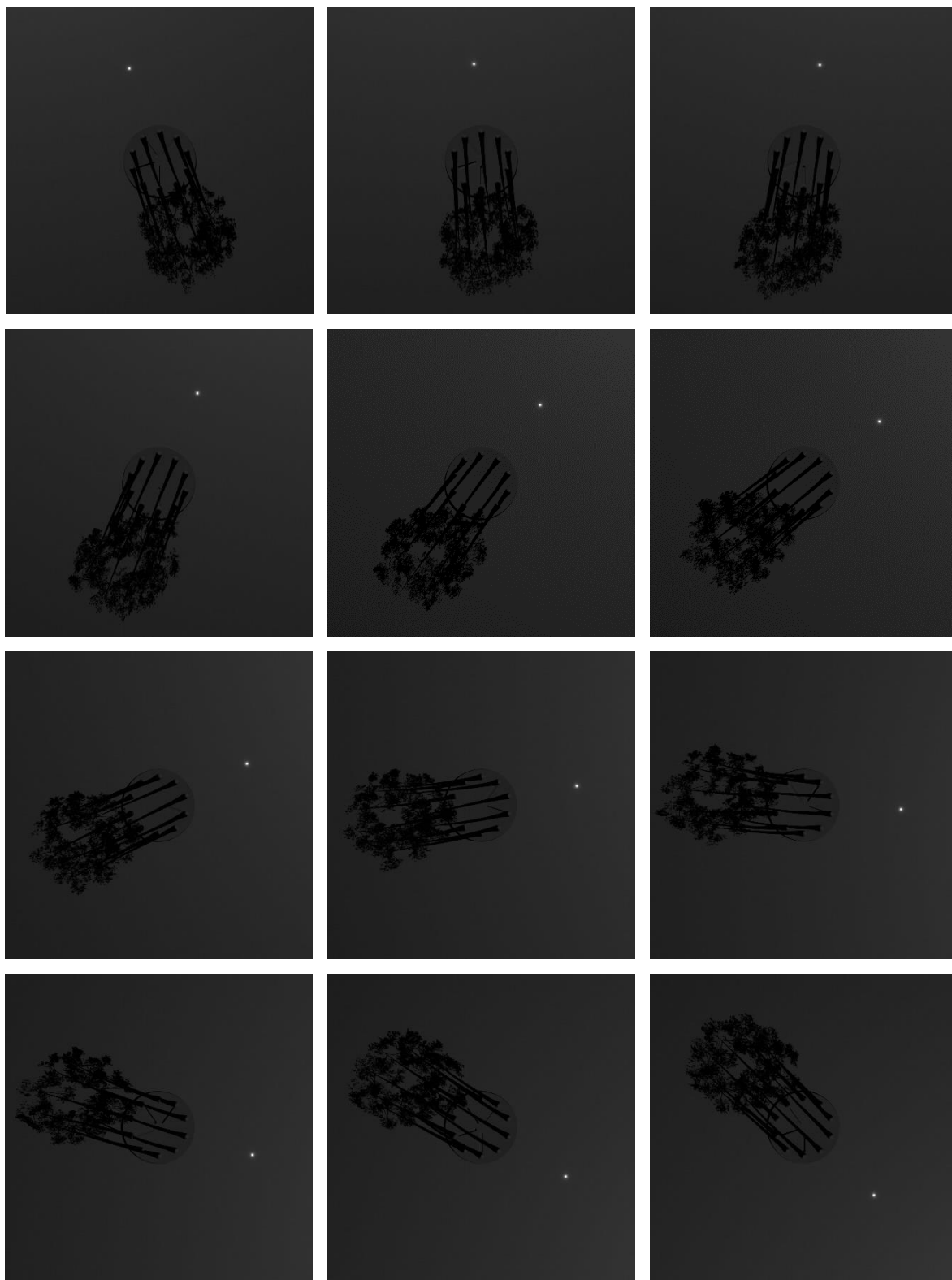


Fig. 14 - series of stills from *I Remember when the Trees were Forests*, 2024

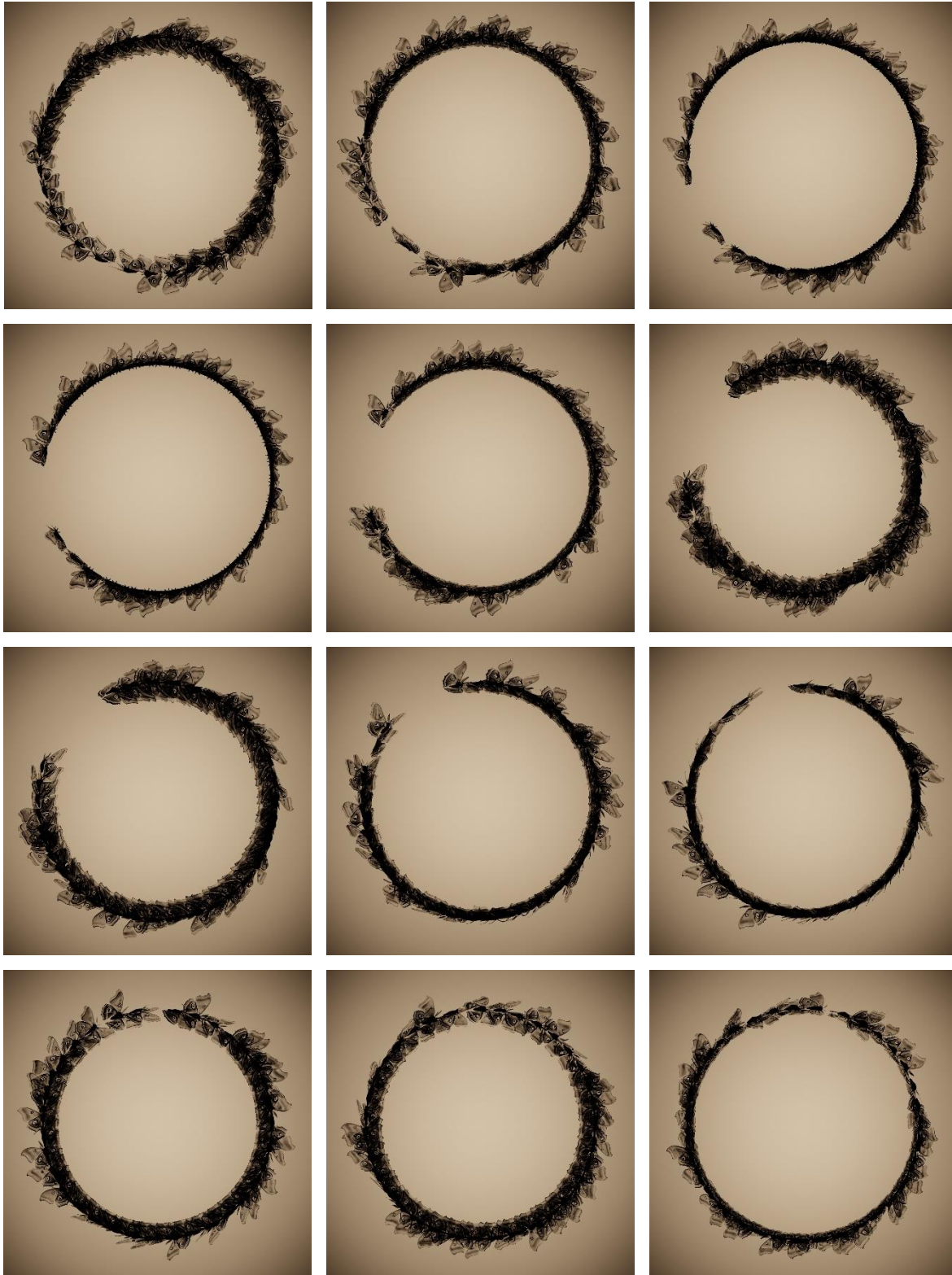


Fig. 15 - series of stills from *I Remember when the Moths weren't Trapped*, 2024

The simulacrum, *I Remember when the Moth's weren't Trapped*, has been discussed in some detail in Chapter One. In this section I would add a short discussion about its position within contemporary new media. In this piece I turn back for reference to the work of John Gerrard. In his *Flag* works, Gerrard develops a series of simulacra that depict the nation state's reliance on the consumption of fossil fuels. These *Flag* simulacra all involving the animation of an abstracted nation state flag made of black or colored smoke (fig. 17.) I am drawn to them as a reference for a way of drawing attention to specific environmental issues without resorting to outrage or graphic content. They invite the viewer to question what they are looking at. Recently I was referred to the work of artist Sabrina Ratte. In her series *Floralia*, Ratte depicts a virtual archive of extinct plants. Similar to this thesis, *Floralia* is connected to ideas of defuturing and the replacement of the real with the image of the real. I am interested in further study of her work along with other emerging artists working in the space of simulation.

This thesis also draws influence from expanded cinema, and in particular the work of Bill Viola. Viola is a contemporary video artist whose art focuses on fundamental human experiences such as resilience, the threshold between life and death, and consciousness. His work is slow and meditative, usually with an arresting moment interrupting the video loop. In *Ascension* a figure plunges into water. This is the arresting moment that starts the video loop. Viewed from underwater, the figure is briefly suspended in the form of a crucifix, before rising to the surface to then sink out of the bottom of the frame slowly. I view this film as a type of simulacrum of the death of Christ. The threshold at the top of the frame, between water and air, represents the threshold between life and death. The simple meditative quality to the rest of the video sets up the affect of the arresting moment. In earlier versions of *I remember when the Fish and Fisher weren't Separate* (fig. 37), I worked with a similar arresting moment of the fisher plunging through the threshold between their two worlds. This sequence begins

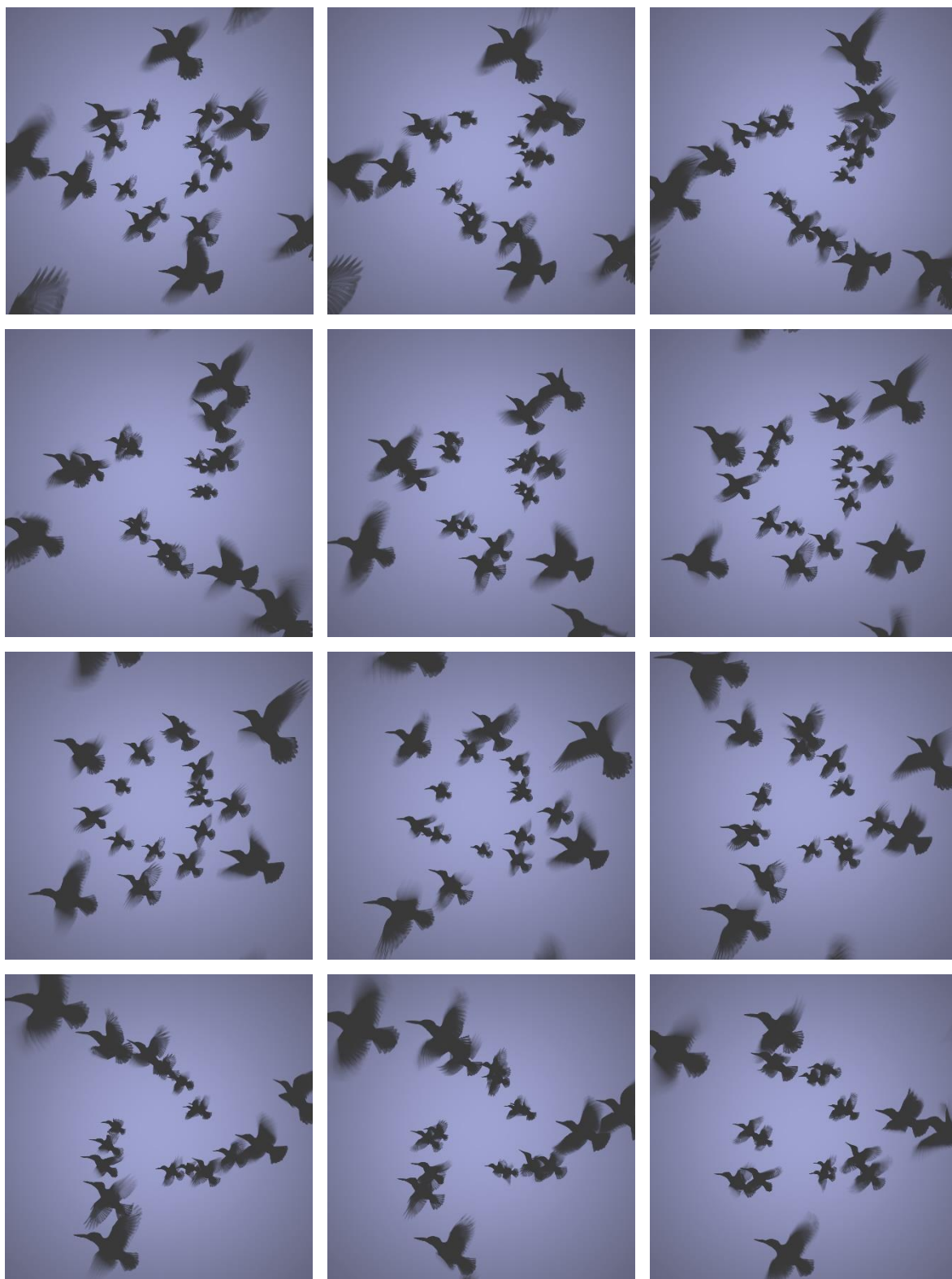


Fig. 16 - series of stills from '*I Remember when the Fish and Fisher weren't Separate V1*,' 2024

with the animation rotating to a digital view of the simulacrum that reveals that what initially looked like a two three-dimensional animation was actually a three-dimensional view. This perceptual shift from two dimensions to three, helped to create the arresting moment. In its current state, *I remember when the Fish and Fisher weren't Separate* acts as the arresting moments in the larger simulation. The simulacrum is depicted as 'glitchy.' It appears stuck in a short repeating loop that quickly breaks down into the red 'revealing' light. Soon after, the simulation itself glitches to a full screen of pure red revealing light. Here, I wanted to create as bright a light as possible to reveal the dark RCB room so that the viewer could experience the color with more awareness of others in the room also sharing in this experience.

In the early 1980's, when I was about ten years old, I had the privilege of being given a spectacular gift, a Commodore 64 personal computer. We were one of the first households in the generally working-class neighborhood to own a computer. I found it captivating and became an early adopter. When I was young, I was also diagnosed with dyslexia and I was always explicitly told by the education system that I would not be able to graduate from high school, let alone pursue any form of post-secondary education. Early in high school, I taught myself how to use the computer to change that narrative. I came to equate the computer with survival. It was like playing with fire and it allowed me to graduate from university and become a professional architect. My practice as an architect was, and still is, rooted in my ability to use the computer in 'cutting edge' ways to create simulations of buildings, landscapes, and communities. Over my life I have built many simulations and simulacra.

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Fig. 17 – *Western Flag* (above), John Gerrard, 2017.

In *Simulacra and Simulation*, Baudrillard addressed the significance of simulation in contemporary media culture. The text is divided into chapters that read like a series of short essays. In them, Baudrillard discusses the shift in postmodern culture away from simple representation and towards increasingly sophisticated levels of simulation, which he conceptualizes as 'orders of simulacra.' Baudrillard cites numerous instances in society where simulation had become more interesting, vivid, and valued than what he calls the 'real.' He argues that as the 'real' is replaced with simulacra, culture becomes saturated with signs and symbols and that the proliferation of these symbols is resulting in an 'implosion of meaning.'

Of notable interest to my research is the chapter "The Precession of Simulacra." In it, Baudrillard introduces the concept of the 'hyperreal,' an order of simulacra in which the simulation is perceived as being more real than the 'real.' As an example, the author discusses Disneyland, 'Disneyland is presented as imaginary to make us believe that the rest is real, whereas all of Los Angeles and the America that surrounds it are no longer real but belong to the hyperreal order and to the order of simulation.' (12)

Although *Simulacra and Simulation* was published over forty years ago, one could argue that Baudrillard's questioning of the impacts of simulation is even more relevant today, at a time of 'fake news' and the erosion of 'truth,' than it was at the time of its writing. The trends in media culture that he outlines have only accelerated. The text is an important starting point as it came at the transition to digital media and the proliferation of computer-generated imaging. It foreshadows the rise of increasingly immersive video gaming and entertainment that is undermining our collective connection to the 'real,' to the natural world. The text presents a sophisticated questioning of the impact of simulation that is highly relevant to this artistic research.



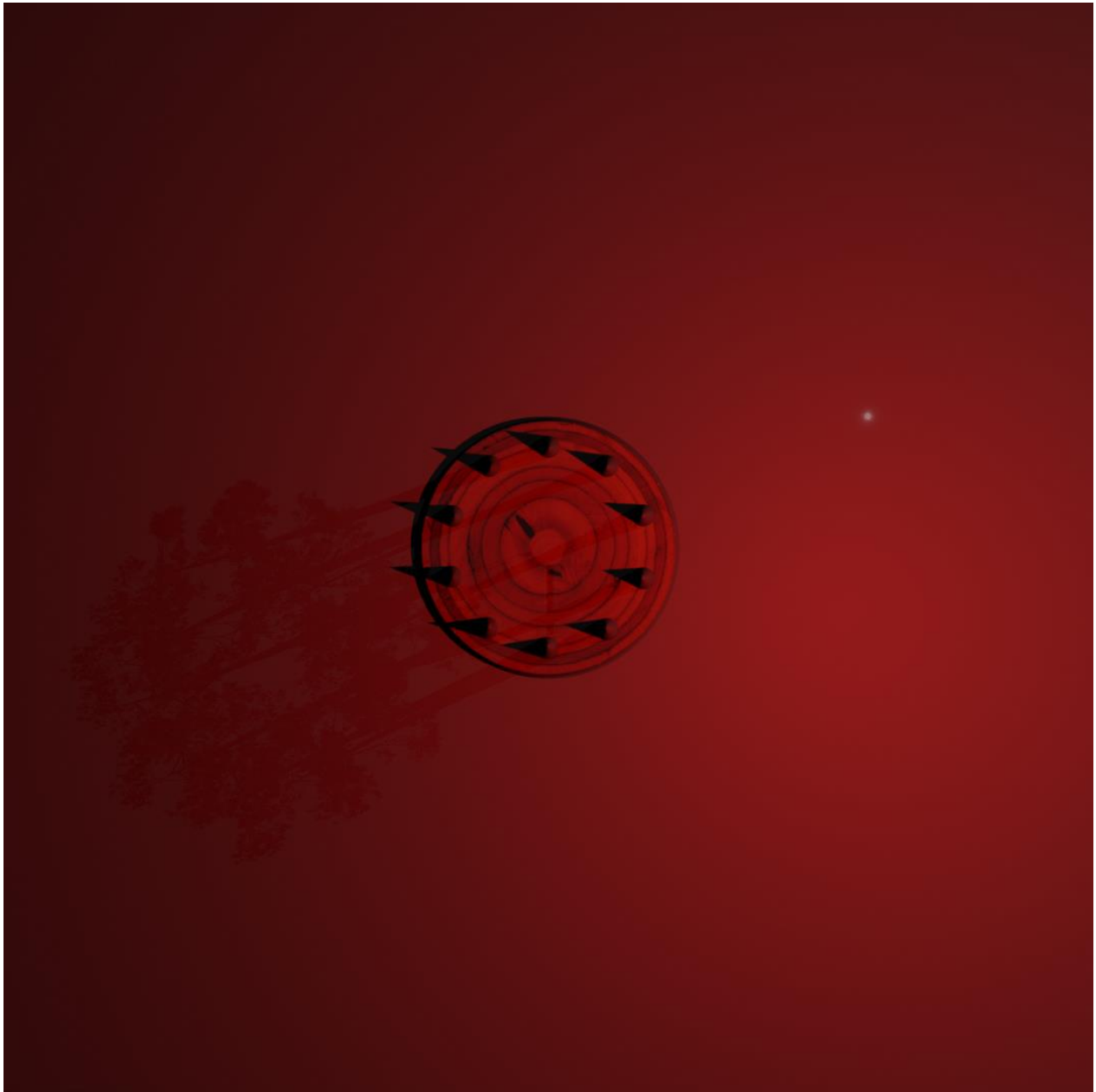


Fig. 18 - still from *Forest Wood Grain Red Light Study 3*, 2023

Here I would like to introduce a simplified example of the power that symbols have to separate us from the real. In *Falling into Grace* by Adyashanti, the author summarizes the ideas of the spiritual teacher Krishnamurti. I cite this example because it discusses the bird form and the use of words as a type of simulacra. Just like how the word bird is nothing like a bird, so is the image of a rainforest nothing at all like a rainforest.

*'When you teach a child that a bird is named 'bird,' the child will never see the bird again. What they'll see is the word 'bird.' That's what they'll see and feel, and when they look up in the sky and see that strange, winged being take flight, they'll forget that what is actually there is a great mystery. They'll forget that they really don't know what it is. They'll forget that that thing flying through the sky is beyond all words, that it's an extraordinary and wondrous thing that flies through the sky. But as soon as we name it, we think we know what it is.'* (7)

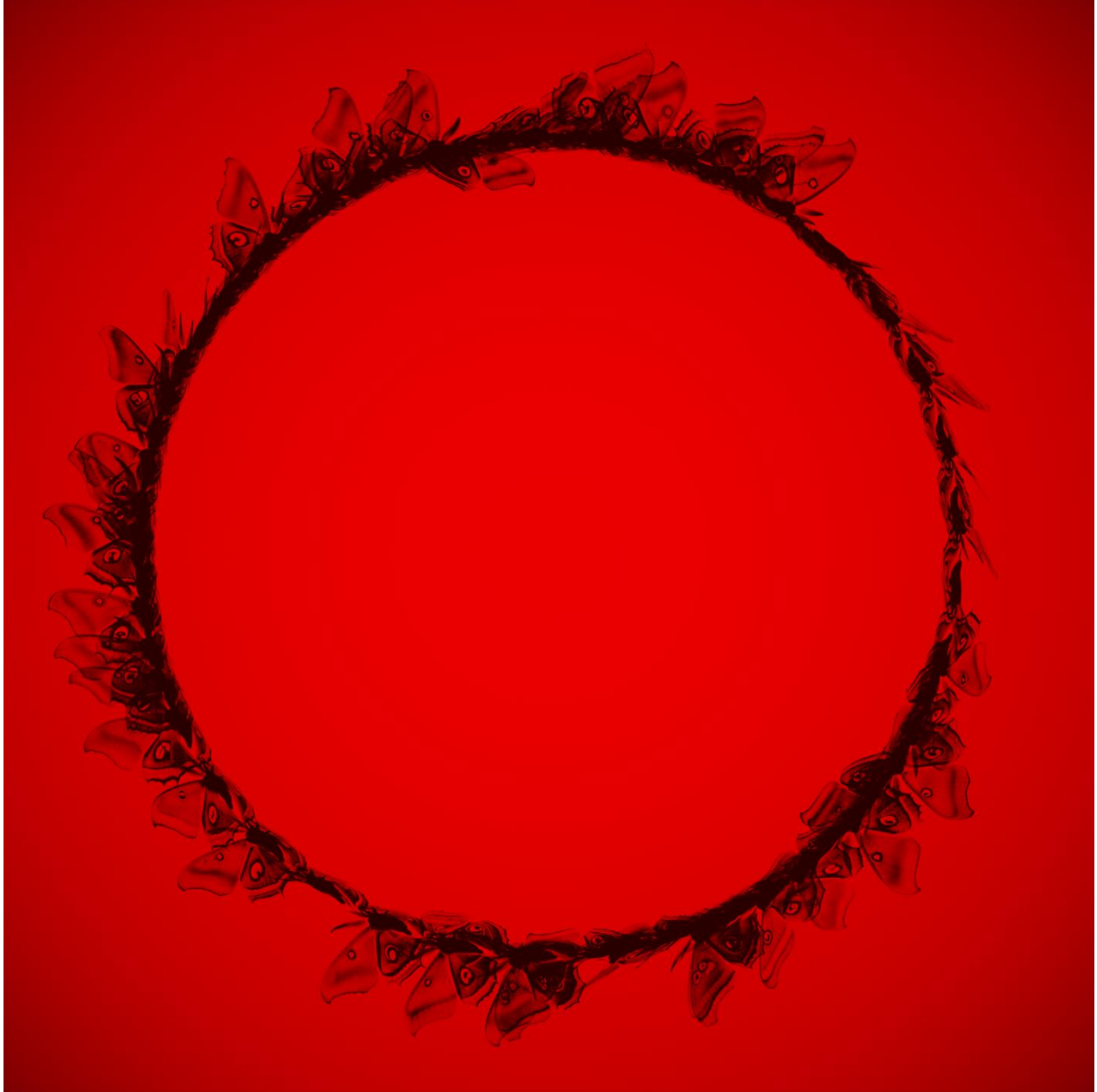


Fig. 19 - still from *Moth Right Light Study 2*, 2023



Fig. 20 - still from *Fisher Red Light Study 4*, 2023

### Chapter Three – Meditation and a Series of Studies

I started practicing yoga a little more than ten years ago, initially to help deal with the stress of running an architectural practice. Through yoga, I was presented with a non-dualistic worldview. My interest in non-dualism expanded through involvement in the larger yogic community. This turned out to be consequential. It is difficult to put into words the effect that the practice of yoga had on me. I experienced a profound shift. The practice of yoga led to meditation and mindfulness and an opening to 'see' the world differently.

This chapter focuses on the thesis's artistic method. *I Remember when the World was Thicker*, is a 3D digital animation made by combining Blender software with text-to-image AI. The process to produce this work involves hours of dedicated seated computer work. A great amount of time is spent testing through a series of small studies. As one study renders the next one begins. Before this studio work starts, I spend time in walking meditations in the urban realm, and seated meditations in nature. I find inspiration and motivation through this observational process. As this thesis progressed, I slowly developed a process of wandering in the urban realm. I found myself looking for inspiration in the most desolate urban spaces; in the places that I find leave me with the most intense feelings of alienation from the natural world. Here I developed a process of projection bombing as a method of informing the artistic production. (fig. 23) This chapter will expand on these two aspects of practice-based research.



Fig. 21 – detail of moth 'actor', 2023

This line of research began a few summers ago when I spent two months living with my father on Vancouver Island. He suffers from Parkinson's disease and as a result, everything moves slowly. This time happened to coincide with the strange heat dome that enveloped the lower mainland and the two of us settled into a slow lethargic rhythm, removed from contemporary life. Every evening, after dinner was finished, I would make my way down to the ocean. There at its edge, I would quietly sit on the ground for a few hours in simple observation. Unfocused, and open, with my awareness on the larger soundscape, not individual sounds or their causes. Sometimes I would record my observations in a small sketchbook. It was a form of meditative contemplation, and it had a profound effect on this artistic research.

During my time with my father, the sky became fascinating to me. I would sit by the ocean and watch it for hours. Friends told me that I had entered a 'time of magic' and that, in the past, they had experienced something similar brought on by intense meditation. During this period, the sky lost its 'background' nature. It was no longer a void with clouds pasted onto it, but instead, it appeared like a vast rolling, violent, colorful ocean that I lived at the bottom of. Birds flew like fishes. I would watch the birds with the intense feeling that they and the sky were one and the same. This experience directly influenced the creation of *I Remember when the Fish and Fisher weren't Separate*. As the research continued, I developed a process of seated meditation in nature and more 'naturalized' settings, such as oceanside parks and beaches. I now take long walks or bike rides to access these places as a transition to a more meditative state. Once there, I will sit in open observation. The inspiration for *ForestStudy1* came out of this process.



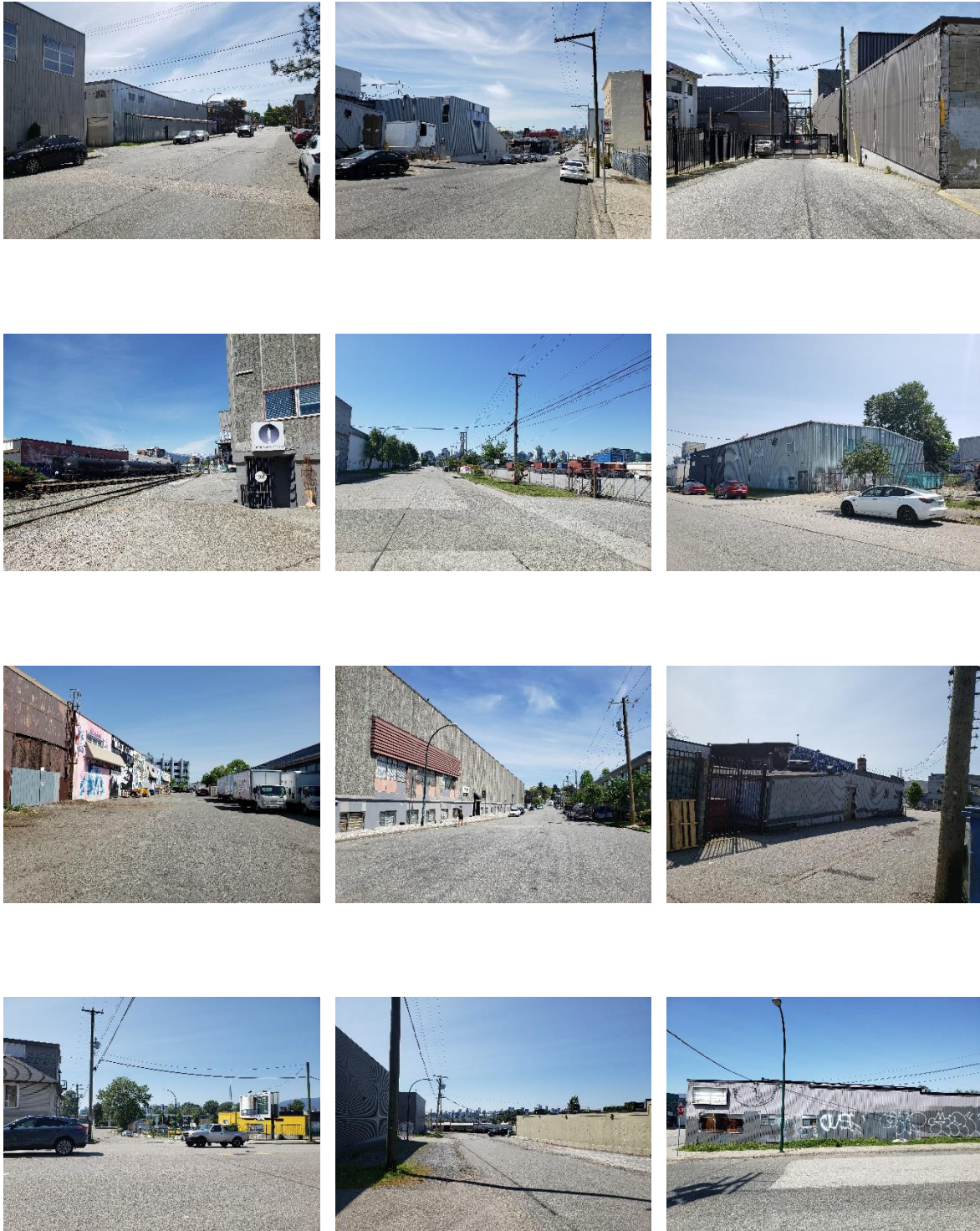


Fig. 22 - series of photos taken while on an urban wander. This area was once a vast complex tidal wetland.



As a counterpoint to the time spent in open observation of the natural world, I began to research, through doing, a process of urban wandering. The process I developed was similar to what is sometimes called Flaneur. Merlin Coverley, in *Psychogeography*, describes Flaneur as, 'wandering without aim, stopping once in a while to look around.' (67) Flaneur is connected to the concept of the *dérive*, an urban observational method employed by the Situationist art movement of the 1960s. While wandering I would be attentive to 'zones of atmosphere' and the thresholds between these zones. I learned of this process many years ago as an architectural student and have employed it innumerable times over my long career as an architect and urban designer as a way of assessing patterns in the urban realm.

I experienced these wanderings as a form of moving meditation, either on foot or drifting slowly on my bicycle. In the process, I found that I was drawn to forgotten, empty, interstitial service areas, the spaces that most triggered my feeling of solastalgia. Over time I found that I would return to some of these spaces dozens of times. While there, similar to the seated approach of open observation in the natural realm discussed above, I would stand in open awareness listening to the ambient sounds of the City.

During the urban wanderings, I became attentive to the pervasive graffiti and its connection to my feelings of alienation and solastalgia. It wasn't that the graffiti seemed to create these feelings but that the spaces that felt the most alienating seemed to attract the most graffiti. Here I began to be interested in the specific role contemporary art practices, primarily street art, might play in extending or augmenting the realities of these spaces. In the article *Exploring Extended Realities in Environmental Artistic Expression through Interactive Video Projections*, published in *Big Data and Cognitive Computing*, A.J. Bongers sites many examples of street art in Sydney and Paris to highlight the continuum of methods



Fig. 23 - still from projection bombing installation of *MothStudy1*, 2023

used by artists to interact with the urban environment. Of notable interest to this research are works by street artists Invader, Zigom.art, Titiskull, Will Coles, Banksy, Blu, Gregos, and Ememem. Bongers connects this lineage of street art to his personal, along with other Sydney artists, work with 'projection bombing.' Projection bombing is a style of art that projects digital video images onto the urban realm using mobile projection equipment. The article contains a highly detailed technical discussion of equipment setups used for the creation of walking projection bombing that does not require the use of a car battery or power taken from street light posts. It lists suppliers and model numbers for various power sources, video controllers, audiovisual software, projectors, and cable setups.

This technical research led to the development of two works of artistic production employing projection bombing as a type of simulacra. (fig. 24 and fig. 25) The locations for these works were chosen after significant wandering. They were sites where the underlaying natural patterns were the most suppressed. They gave me an intense feeling of aloneness and emptiness. These two projection bombing works greatly informed the final gallery simulacra, *I Remember When the Moths weren't Trapped*, and *I Remember when the Fisher and Fish Weren't Separate*.

All three simulacra pieces were built over countless iterations. I approached their making slowly, over many months and, in some cases, years. During their production, I often sat and watch each computer produced animated shadow pattern move for long periods. Normally while the next iteration rendered. It was preferable to do this at night when I could be alone and focused without distraction. The process by which these works were developed was slow, reflective, and observational and is in itself, a form of knowledge seeking. All three pieces essentially consist of three parts: 1) detailed shadow puppets which I call 'actors' - Moths from the Polyphemus family, Douglas Fir Trees, and Pacific King Fishers respectively; 2) the motion paths those 'actors' follow; and 3) a light source to animate the actors in motion. All three parts are completely digital, existing only in the computer until exported through a digital video projector. This thesis support paper will briefly discuss each in order.



Fig. 24 - still from projection bombing installation of *FishFisherStudy3*, 2023

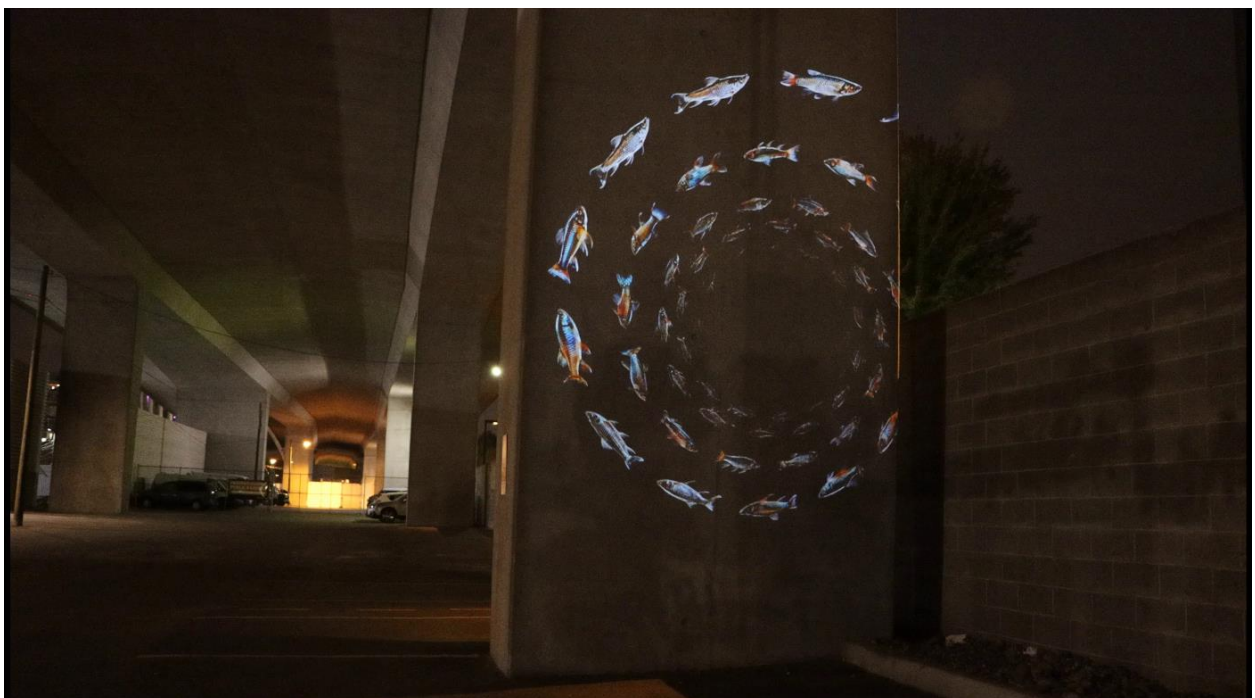


Fig. 25 - still from projection bombing installation of *FishFisherStudy3*, 2023

Like how no two snowflakes are the same, the patterning on each of the moth's wings, the fir's branches, and the fisher's feathers is an unique individual expression of the larger species-specific pattern. The desire to express this individuality led me to the research and development of a material process by which I could generate many unique patterns that were an accurate depiction of the species, while at the same time granting each actor an individual expression. I was looking towards a clean crisp shadow aesthetic, where the detail of the wings, branches, and feathers is perceptible to the viewer. To make the moth and fisher actor images I employed a piece of software called Mid-Journey.

The Mid-Journey bot uses relatively recent text-to-image technology. As the name suggests, text-to-image will generate an image based on a text prompt. The bot takes the text prompt and then sources billions of images to generate a new unique PNG image file. The prompting is highly specific. Small changes in the phrasing result in significant changes in the image generated. In practice, the process became highly iterative when the generated image was re-referenced with small changes to the prompt.

Next, these images were processed through the raster graphics editor Photoshop to, amongst other things, paint out the parts of the body and head that would cast opaque shadows. Throughout, I worked to maintain as high a resolution and fidelity in the images as possible. I would like to make it clear that the resulting images are not photos themselves but are, in essence, images made in conjunction with a computer. These images can be made by the bot in any style: ink drawings, colorful cutouts, Japanese 18th-century block prints. I developed a photorealistic visual style because I wanted something as close to 'real' as possible. I wanted this piece to act as a form of research, a type of bearing witness to the loss of the real and the replacement by the simulation, and to act as a warning about the seduction of the simulacrum.



Fig. 26 – selected fish ‘actors,’ 2023



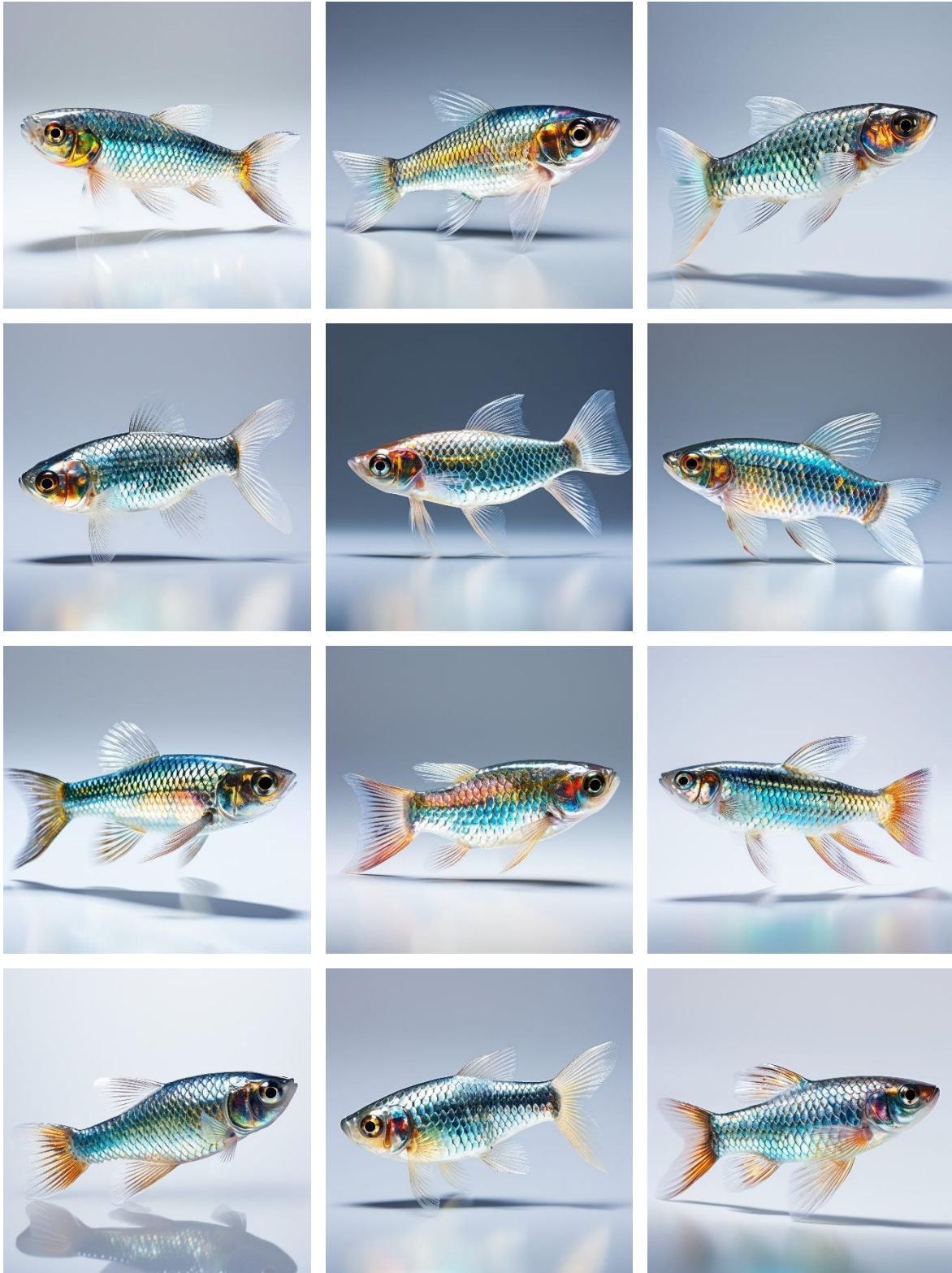


Fig. 27 – selected 'raw' fish 'actors,' 2023

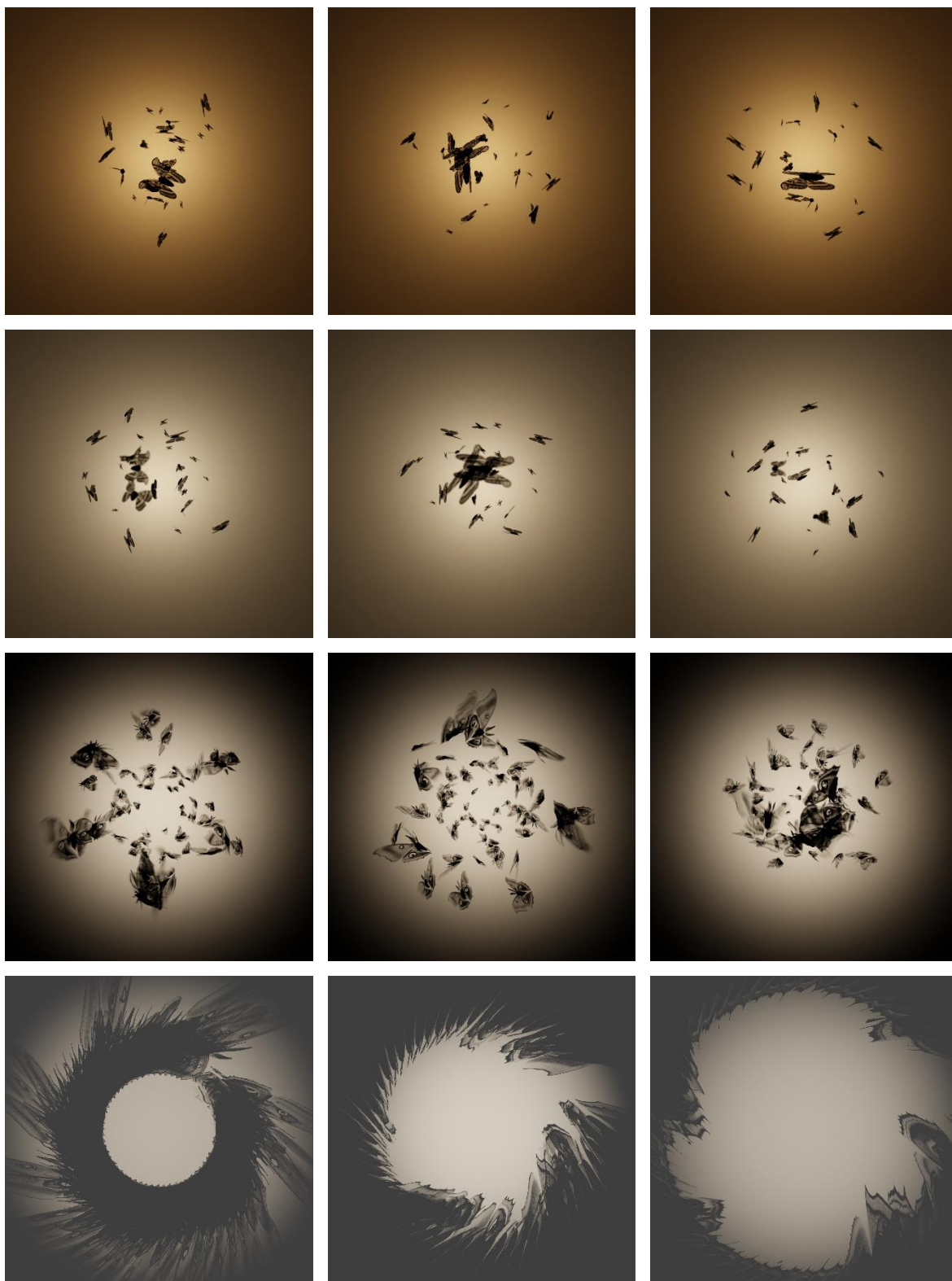


Fig. 28 - series of stills from the development of *MothStudy2*, 2023



Once the individual actors' images were finished, they were imported into Blender, an open-source 3D computer graphics and animation software toolset. Using Blender, motion paths were set up for both the individual actors as well as their collective movement patterns. The development of the motion paths was a slow iterative process. It involved a great amount of testing, reflection, small adjustments, and retesting. I was interested in motion that had a meditative quality to it. After the entire motion pattern was roughed out, it was viewed repeatedly in a semi-meditative state, making small adjustments. I intentionally added many moths and fishers to retain an aspect of the wild abundance of the natural systems, before the anthropocene. From a technical perspective, the moths depicted in the simulacra are not the images built in Mid- Journey but are instead shadows generated in Blender by shining a 'light' through the moving actors, onto a digital flat white surface.

The Enso pattern is a traditional Zen practice of painting a circle in black ink in one continuous motion of the hand and arm. The Enso is used in Zen Buddhism to symbolize Oneness or wholeness. It can also represent impermanence. The drawing of the Enso can be used as a type of meditation. The motion pattern for *I Remember when the Moths weren't Trapped* is designed in reference to the Enso. Being left-handed, I imagined myself painting clockwise. To create the Enso shape in Blender I set up the overall motion to be circular. I divided the moth actors into two groups and assigned each group to a circle motion path. I set the paths to rotate at slightly different speeds. This relatively simple setup created a continuous meditative movement where the moths slowly pass over each other. I added a gap in each circle so that as they rotated slightly out of phase, the gaps would at times align and produce a gap similar to the traditional Enso shape. I then addressed the motion of the individual moth actors. I built the wings to open together on the inside and flutter independently on the outside. This was done through the addition of a bit of noise to the outside wing. A unique individual expression within the larger pattern. In this way, the circular movement of the moths reflects the movement of the arm and



Fig. 29 - series of stills from *MothStudy2*, 2023

brush stroke. The ‘painted edge’ on the outside of the ‘brush stroke’ looks frayed, the inside a harder, darker, more circular ‘cut.’

At times the moths were designed to roll together to reveal their side bodies, their legs all pointing together towards the center of the image. This was done to reference the caterpillar form that they spend most of their existence in. In *MothStudy2*, the color and temperature of the light gradually changes from moonlight to street lighting—soft and silver, changing to sharp and yellow. The simulacra begins with the light source off and ends with it turned on so brightly that it ‘burns through’ the moth actors. Towards the end of the video the moth’s wings, delicate and dusty in the low light, lose fidelity and become ‘burnt’ and ‘crispy’ when exposed to the flood of light. This is a reference to the light traps created by artificial light, discussed at the start of this paper. At the end of the work, the viewer is left trying to focus on a bright white empty screen. The moth pattern is gone. This version was directly influenced by the projection bombing work in the ally and its connection to the street light overhead.

The fir tree actors in *I Remember when the Trees were Forests* were built using a different process. For these, I researched generative 3D modeling bots designed to create tree forms. In the end, I used an add-on for Blender called *Sapling*. This bot generates 3D objects that mimic the branching patterns of individual tree species. My interest in using 3D forms for the trees was driven by a desire to reveal their complex branching structures in the shadows using a rotating light source. This was not possible to do using the Mid-journey techniques discussed above.

*I remember when the Trees were Forests* differs from the prior two in another significant way. The projection bombing research heightened an interest in interlocking the projected animation with physical objects. This is sometimes called projection mapping. A lot of projection bombings employ types of projection mapping to interlock it with the built environment. Early on, I became interested in

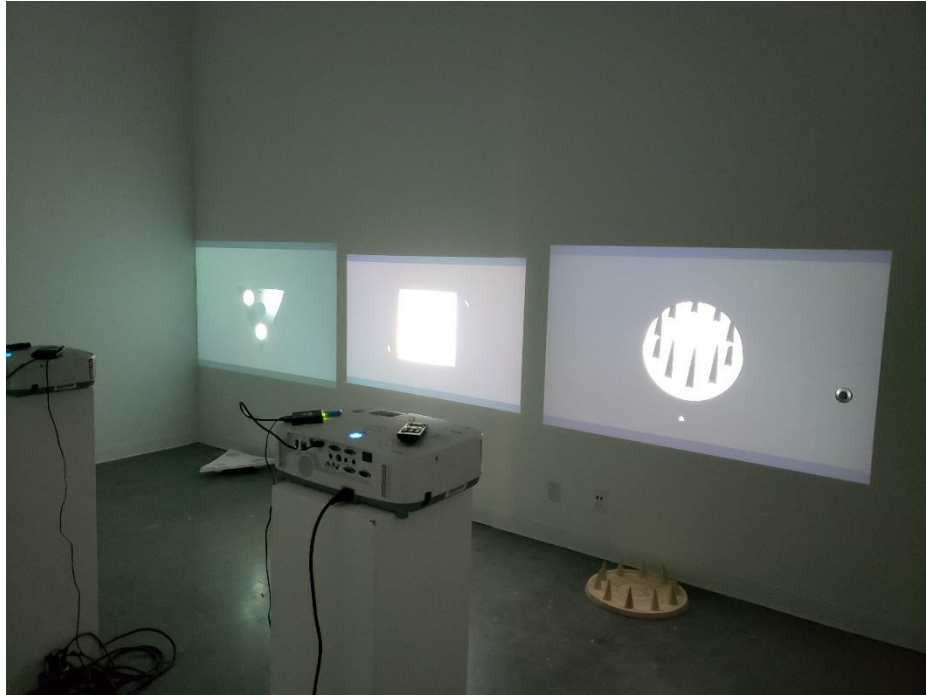


Fig. 30 – photo of projection mapping installation of *HeadWaters, Bees and Lavinder*, and *ForestStudy2*, 2022

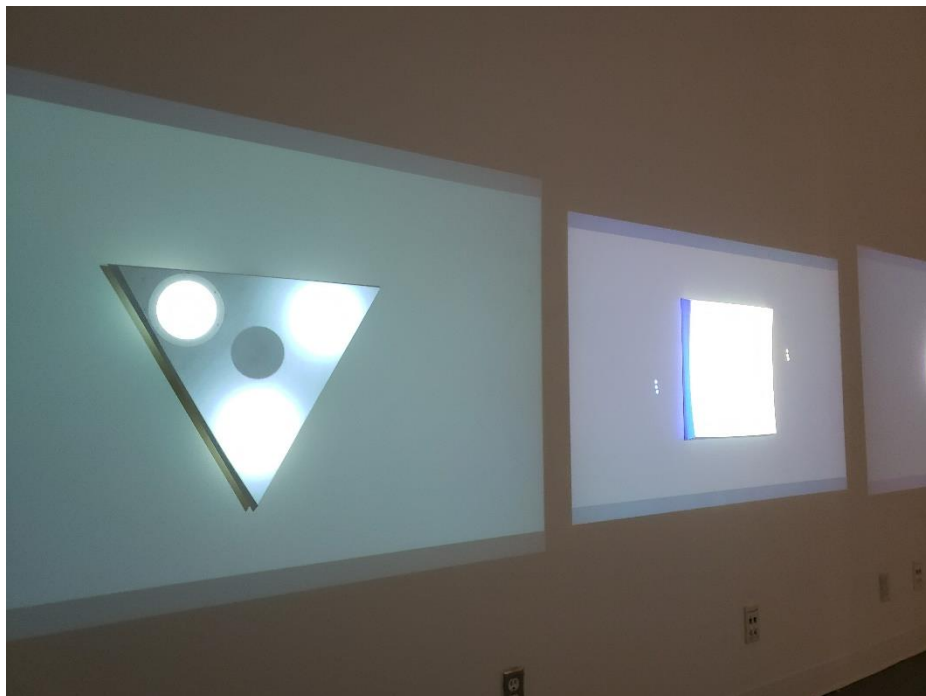


Fig. 31 - photo of projection mapping installation of *HeadWaters, Bees and Lavinder*, and *ForestStudy2*, 2022

researching how this style of mapping could be brought into highly controlled interior gallery spaces.

Using the 3D printer, I exported (printed) a 3D form (fig. 33) that was designed to interlock with animation to create the illusion that the rotating animated light was casting 'real' shadows onto the sculptural printed form. (fig. 32) I made several variations of this maquette.

Building on this work, I then constructed three larger maquettes entitled *Bees and Lavinder*, *Headwaters*, and *Forest Night*. (fig. 30, 31) All three pieces used a physical wood base, machined using the CNC router, onto which a simple animation was projected. These pieces were tests into how two simple forms could be combined to create a third more complex work. This research developed into a form of testing for the projection mapping aspect of *I Remember When the Trees were Forests*.

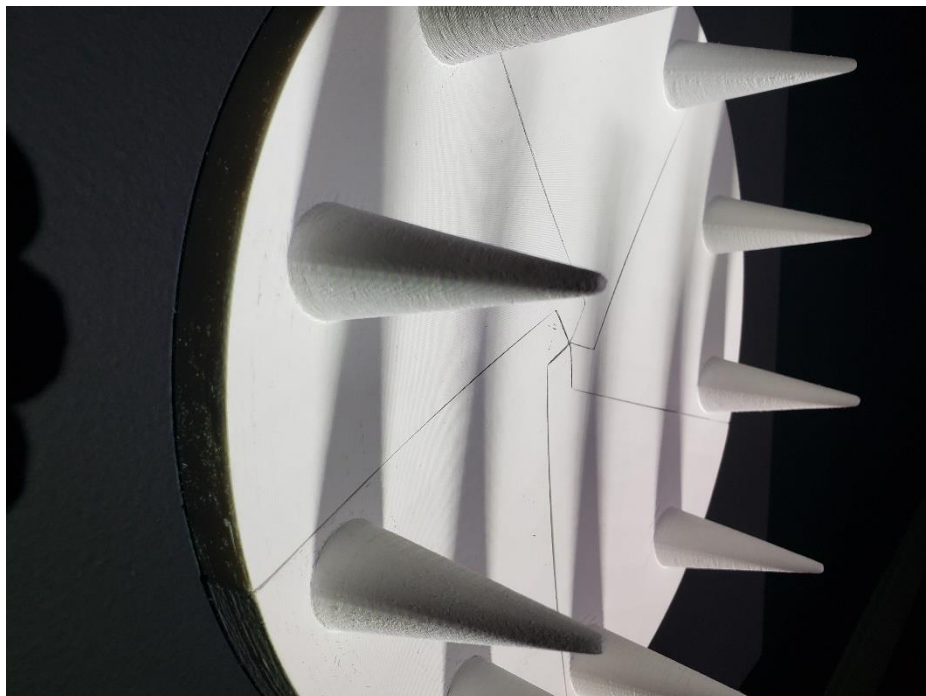
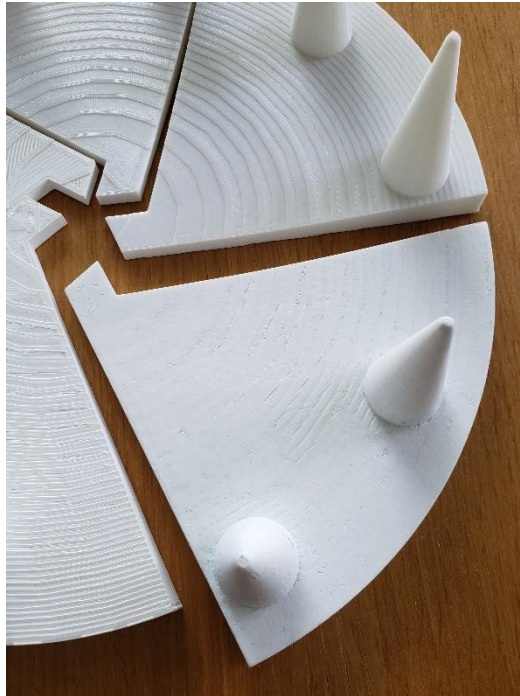


Fig. 32 - photo of *ForestStudy1*, 2022

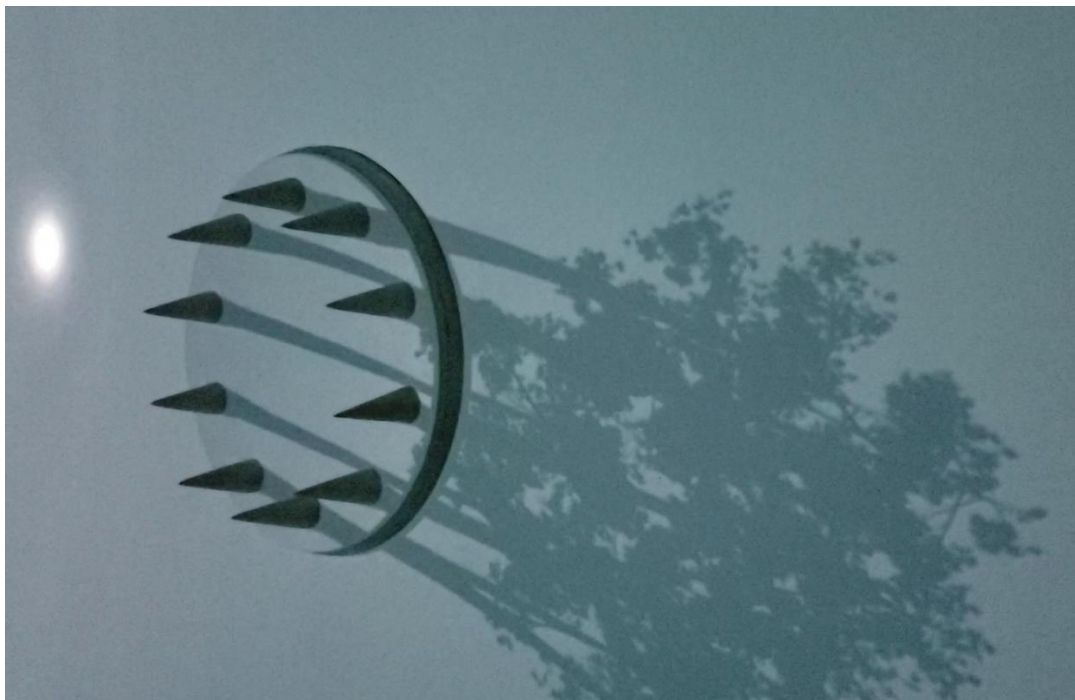


Fig. 33 - photo of *installation of ForestMothStudy1*, 2023



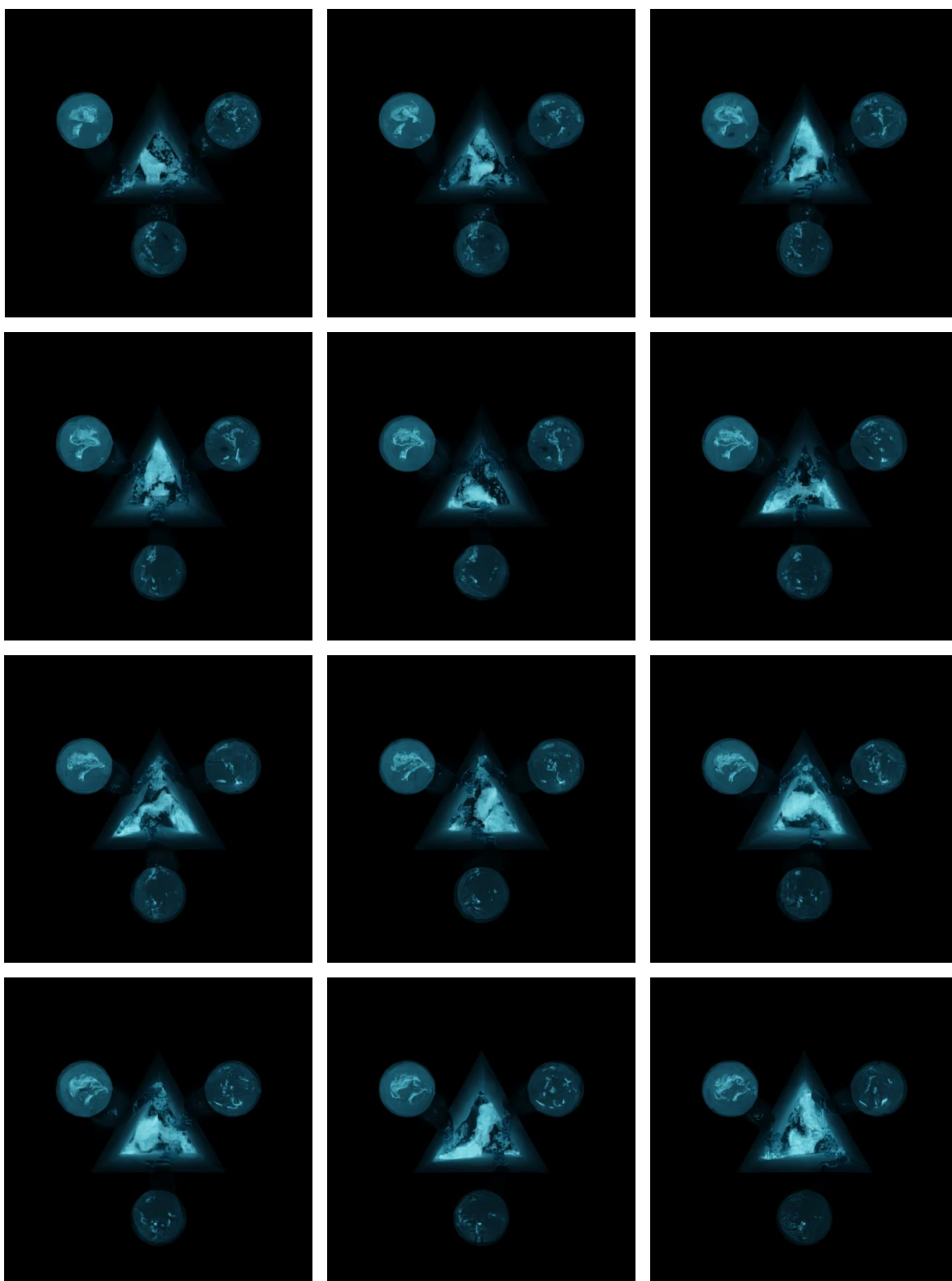


Fig. 34 - series of stills from *HeadWaters*, 2022



## Reflections

*I Remember when the World was Thicker*, contributes to the field of new media through artistic research into new and emerging technologies used to create digital simulacra. The mass adoption of many of these technologies will have a significant impact across society. This thesis studies the ongoing substitution of the real with the simulated, the image of the real. In this sense, it is an expression of solastalgia, a feeling of homesickness while still at home. Within this thesis can be found examples of simulacra; mechanically farmed trees, moths in a light trap, fisher ceaselessly searching for fish. They are representative of both the medium's seductive attributes and its limits and inherent emptiness.

*I Remember when the World was Thicker*, was exhibited in the RBC Gallery at Emily Carr University from March 25<sup>th</sup> until April 12<sup>th</sup> 2023 (Appendix A). This allowed me to spend time with the piece, alone and shared with others. Developing and making the work brought on feelings of solastalgia in me. It was my hope that people viewing the work would understand that it was coming from this place. After discussions of the experience of the installation, it is my understanding that this aspect of the work clearly came through. In particular, some viewers viscerally identified with a sense of loss related to the simulacra, *I remember when the Trees were Forests*. It is this sense of loss, this sense of a defutured future, that I was most hoping would come through in the piece. Part of my interest in creating the simulation of the installation, as opposed to simply having the installation itself, was to reinforce this feeling of loss. In making the work, I imagined that the viewer would experience the installation with the feeling that they had somehow missed it. Many viewers that I spoke with did not consciously realize that they were looking at a simulation of the room and not a documentation of a prior event in the room. There was a clear sense in delight when deception was revealed, but also many then expressed that the revelation left them with a feeling of unease. I hoped that they somehow felt that they were looking at a shadow of the original.

Moving forward, I would like to build on the research in this thesis. One clear direction forward is to research the reconstruction of this piece so that it renders continuously in real-time. The 3D model that the simulation is generated from has a camera which is set to rotate around the center of the room at a slow eight-minute orbit, while pivoting 90 degrees to the left and right. The pivot is set to a slower eleven-minute interval. This results in an endlessly different pattern to the viewpoint. My hope is that, by removing the feeling that there is a camera operator, the sense of solastalgia that I imagine the work reflecting, would be increased. Moving further, I am interested in pursuing this research through the creation of simulation of a projection bombing in a number of the urban spaces visited during the course of this research. For example, making a simulation of the lane that includes the moth shadows and the projector and projection bombing setup with my car, hatch open and projector projecting. In a simulation, the camera, or observer, could move up and down the lane randomly, at times the viewpoint would hide the projector and at others the deception would be revealed – that moths no longer circled the light. They were gone, only their projected image remained. The RBC gallery exhibit could be seen as a gateway piece developed in a much simpler white box interior. Having never truly modeled in photoreal, it enabled me the opportunity to develop the skills, techniques, and workflow that will be required to model much more complex environments, such as the laneway.

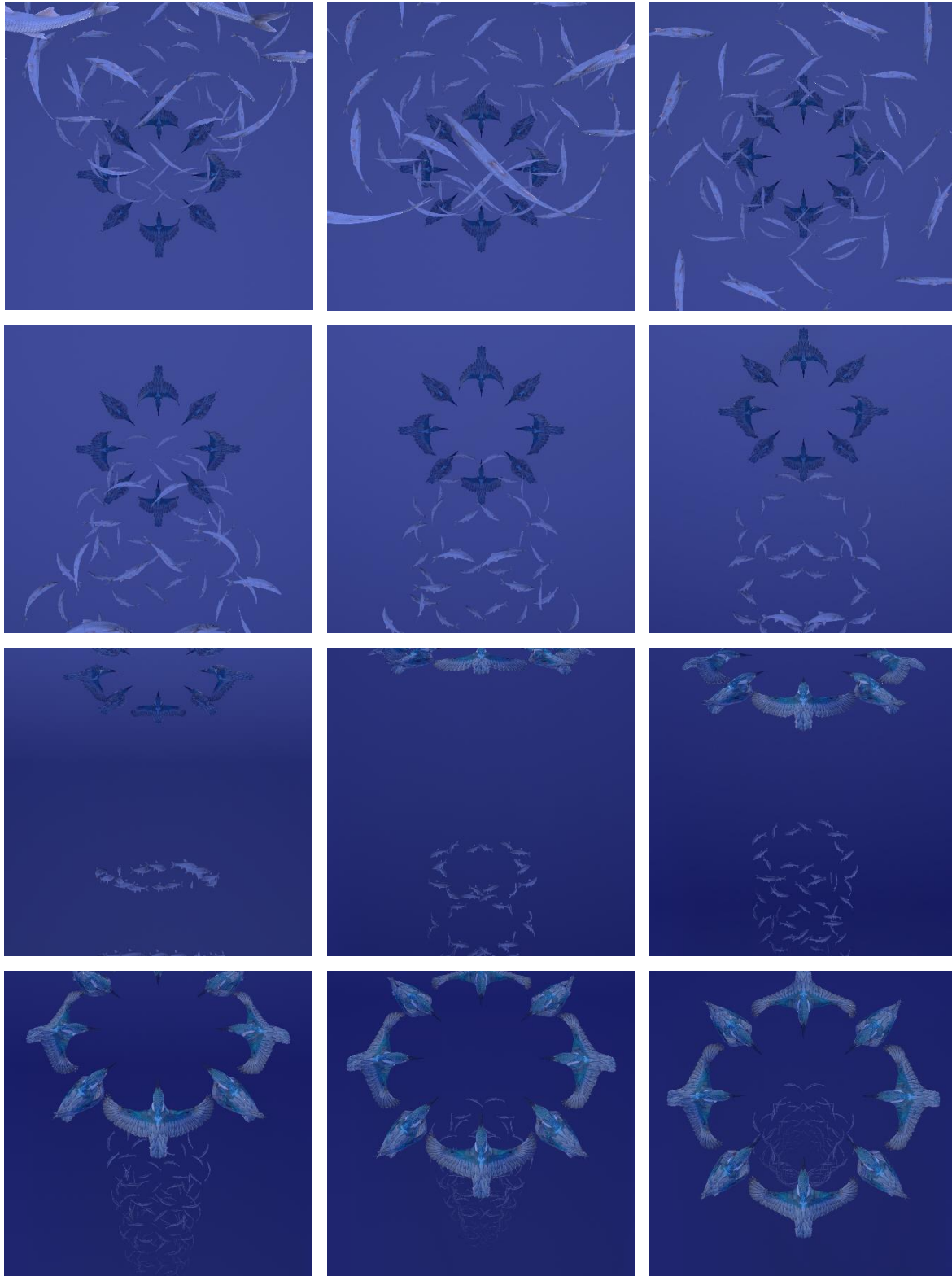


Fig. 35 - series of stills from 'I Remember when the Fish and Fisher weren't Separate V1' 2022

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## Image List

All images by author, accept as follows.

### Fig. 36

Artist Name: John Gerrard

Work Title: Farm (Pryor Creek, Oklahoma) UCCA

Work Medium: Projected Simulation

Word Date: 201

Image Courtesy: The Artist + PACE Gallery + Ullens Center for Contemporary Art

Photography: Li Sen

### Fig. 37

Artist Name: John Gerrard

Work Title: *Western Flag*

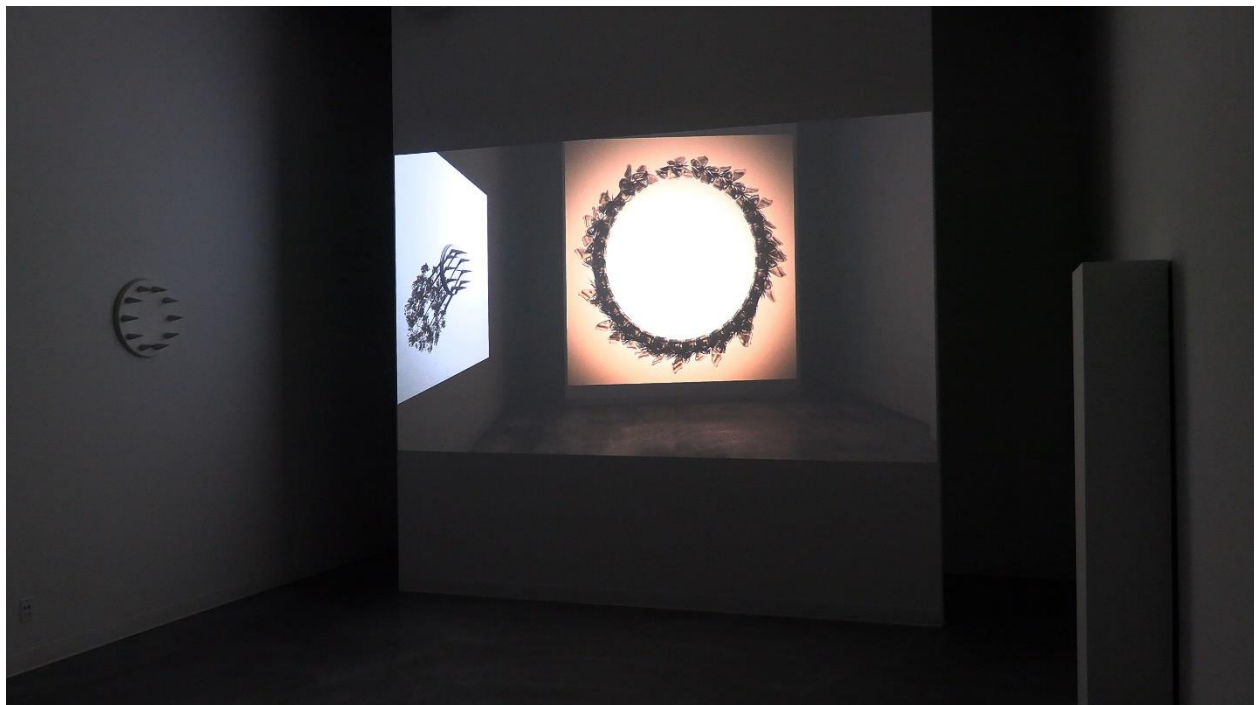
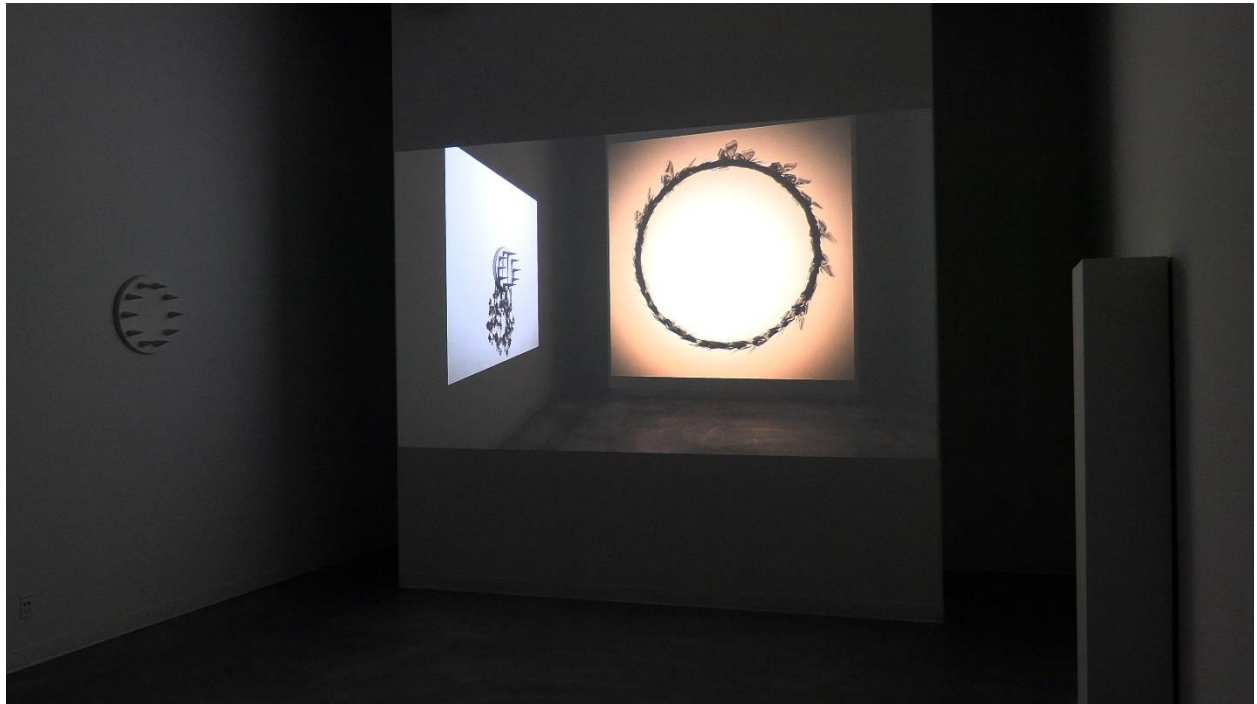
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Word Date: 2017

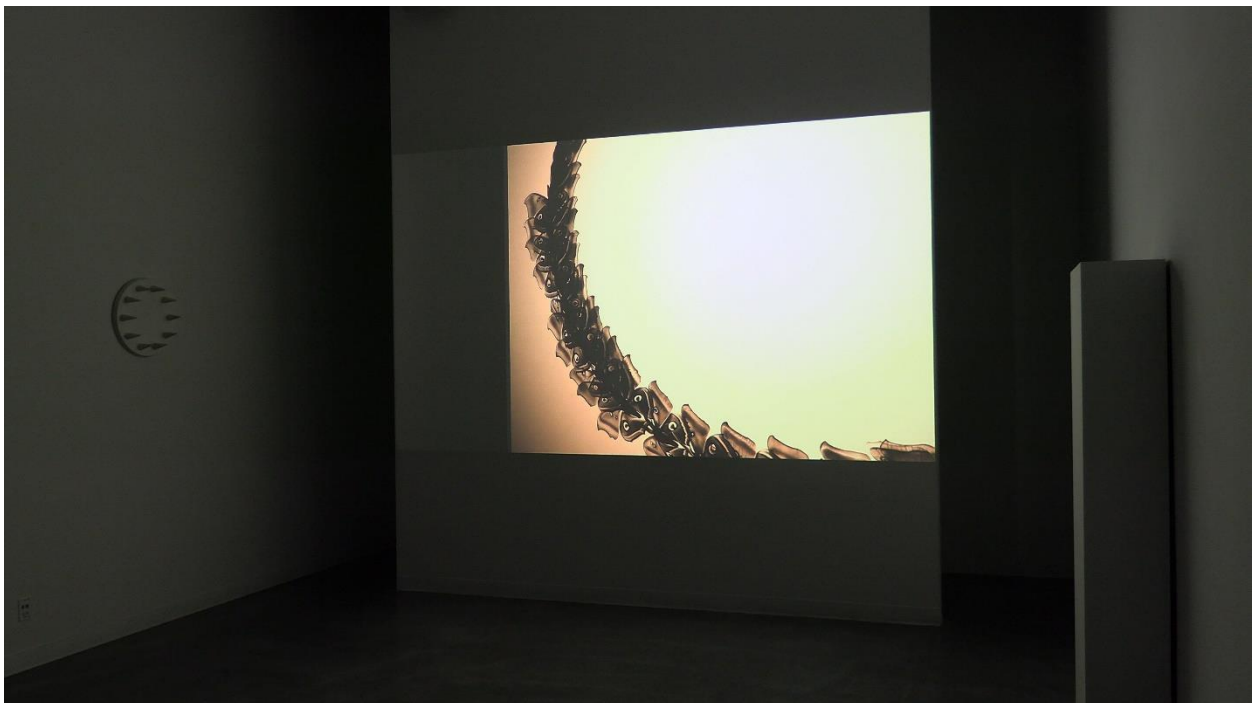
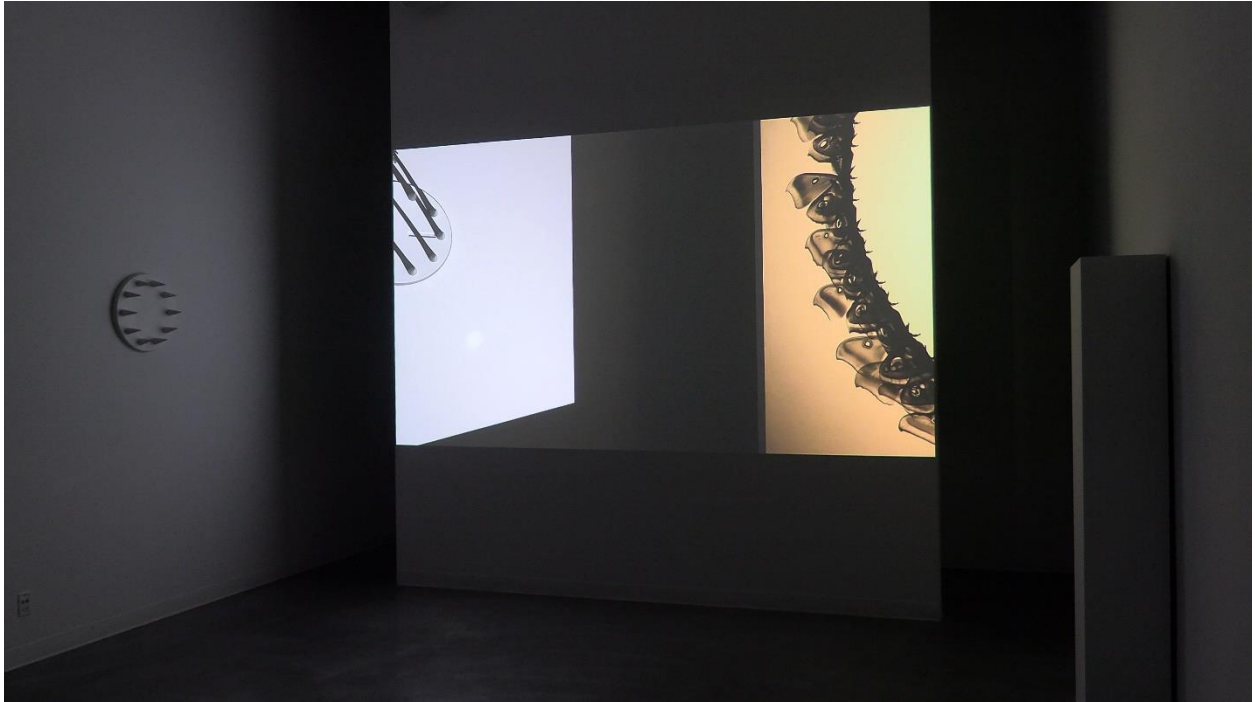
Image Courtesy: The Artist + PACE Gallery

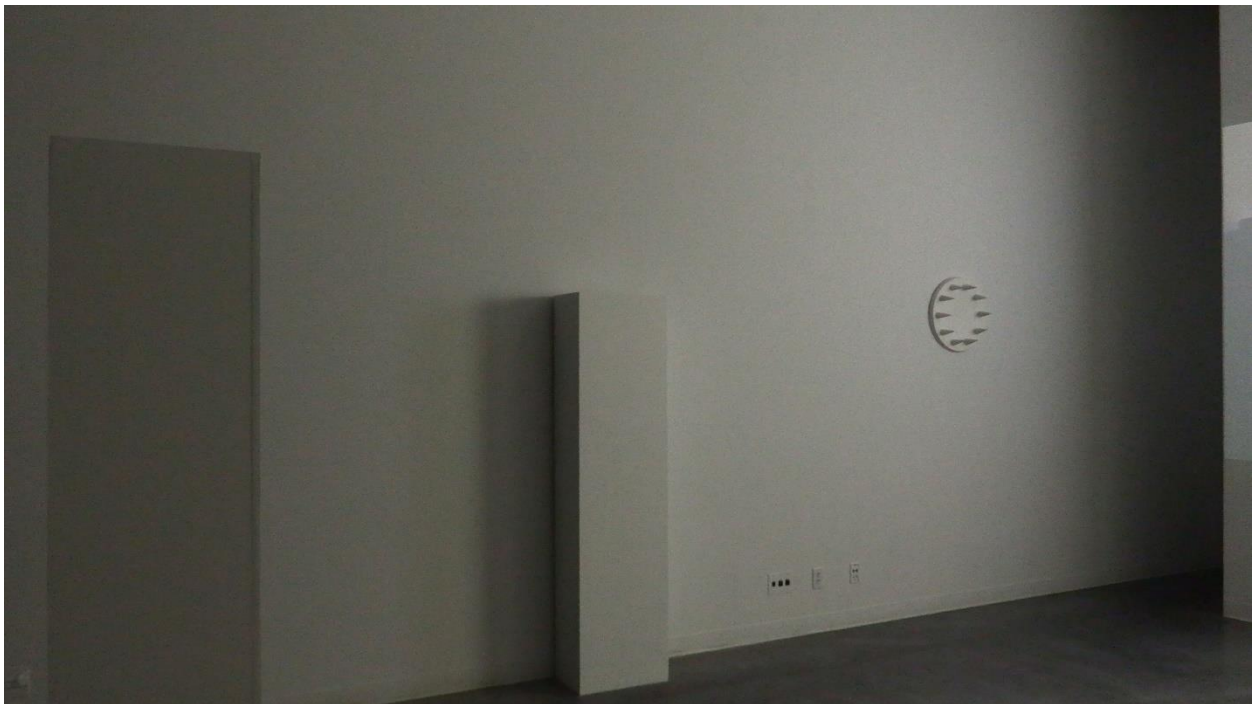
## Appendix A – *I Remember When*, Exhibit Installation and Extended Stills

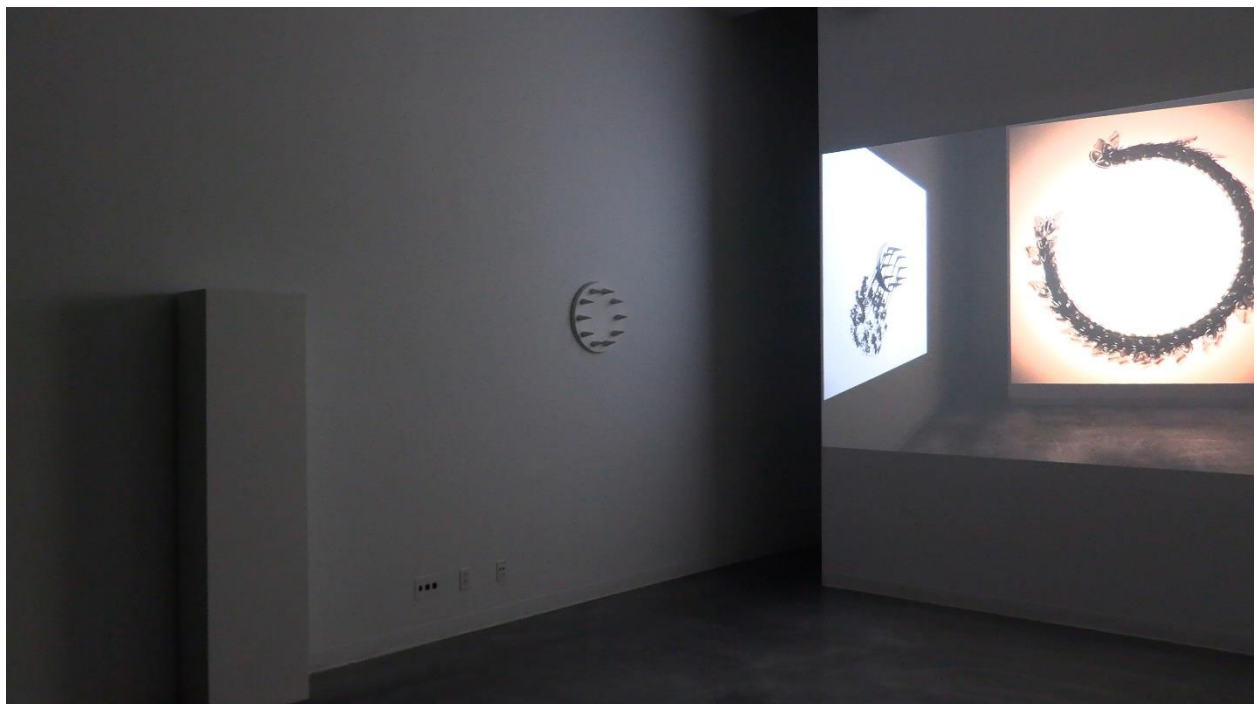
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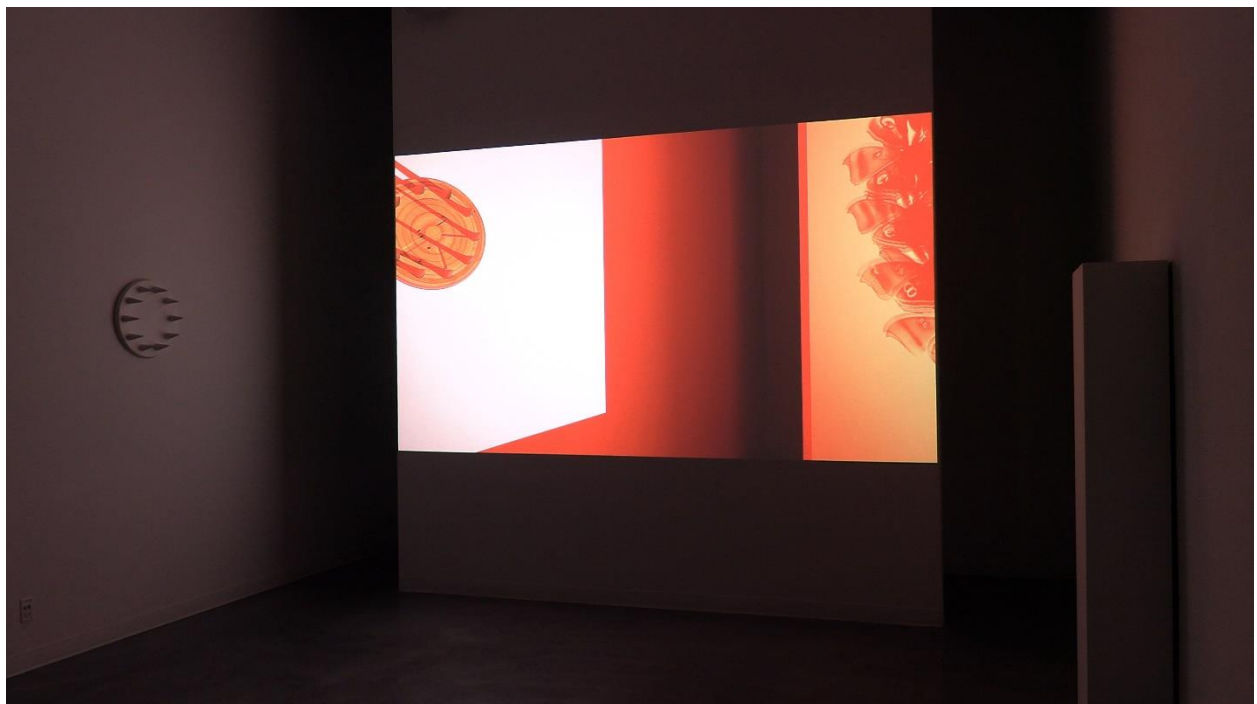
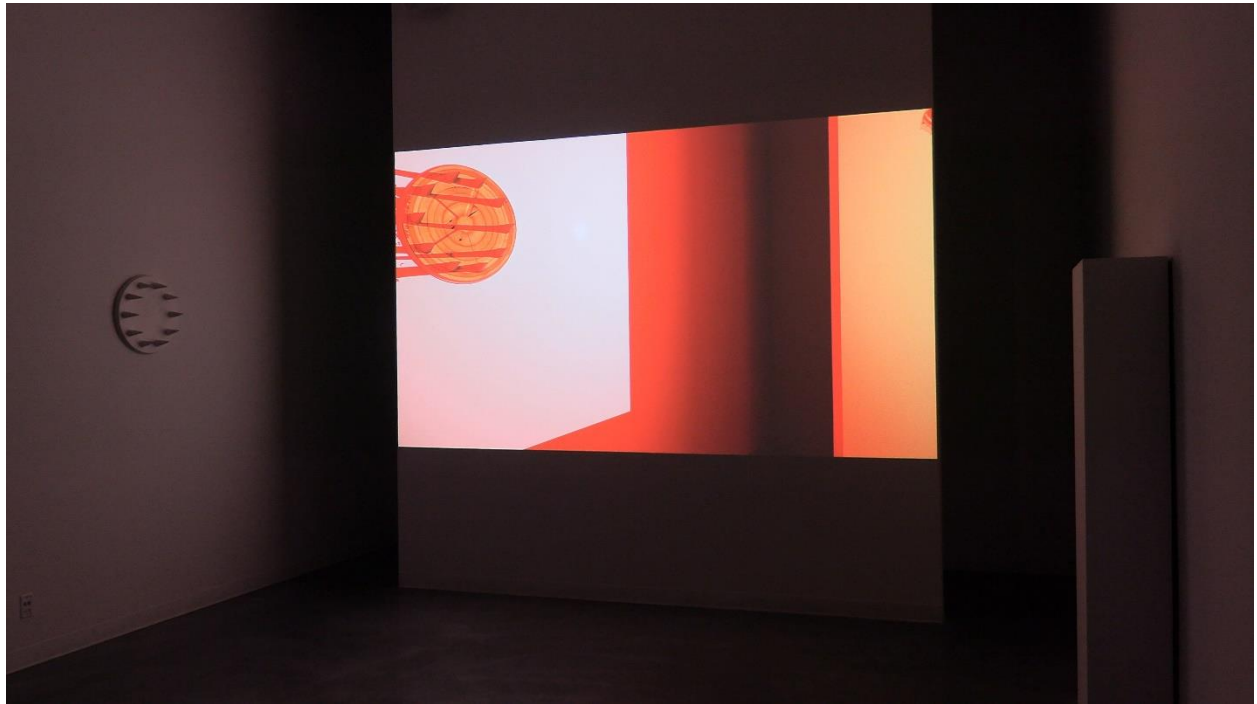




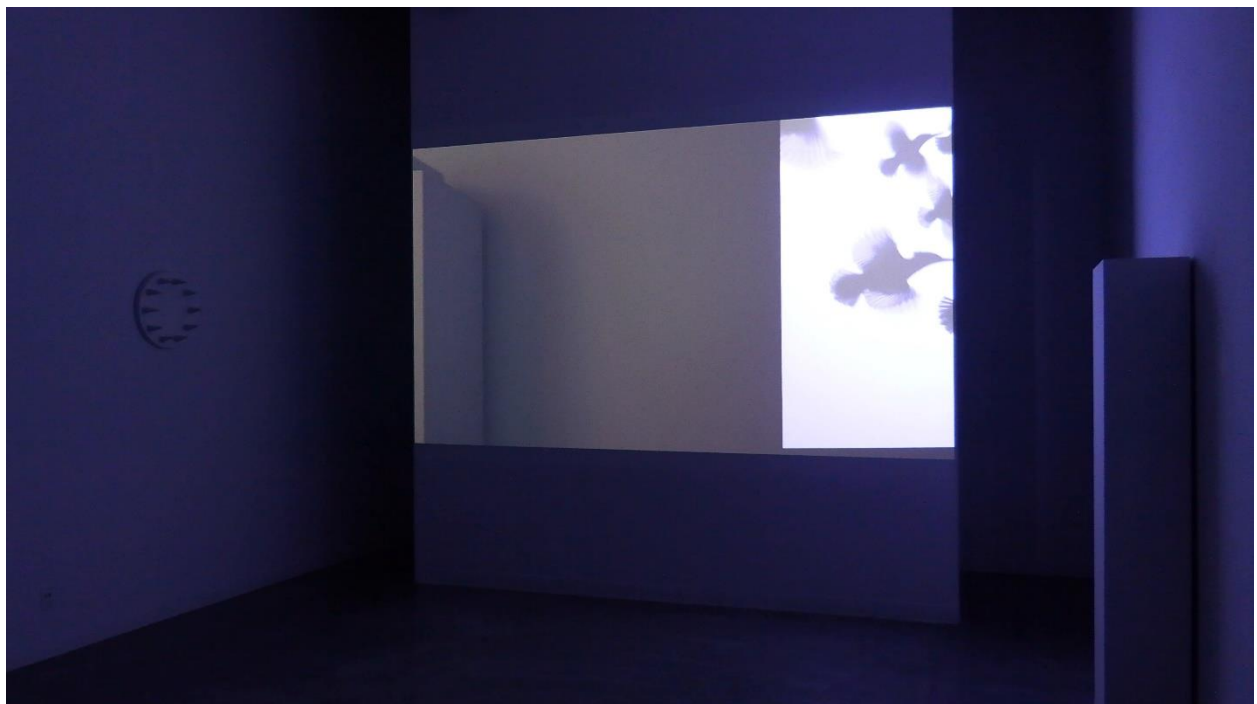
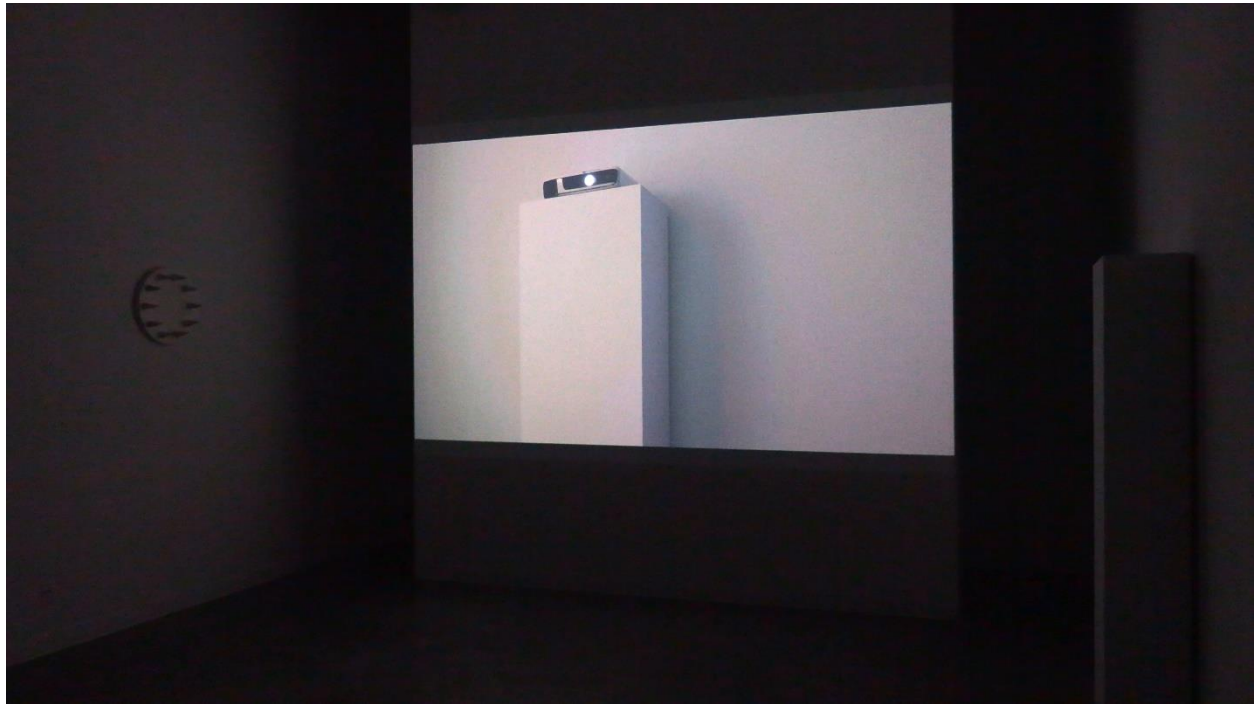


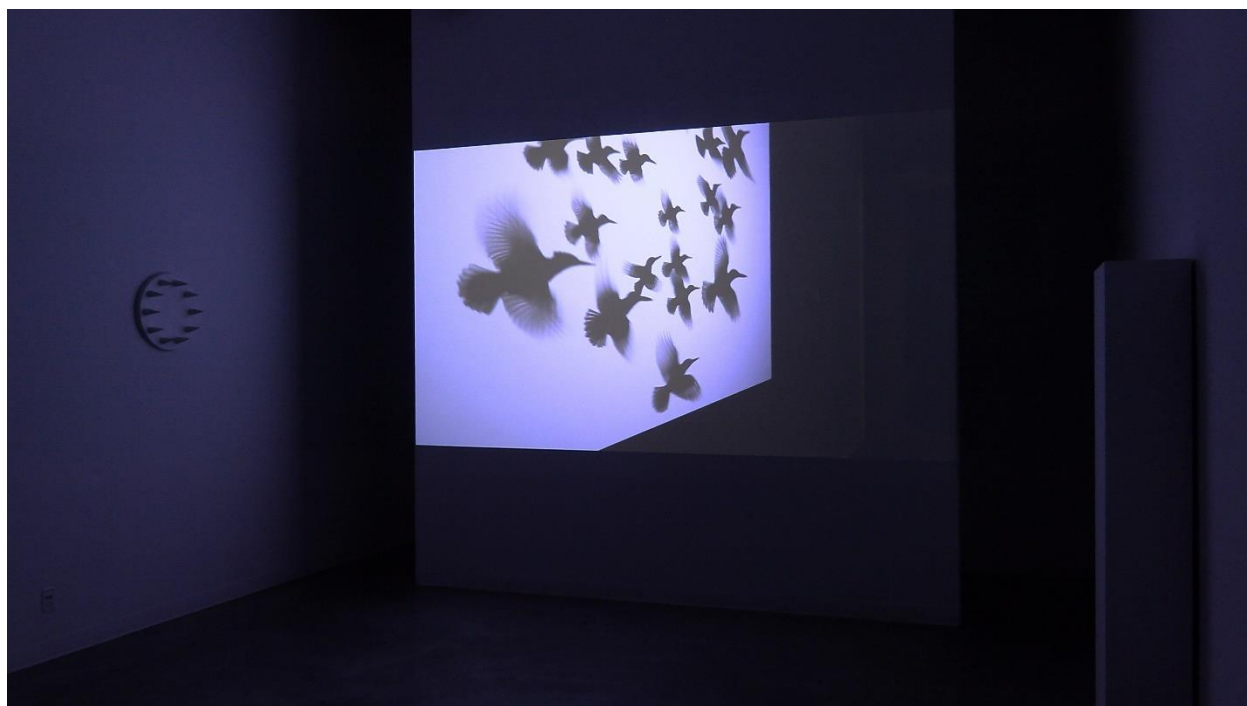
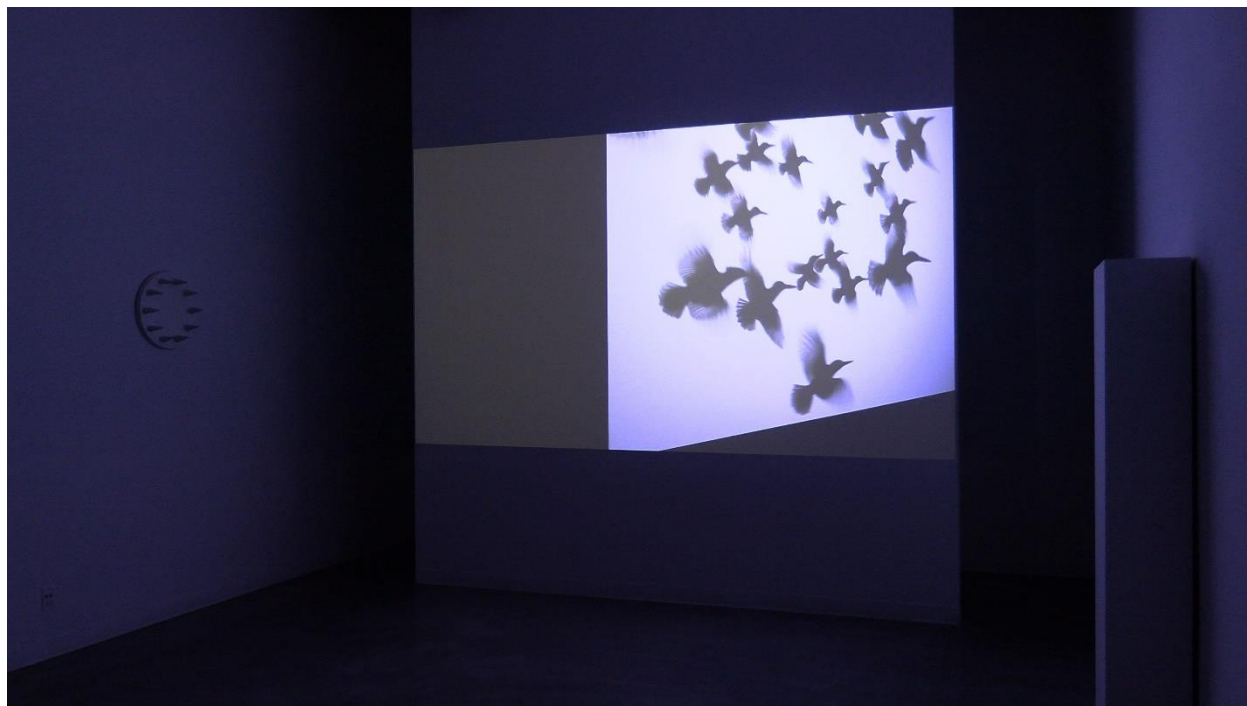


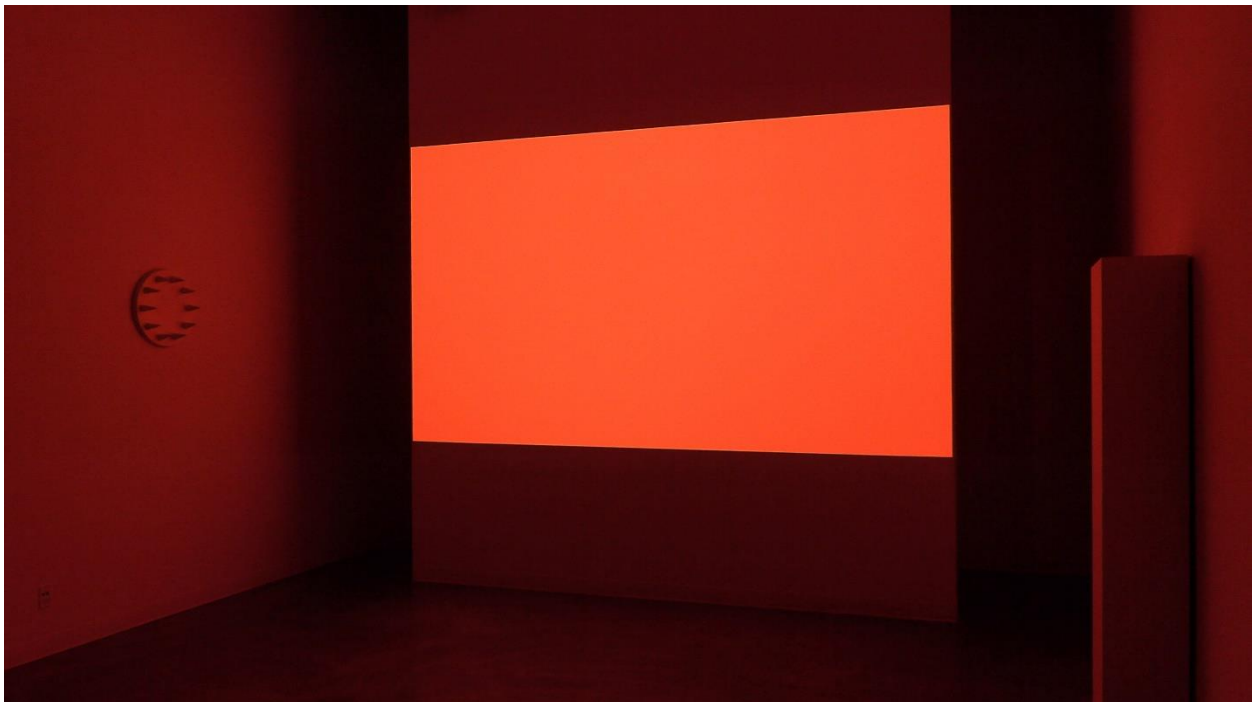
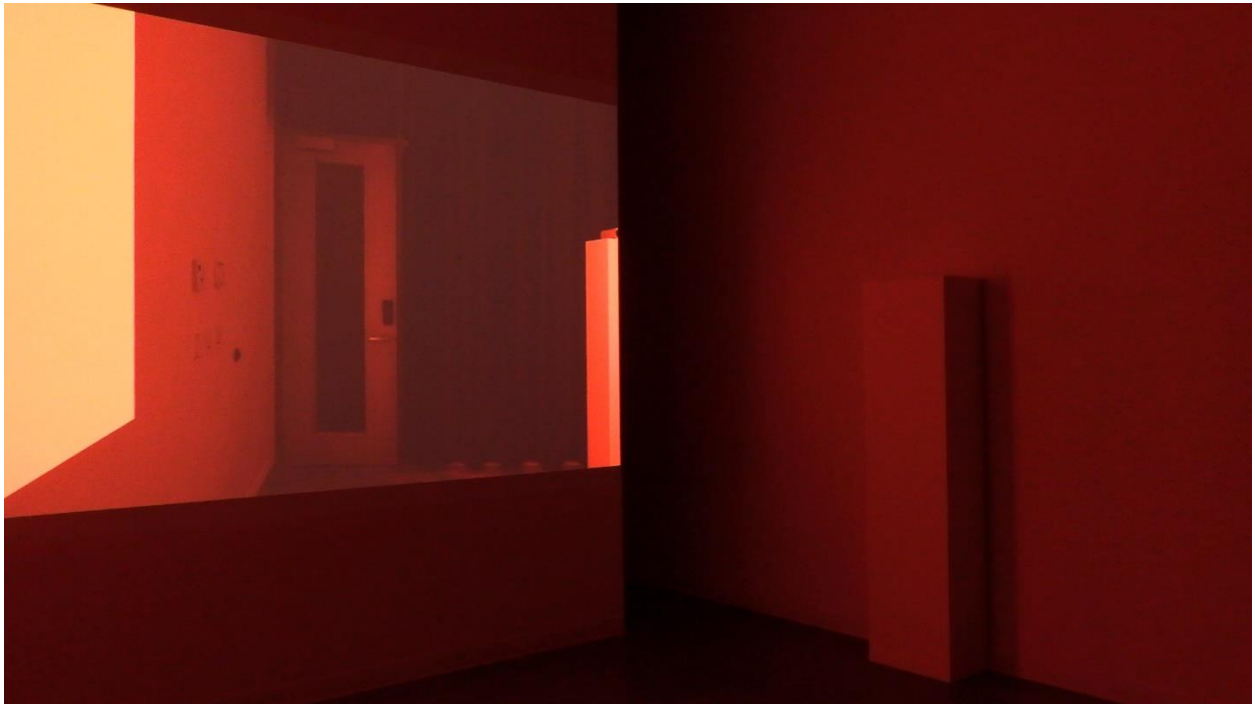


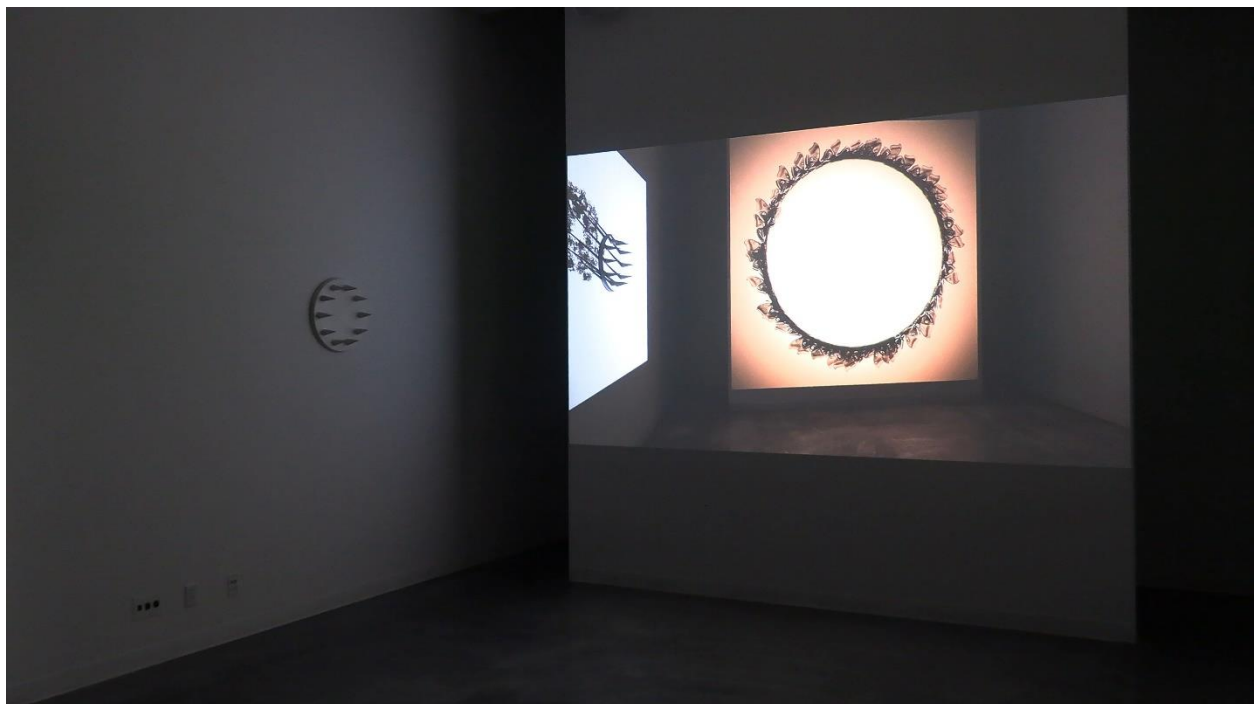
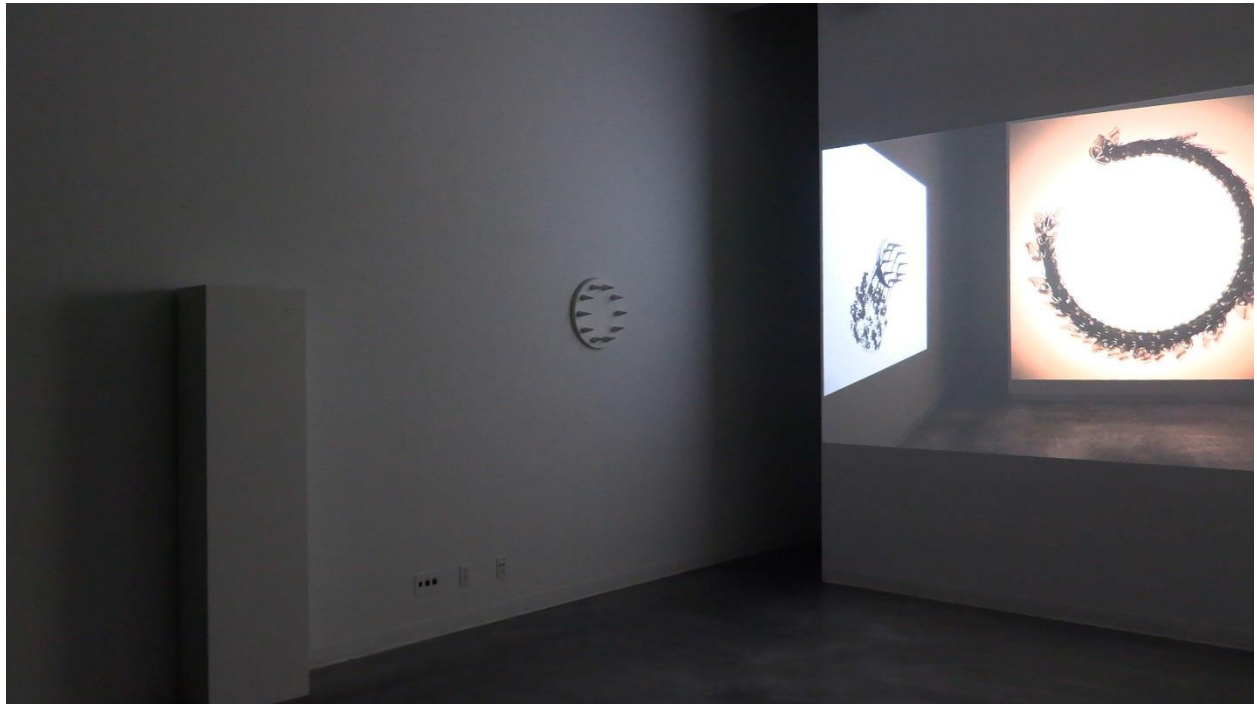




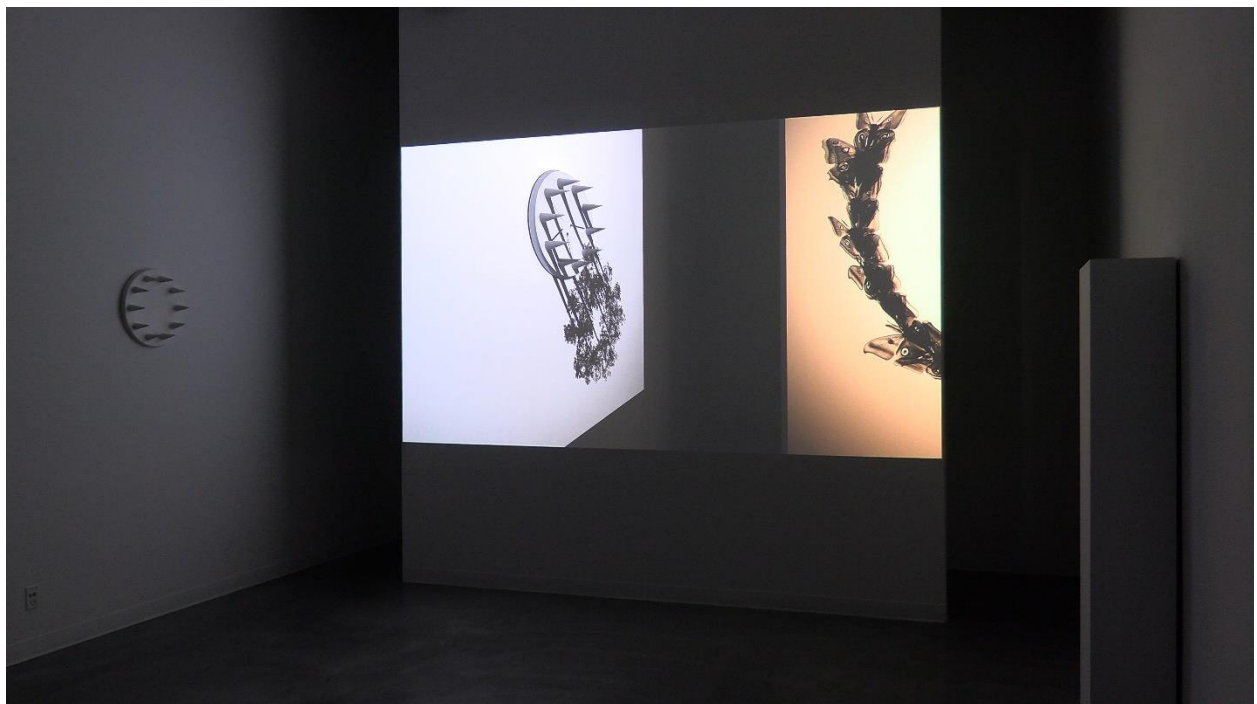
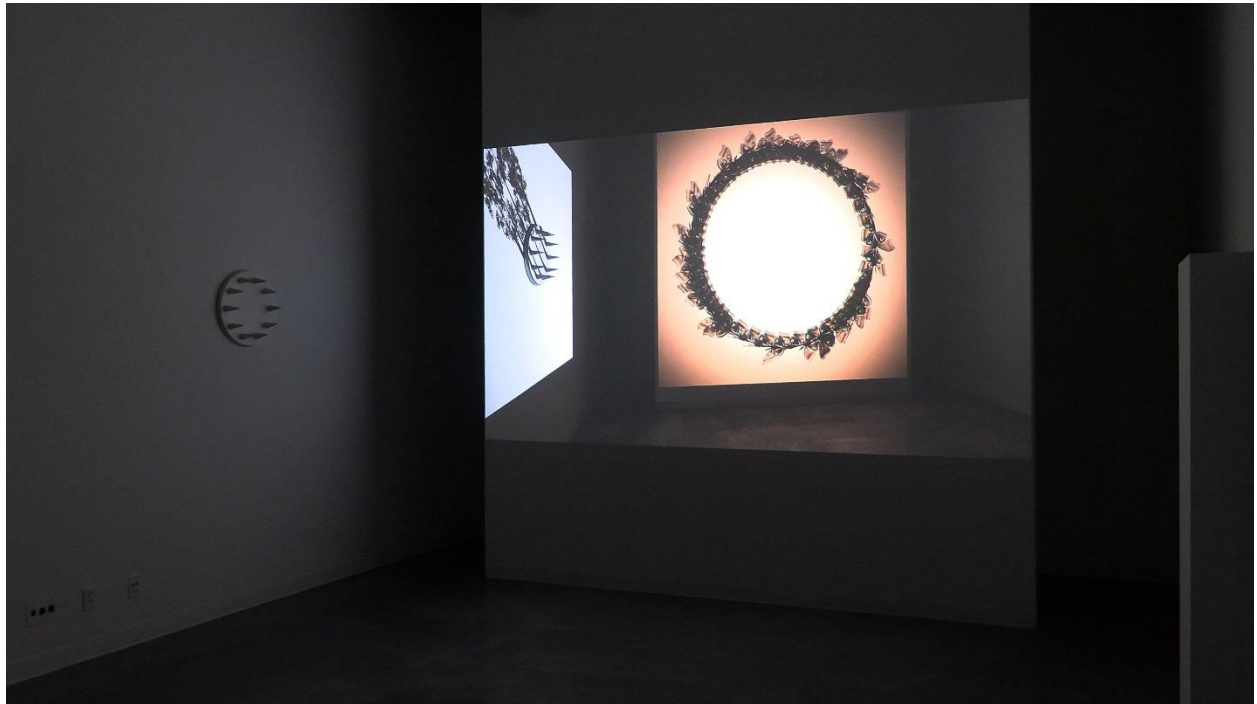


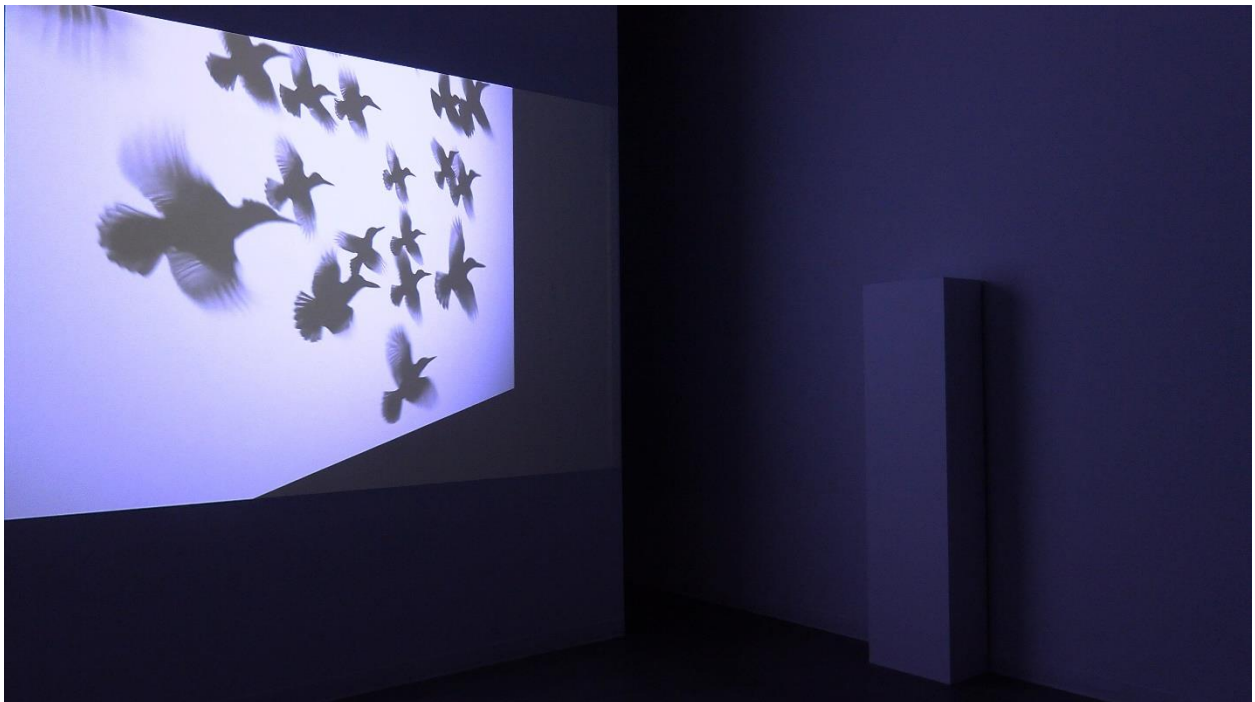
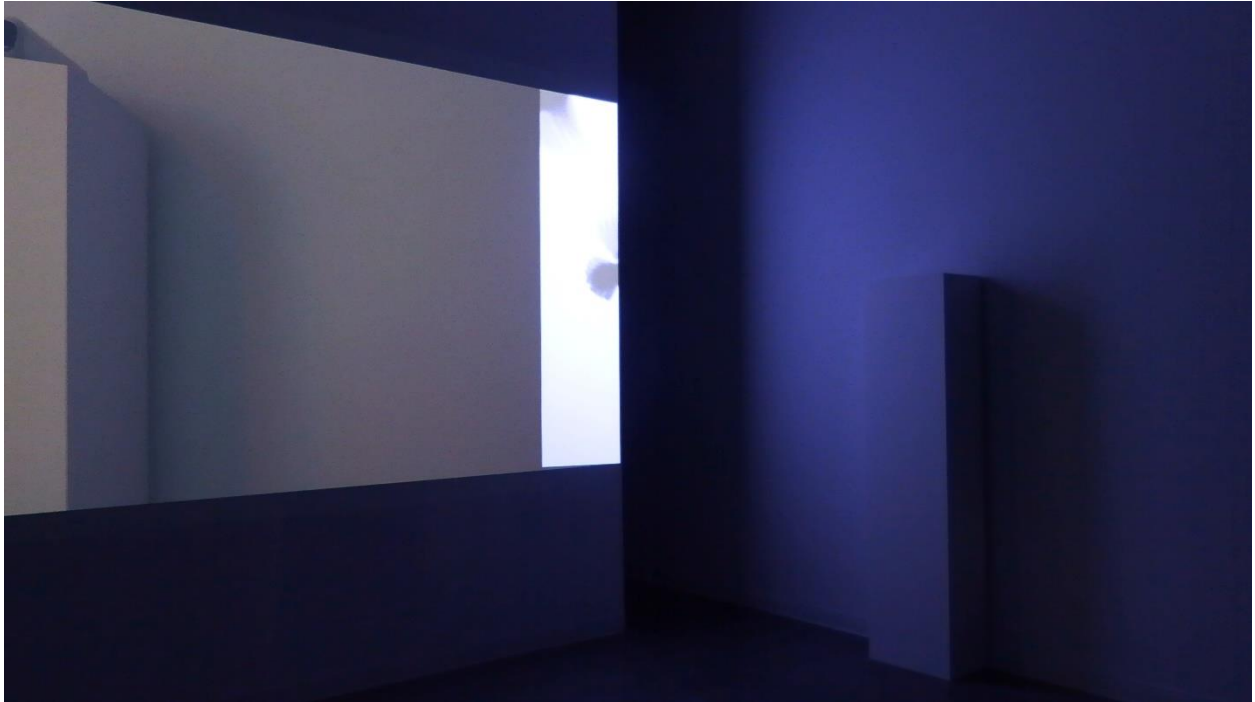


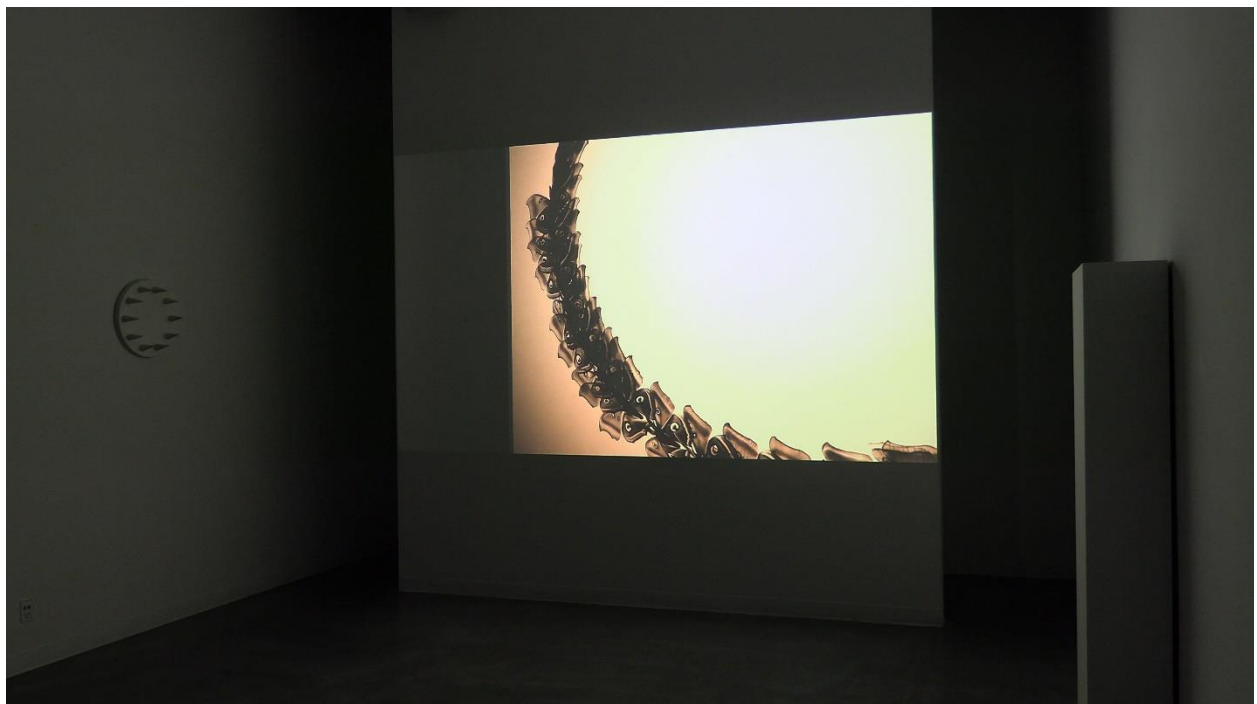
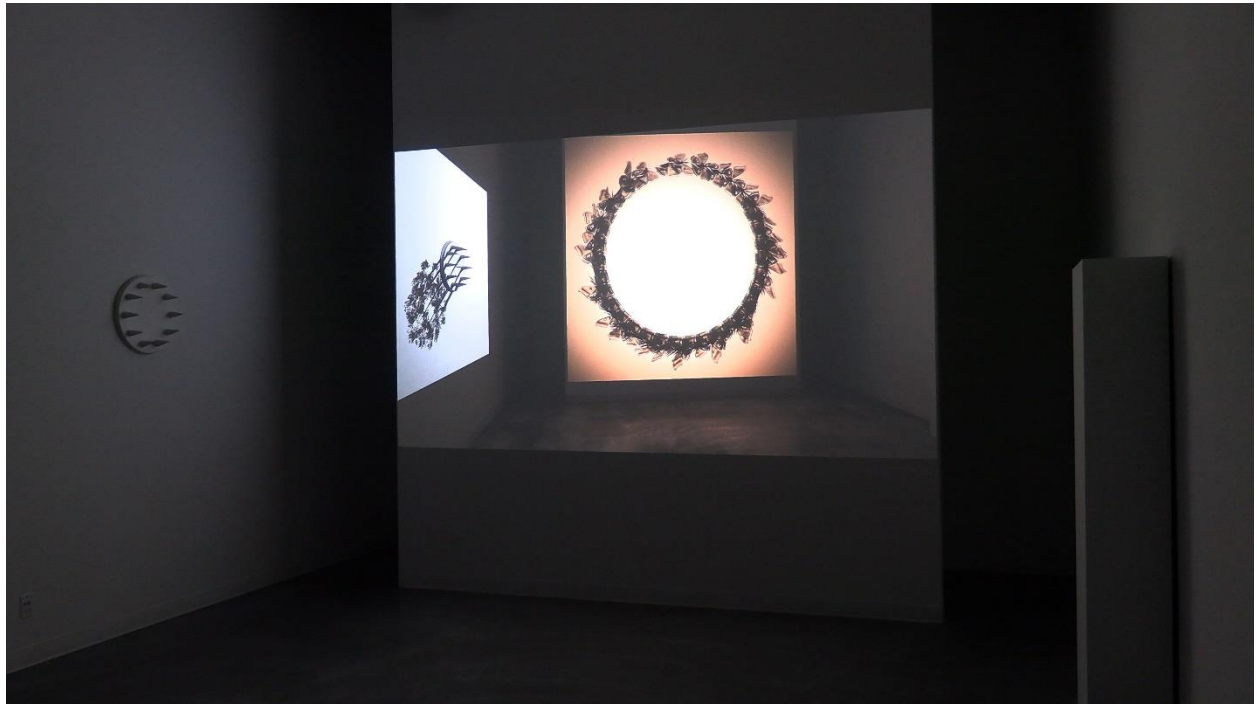












## Appendix B – Design Sketches

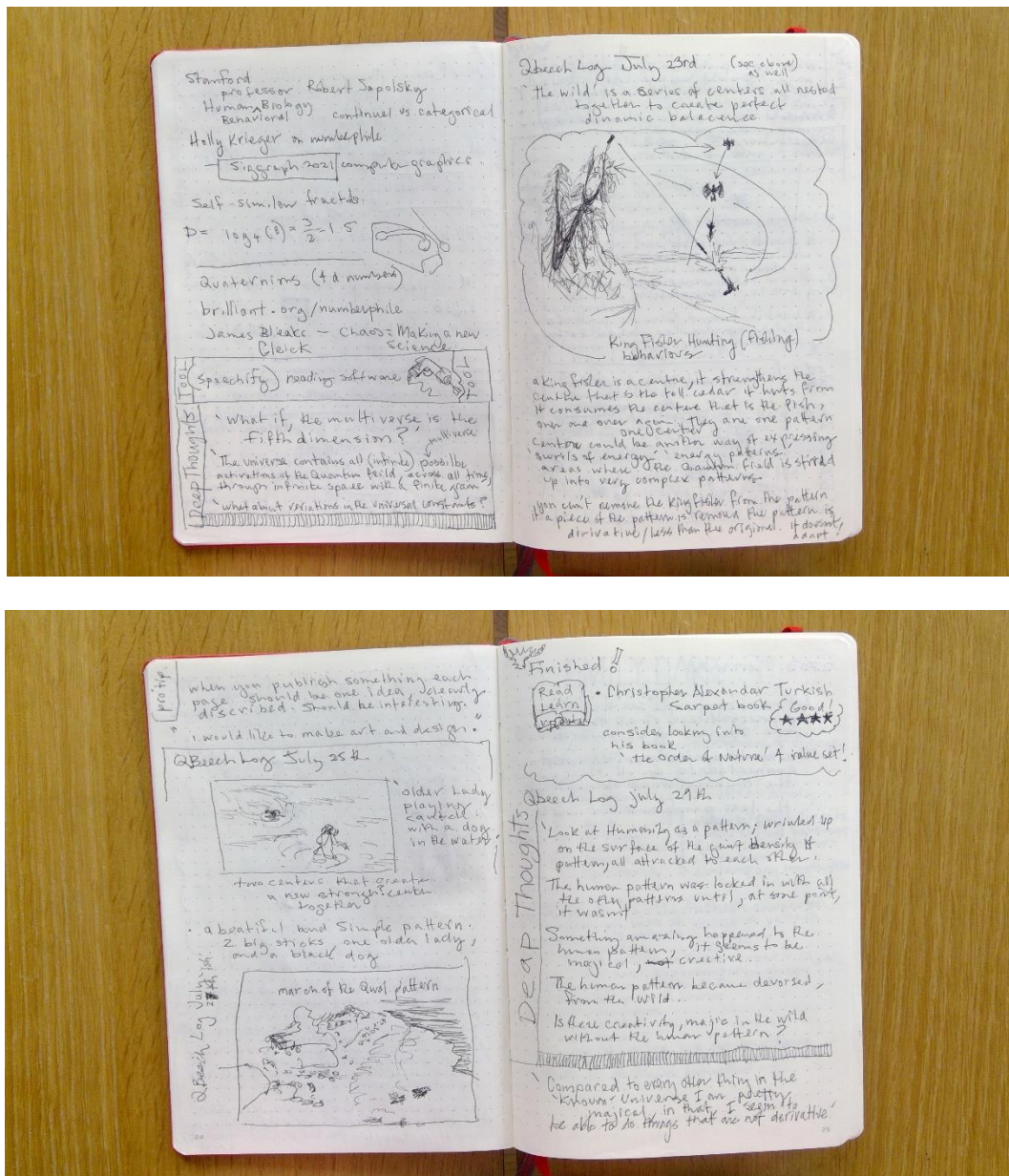
The following is documentation of selected sketches made during the development of this thesis.

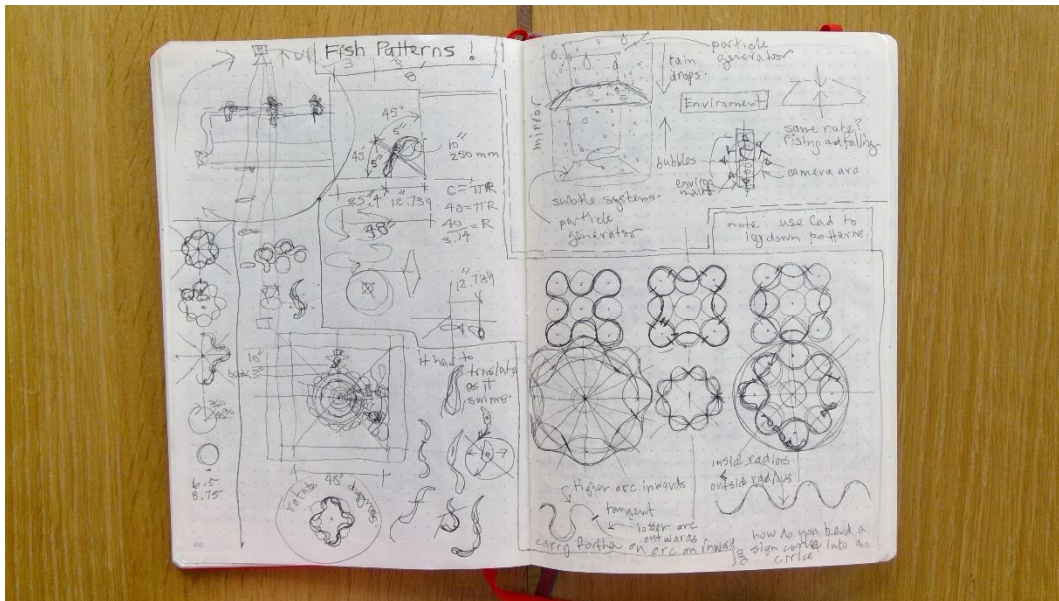
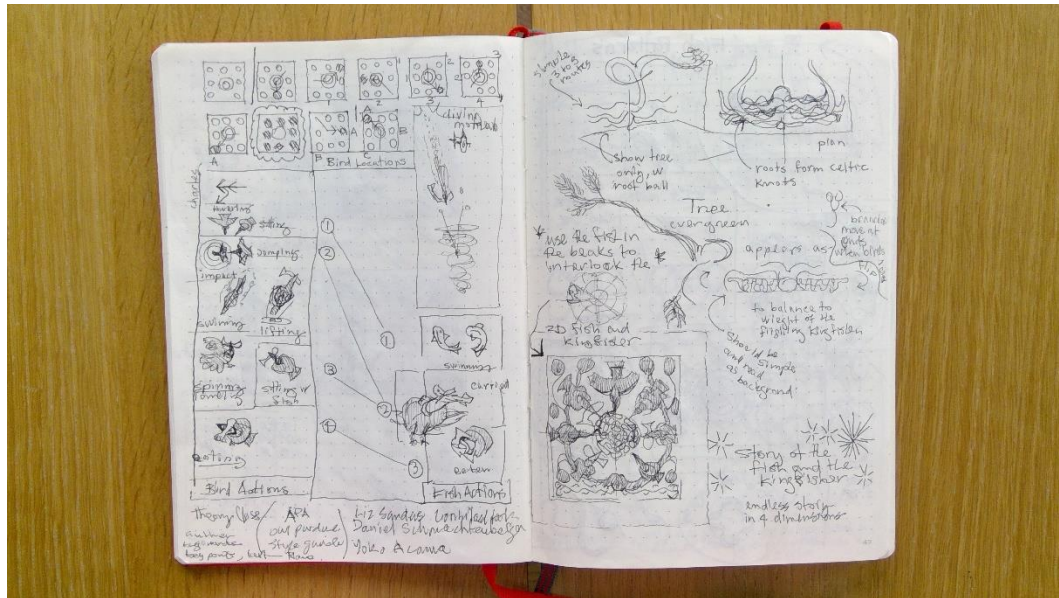
For ease of understanding, they are documented in the following order;

- a) I Remember when the Fish and Fisher weren't Separate.*
- b) I Remember when the Trees were Forests.*
- c) I Remember when the Moths weren't Trapped.*
- d) I Remember when the World was Thicker.*

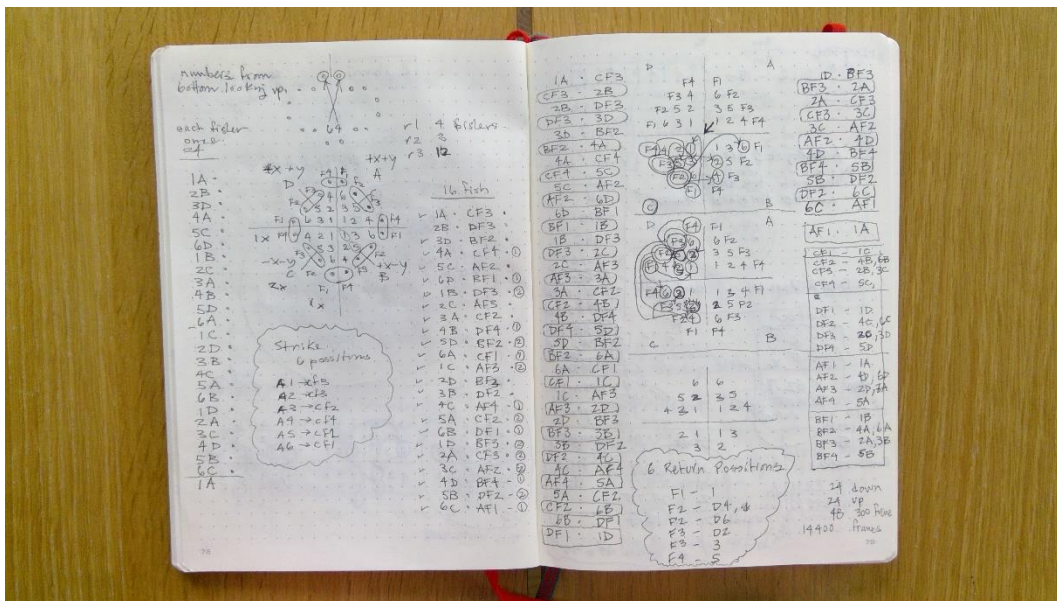
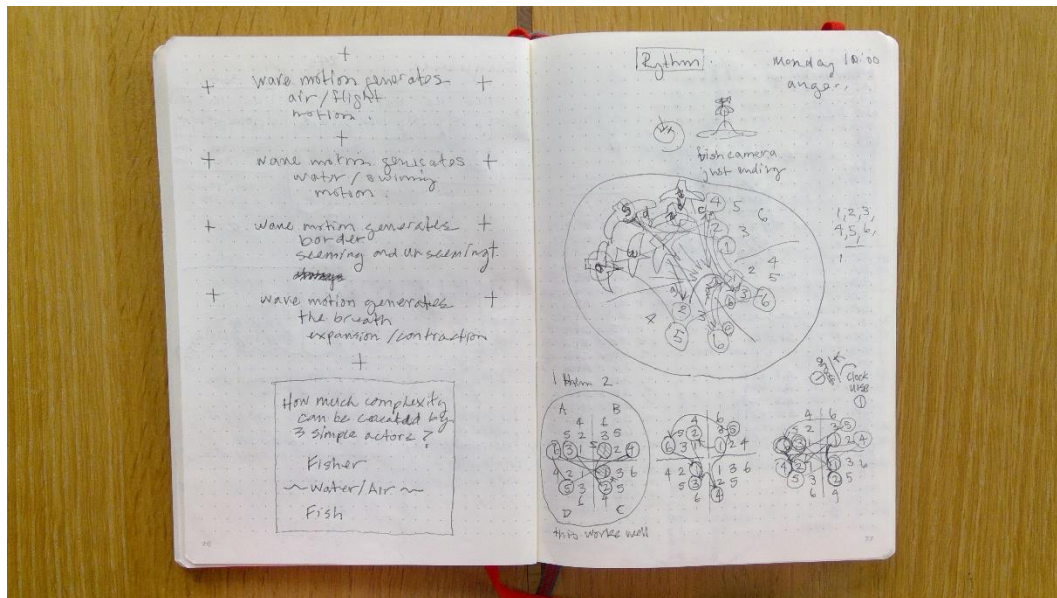


## a) I Remember when the Fisher and Fisher weren't Separate.

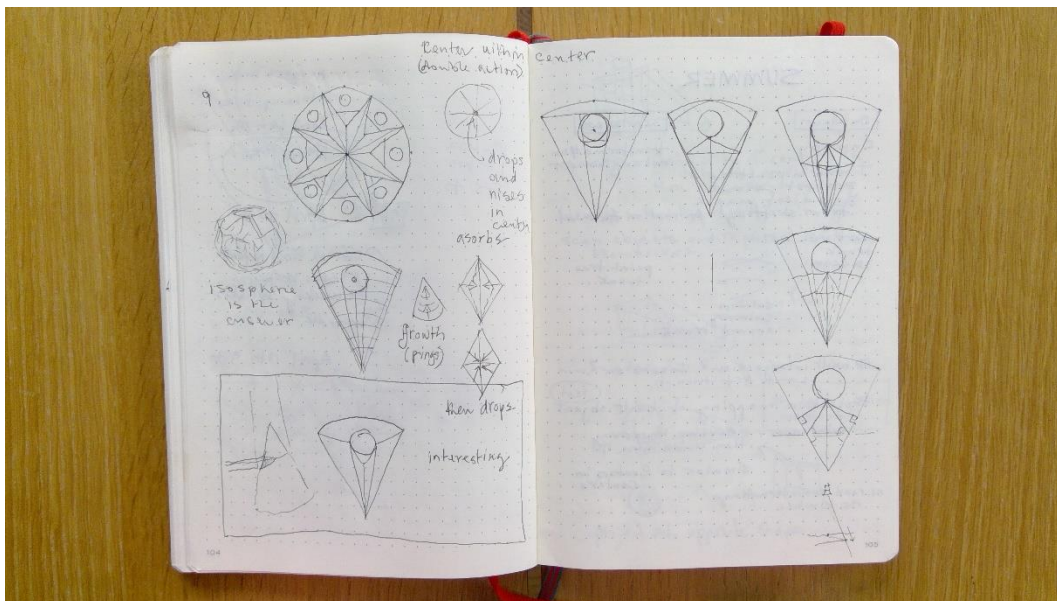
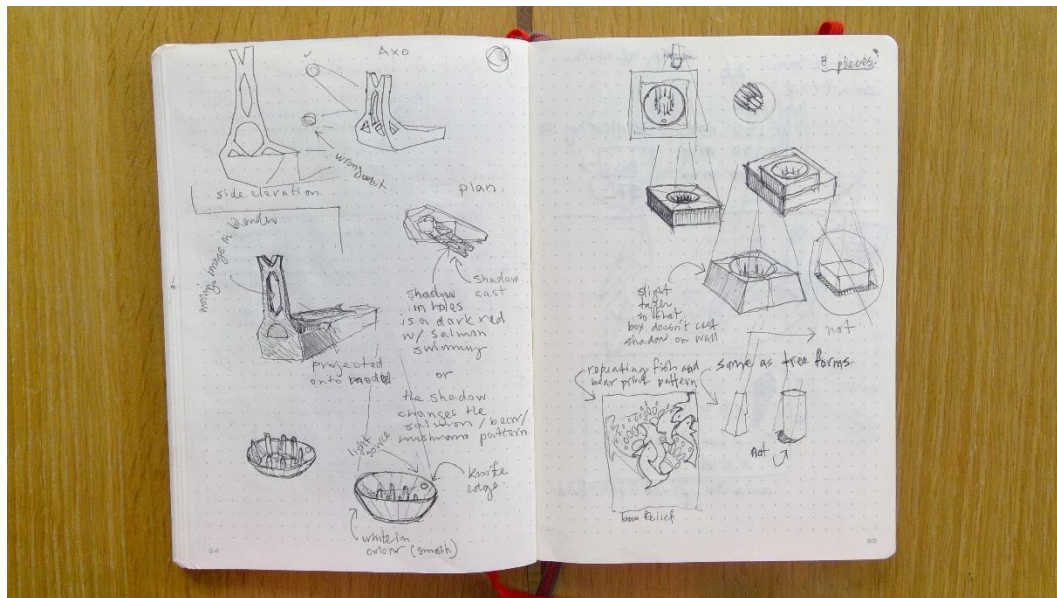




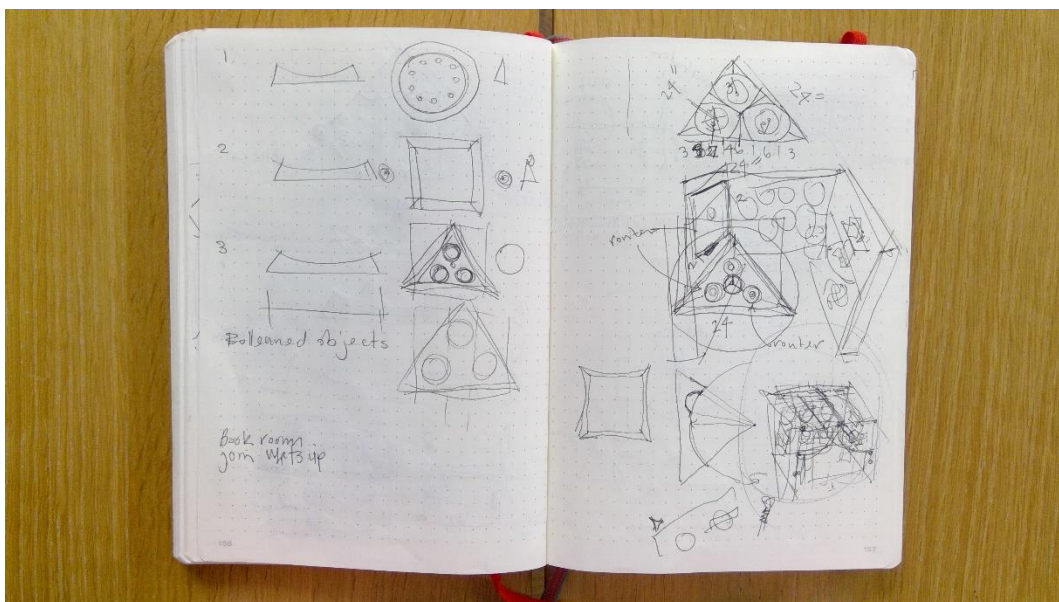
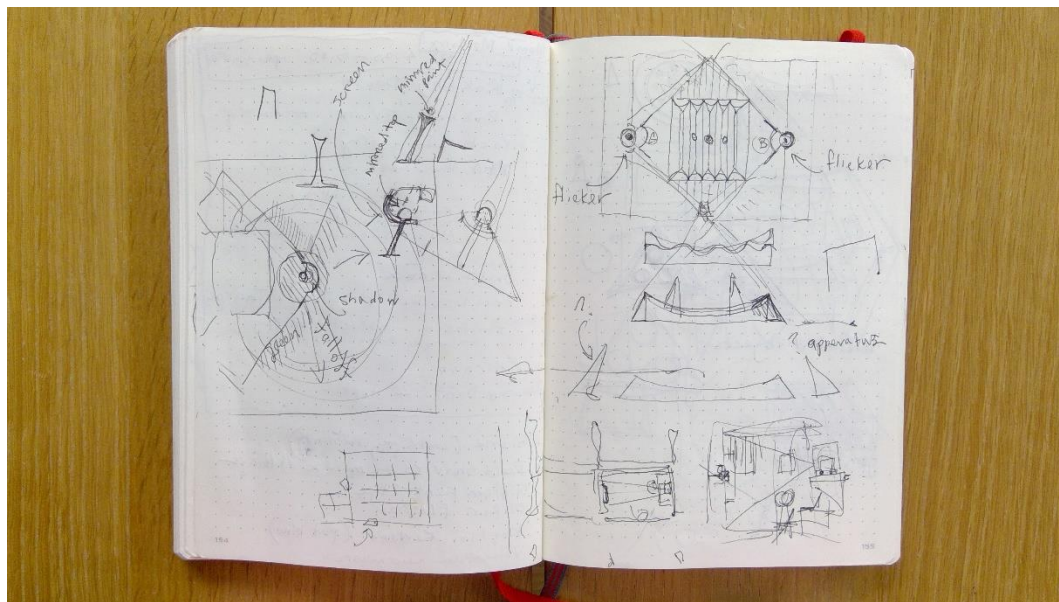


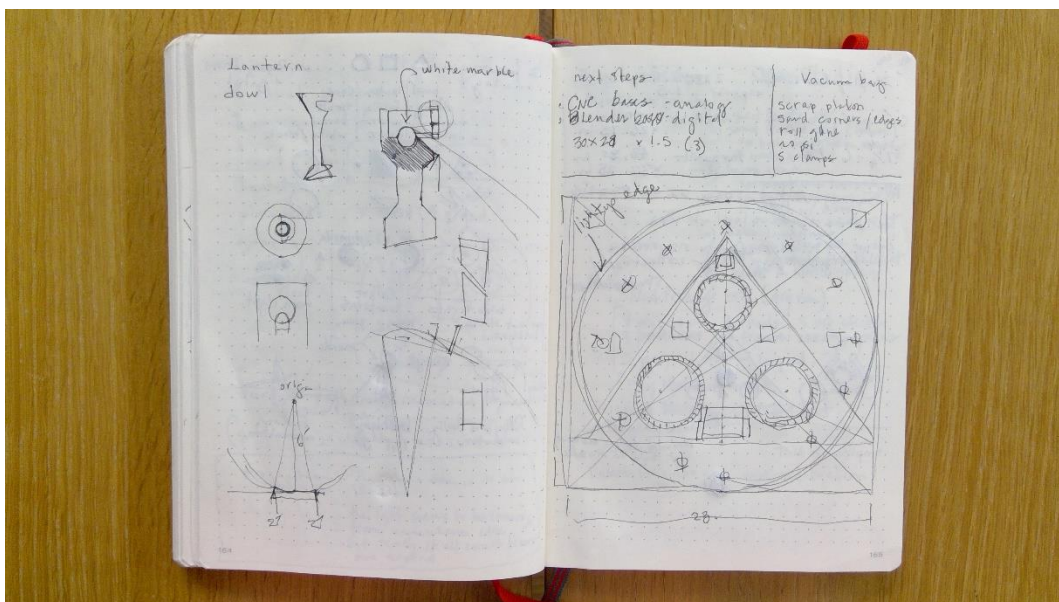
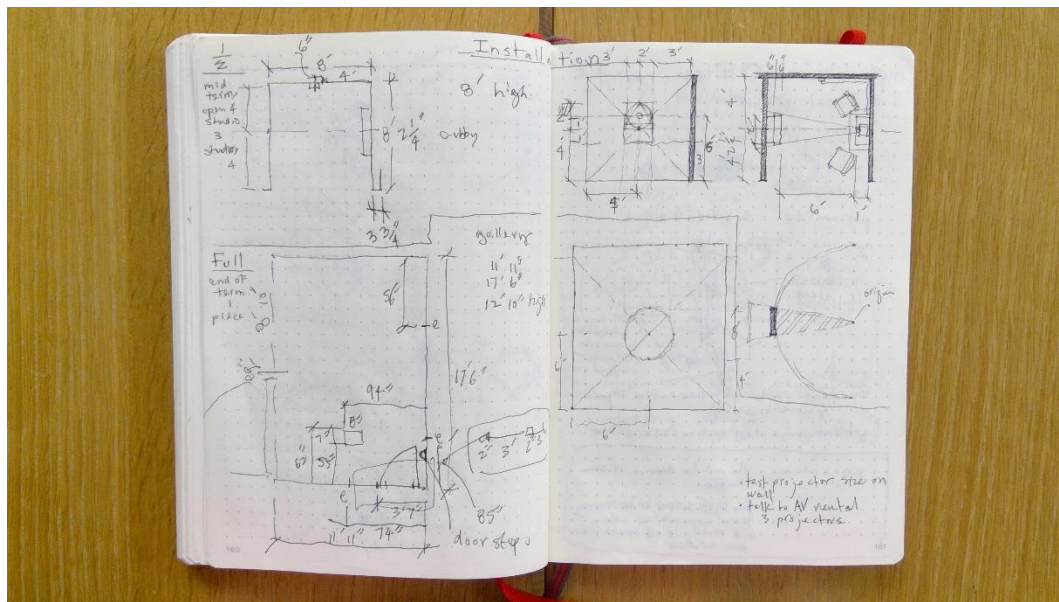


b) I Remember when the Trees were Forests



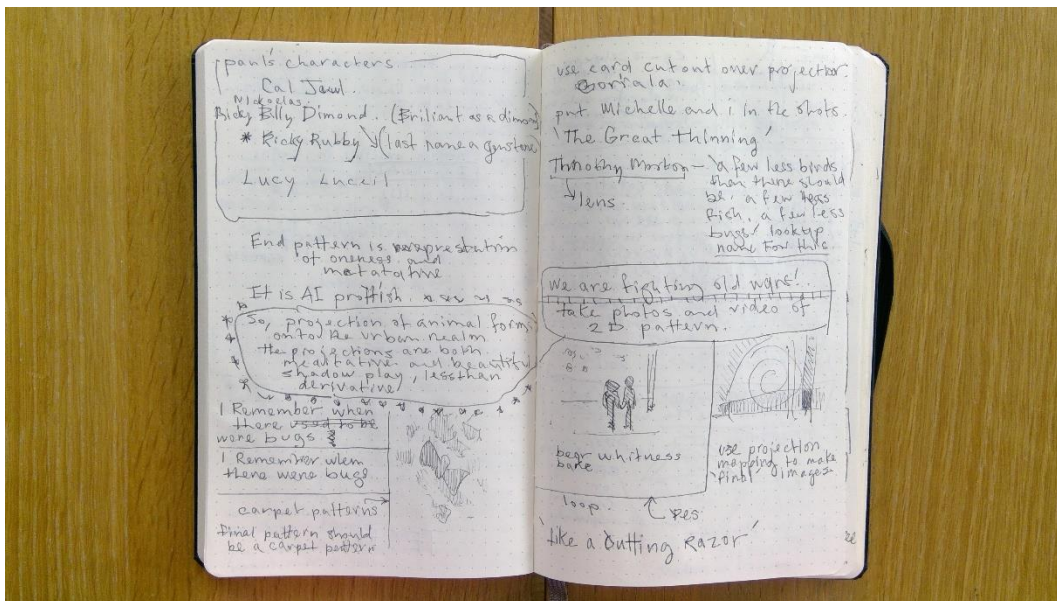
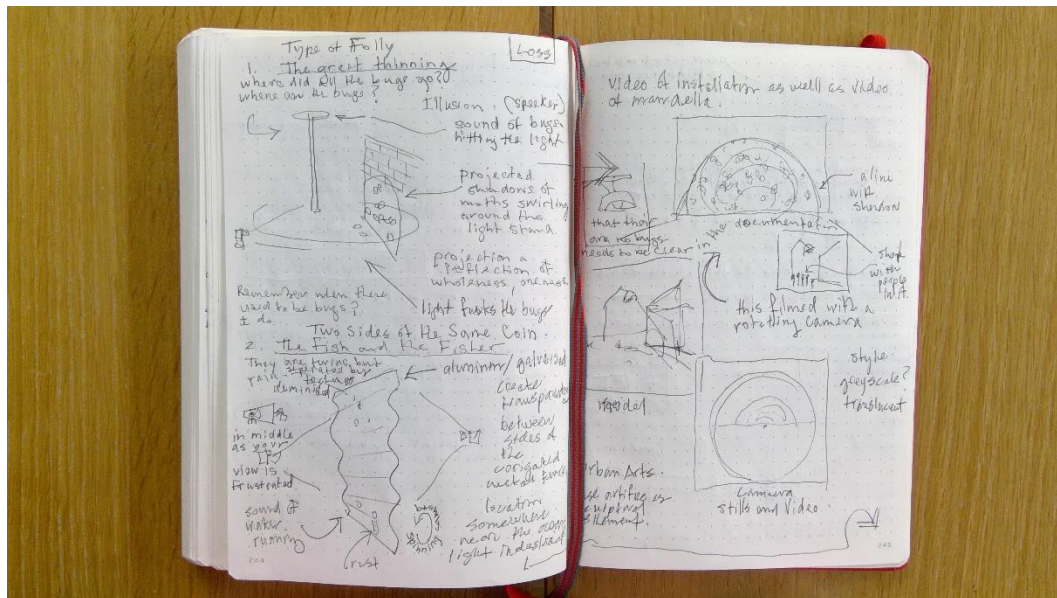


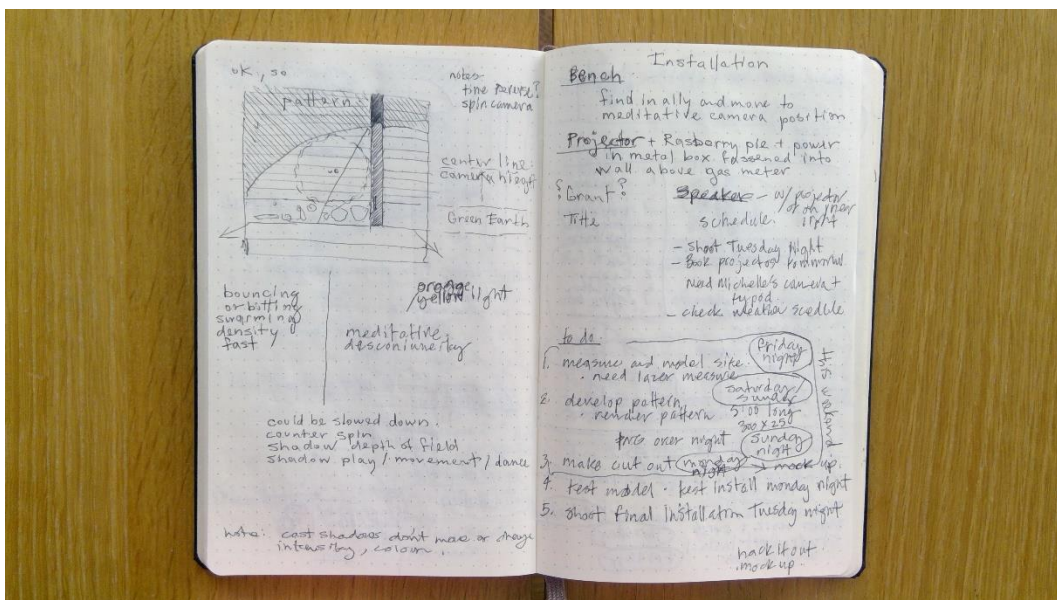
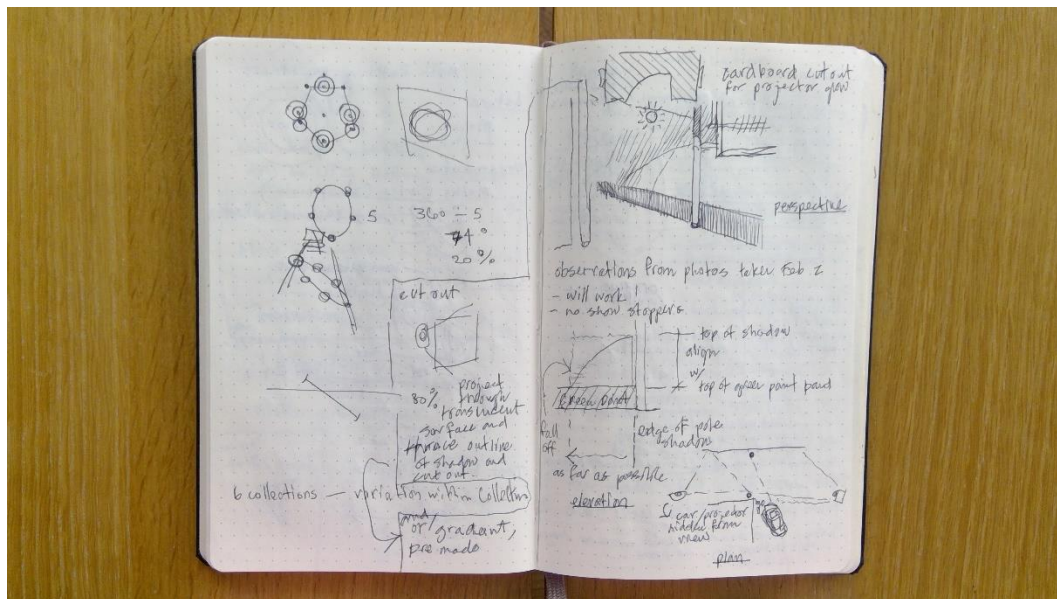




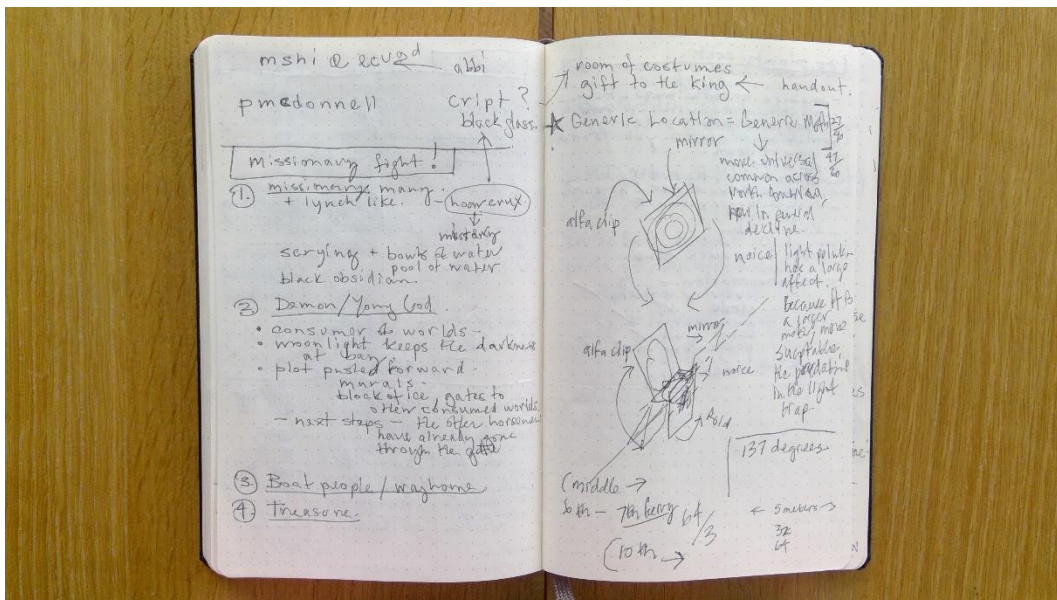
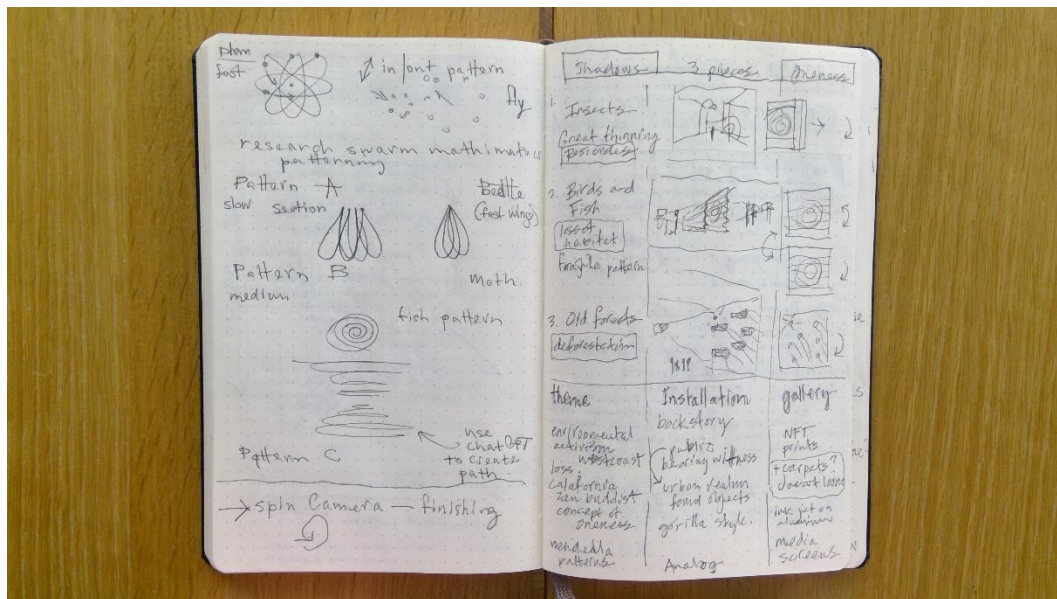


## c) I Remember when the Moths weren't Trapped.









## d) I Remember when the World was Thicker

