

Stories Of The Wind

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ABSTRACT

Stories of the Wind is an audiovisual performance exploring various media to tell a story, integrating media at the intersection of visual arts and music, leveraged by technology. Different materials and technologies coexist as pieces of an audiovisual performance, with images, sound objects and interactive works. The production of this work was informed by artistic-scholarship, which involved the combination of aesthetic education and aesthetic experience with research and analysis in the process of artistic and academic creation.

This project was meant to be exhibited in the Cube, at the Moss Arts Center, at Virginia Tech. Because of the Covid-19 pandemic, it was not possible to present the project in the space that it was created for, so a video adaptation was made to be submitted for the thesis defense. The video submitted as the thesis project pandemic adaptation can be seen through the following link: <https://www.youtube.com/watch?v=dH8ce9KO41w&t=50s>

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GENERAL AUDIENCE ABSTRACT

Stories of the Wind is an audiovisual performance telling a story using visual arts and music. It was created to be performed in the Cube, at the Moss Arts Center, at Virginia Tech.

Because of the Covid-19 pandemic, it was not possible to perform the project. A video adaptation was made instead, which can be seen through the following link:
<https://www.youtube.com/watch?v=dH8ce9KO41w&t=50s>

In a project of this sort, which entails a great deal of experimentation, research and access to spaces and equipment, much assistance must be sought. It is important to acknowledge a number of people who have freely given their time to assist me: The staff in ICAT (Institute for Creativity, Arts and Technology), namely George Hardebeck and Brandon Hale, and the Moss Arts Center staff. Professor Thomas Tucker. Professors Eric Standley, Charles Nichols, Tanner Upthegrove and Kevin Concannon, who were my thesis committee. Professors Ico Bukvic, Simone Paterson, Phat Nguyen, Zach Duer, Scotty Hardwig, Richard Phillips, Kyle Hutchins, Eric Lyon, Amanda Nelson, Ruth Waalkes, Michelle Farber. I also wanted to thank recent MFA graduate Daniel Monzel, BFA student Bridget Olsen, and PhD candidate Michael Rhoades. I would like to thank the poet Matt Dhillon. I would like to thank the performers: music student Rachel Hachem, the musician and sound therapist BreAnna Martin, the performers from the New Music Ensemble, namely Gabriela Marchetti, Caden Vandervort and Jennifer Webbert. I would like to thank my father, who is passionate about airplanes, stars, the sky and music. I would like to express gratitude for having met Anja Haelg Bieri, the most brilliant artist-scholar I have ever known. Her teachings continue to help me today.

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Introduction

This thesis project consists of an audiovisual performance in the Cube, in the Moss Arts Center, as well as a paper explanation of the creative process, the content of the performance and technical aspects of making it happen. Due to the Covid-19 pandemic it was necessary to make a version of the project to be presented through videos to be seen from home.

The audiovisual performance is a story composed of many small pieces that when put together, form one story. The pieces are audiovisual performances, created with different materials and technologies. The content of the story is about suffering, immigration, meditation, art as therapy, what the arts can do for you, epistemological intelligence, arts advocacy, and socially contextualizing aesthetic work. It drew inspiration from the work of Viktor Frankl, Joseph Campbell, Theodor Adorno, Gaston Bachelard, George Macdonald, Franz Kafka and Alan Watts.

In this thesis paper, I looked to write about my trajectory in aesthetic education. I believe that it involves the training of the senses as well as learning to interpret aesthetic symbols and perceptions; I bring sensory approaches to my research as well as visual analysis in order to socially contextualize aesthetic approaches and artistic works – a skill most needed in our digital information society. Artists need to know other artists' work. Because of that, previous works for the Cube are mentioned as references. Finally, creating aesthetic works in academia can also bring aesthetic education to a larger public (audience, other students, locals) who can learn about topics in a new aesthetic way, which adds a layer of interaction with people to my work.

Another part of this paper explains which technology, techniques or ideas were used to make each piece of aesthetic work, focusing on the creative process. This part details the process of artistic and academic creation, and it was also a way to find my own voice. I was given a lot of room for reflection by the readings from the authors mentioned above and by attending art exhibitions and performances. As I created pieces, I kept a logbook. Focusing on the creative process calls for a different evaluation: it is not only the final product that counts, but the entire process with its setbacks, new beginnings, and insights. The creative process enabled me to 'fail constructively', to learn from the work in progress. Throughout this process, I'd have an idea and then go find out how to make it be materialized. I have looked to use free

and open software that allowed me freedom to use data and manipulate my images in creative ways, but also requires understanding of code and of how computer processes work. It requires trouble-shooting, creative solutions to obstacles, and reaching out to people who might have knowledge about a specific problem. In addition, in order to create a story and have it be told in the Cube, using the space's sound and imagery potential, one needs to understand how the systems in the Cube work, as well as how to make it interact with the work created.

By the time the Covid-19 pandemic hit, a lot of work had already been put into planning and making work for the Cube, but then it would not be possible to show the work in the Cube nor access the space at all. So it was necessary to think of a way to make a project that people could see at home from their computers. If the project could have been performed in the Cube, in order to document the performance I would have recorded a video of the performance, which is a recording of images and sound. In this way, I chose to make a reversed documentation of the performance by making a video that shows a possible future of how the project *would be* in the Cube, with its images and sounds, as well as illustrations of the project happening in the space. If the project can be realized after the pandemic, this video will be a useful guide for performers and other people working to put it together. The adaptation choices for each section of the performance are detailed in the Documentation of the Creative Process. The adaptation video can be seen through the following link: <https://www.youtube.com/watch?v=dH8ce9KO41w&t=50s>

Finally, the technical and artistic content parts of the thesis are wrapped together by the reflection about how are the use of that technology -and that space- making the story be told in a meaningful way. The literature and other artistic work references helped to understand the society I live and work in. Understanding society in its historical, cultural, political dimensions, helps the academic and artistic practice that wants to actively participate in society by contributing strong works that reflect universal human dimensions in their very particularities.

Reflections about the use of technology and immersive storytelling

Many other ways of telling stories can be immersive, and many of those do not involve the use of expensive and extensive technology. A book can be immersive. A class with a professor

talking in front a blackboard can be immersive. In the Cube, we have access to technology with motion capture, stereoscopic 3D projections, 360 cameras and so much more. The space is known for its possibilities of supportive immersive storytelling, immersive sound, immersive art installations and immersive research projects. However, it is important to question why is all the technology necessary, what is it adding to the work and if it helps the content of the work

Artwork and performances in the Cube allow for the creation of spaces with sensual environments that may surround the audience with an aesthetic experience by means of light, sound and images. The space seems to provide for a fusion of installation art with the conventional characteristics of a theater, like a stage and seating space, except that the space is a lot more flexible and fluid. It is so flexible that it depends on the artists to organize the space and to delimitate or locate the spaces for visuals, sounds, performance, audience, crew and any other area required to make the art show happen.

This thesis project focuses on showing storytelling work in multimedia to reflect learnings from the time in the program of Creative Technologies. The Cube is a space that allows for a flexible coexistence of multiple media and artworks, along with allowing people to be in the space experiencing the art in the space through images, sound and live performances. The fact that the Cube is a blackbox theater makes it easier to call attention to certain areas by the use of light. The Cyclorama can stand alone as a light source, for example, calling attention to the images in it. The sound in the Cube is distributed along 140 speakers all around the room, creating the possibility for an imaginary sphere of sound, which helps to immerse the audience in the experience of that the art show is adding to the space.

Each of the seven movements that compose this story use different media to tell that piece of story. These choices are discussed in the part called *Documentation of the Creative Process* in this thesis paper. The use of different media led to different needs of equipment, performers and spatial layout in every part of the project according to each piece. The thesis project in general was conceptualized in spheres and areas of focus, using the possibilities of transition of focus between these spheres as resources for creative expression and practical organization of the entire art show.

During the creative process there were concerns about whether the various media and the division of the story into pieces would amount to a cohesive presentation. To address this concern and other aesthetic choices, the reference of *spherology* from the book *Foams*, by Peter Sloterdijk

was very helpful. The section *Aesthetics* in this thesis paper explains more about the book and how learnings from that book relate to this work.

This concept of spheres helps to organize the show in time and in space, as shown in Figure 1 below. The largest purple sphere represents the spatialized sound around the Cube. There is a purple sphere around the cyclorama, accounting for the circular projection as a light and image source. Another sphere encompasses the sitting space and possibilities for the audience to move around during the performance. A smaller sphere in the center represents the performance space used for some parts of the story. There is a sphere around the round rug used in the last part of the story, and a sphere for the projected images at the curtains of the Cube.

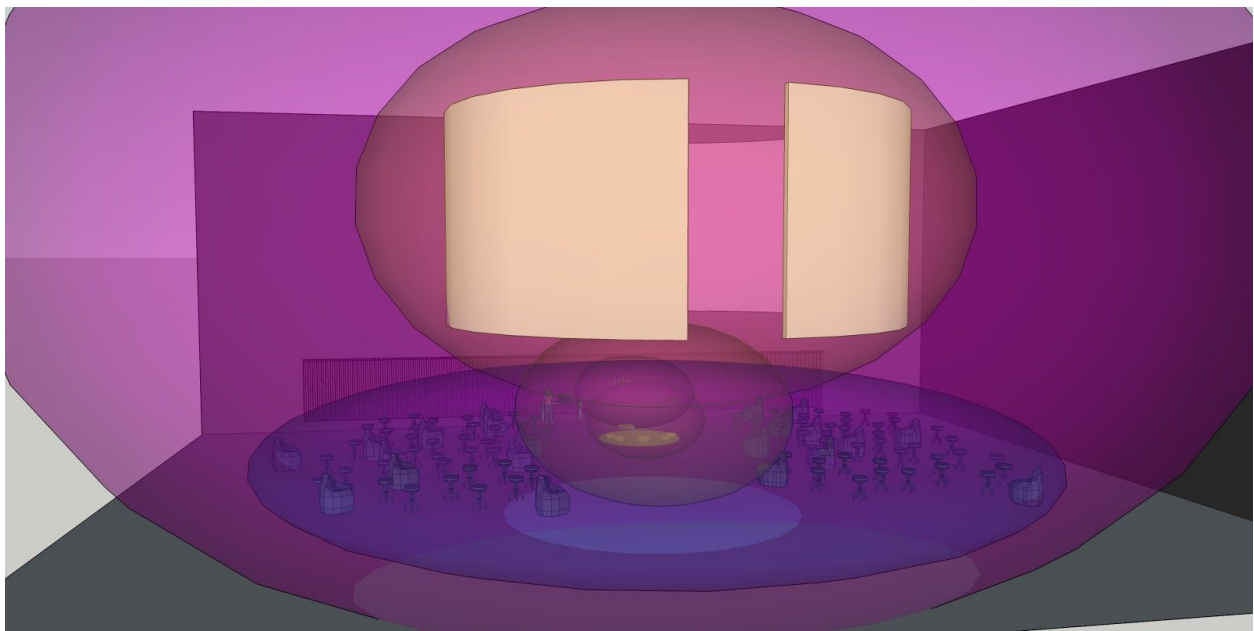


Figure 1: Audio Visual space rendition of the Cube in the Moss Arts Center, Virginia Tech.

Adaptations to different spaces, backups and limitations

The project has multiple layers of execution to adapt to different circumstances while still keeping the idea of light and images moving and responding to sound. Adaptations are necessary to be able to present the project in multiple spaces or circumstances. Backups were created in case the interactive technology fails, to ensure the success in presenting a certain part of the story to convey its message.

Adaptation to watch the story in a computer, away from the Cube

The restrictions of the current Covid-19 pandemic prevent people from leaving their houses and gathering in public. Because of that it was necessary to make an adaptation of the project by preparing videos for the thesis committee members and anyone else interested to see this project from computers at home. The ambisonics mix for 140 speakers in the Cube that was made before the pandemic doesn't sound well in a computer. The whole audio mix becomes confusing to listen to. Therefore experiments with mixes in stereo and binaural encoding were made as options for seeing the story in a computer. Other adaptation strategies were the following: making perspective view illustrations of how the layout would look like in the Cube, making illustrations of performers playing instruments in the space, recording my voice introducing the work with explanations about the space, having written descriptions on the screen of what is going on in transitions between pieces.

The project is adapted to a different space, that of the computer screen with two speakers, which has advantages and disadvantages for the project composition. However, regardless of this limitation, if the performance could happen in the Cube, the documentation would be through a video recording the performance and the space, to be seen from a computer screen, which is already different from experiencing the work live.

Being able to see problems of showing this story in different spaces and come up with solutions is a good ability to develop. Even in times when a major virus pandemic is not a concern, it is important to be able to adapt a project to present it in different spaces and under various circumstances. It makes it possible to reach a larger audience and also reflect on different outcomes from different aesthetic choices to adapt to different media and spaces. It is key for a creative technologist who aims to work with multimedia to be able to be flexible and still find aesthetic solutions that benefit the story.

The Setup in the Cube

The setup of the space for the project was planned to take into account performance spaces, seating space for the audience, equipment space and projection spaces. A model of the intended setup was made in the 3D modeling software SketchUp, to illustrate the layout of the

space including area necessary for equipment. The pictures Figure 2 and Figure 3 show an overview of the space in the Cube, with the cyclorama elevated, seating distributed in the space, a central area left free for performance, equipment necessary for projections and other parts of the performance, and the curtains of the Cube represented behind the computer table. A human figure by the computer table was put in the model to help convey a sense of scale.

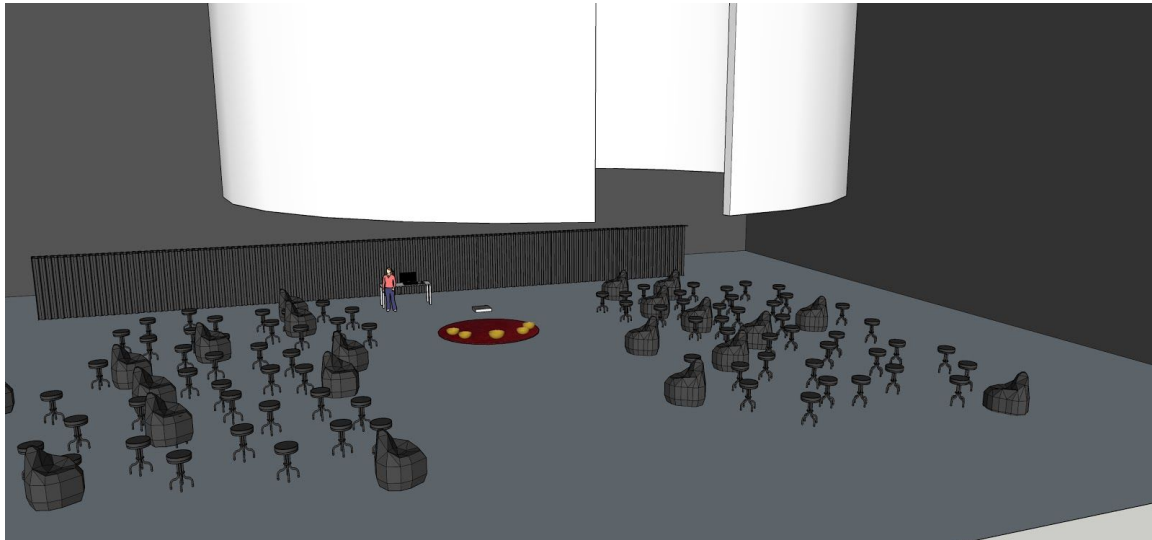


Figure 2: An overview of the layout of the space in the Cube.

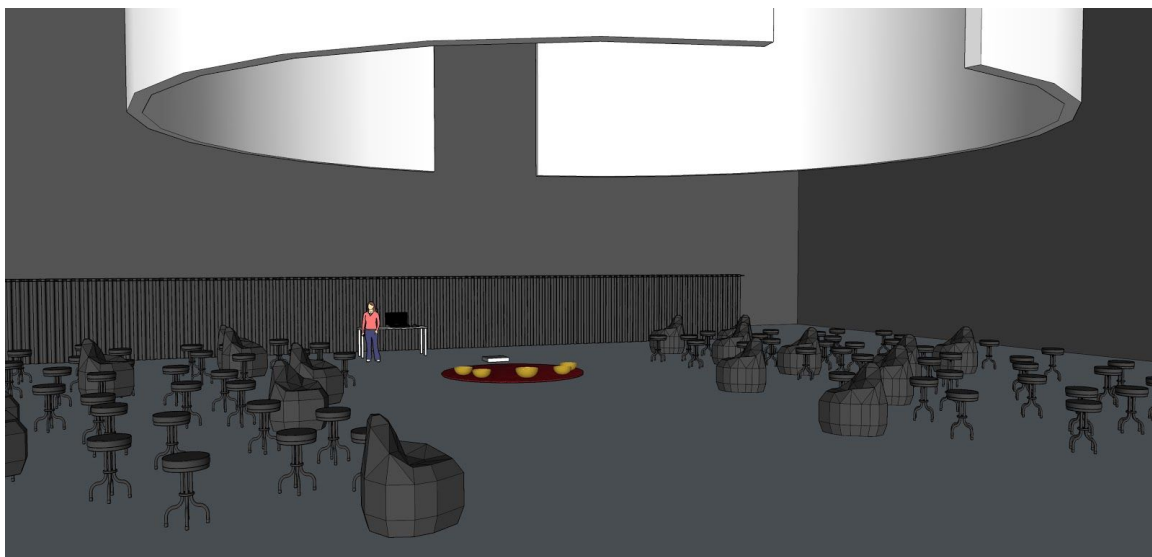


Figure 3: Another view of the layout of the space.

There is a list of equipment necessary for certain pieces that will stay in the space throughout the entire performance, as shown in Figure 4:

- a table with equipment that belongs to ICAT, with the computer that connects to sound and to the Cyclorama;
- The author's personal computer sharing the table with the ICAT's computer, but connected to a projector on the floor;
- a projector on the floor to show images at the curtains of the Cube, instead of the Cyclorama;
- a round carpet with Tibetan bowls and other musical instruments that are part of the setup for the last piece Sound and Image Garden.

Microphones will also be necessary for this performance, but they may not have to stay on the stage through the entire show. The setup was planned to have room for a microphone to stay on the stage, depending on the type of microphone available.

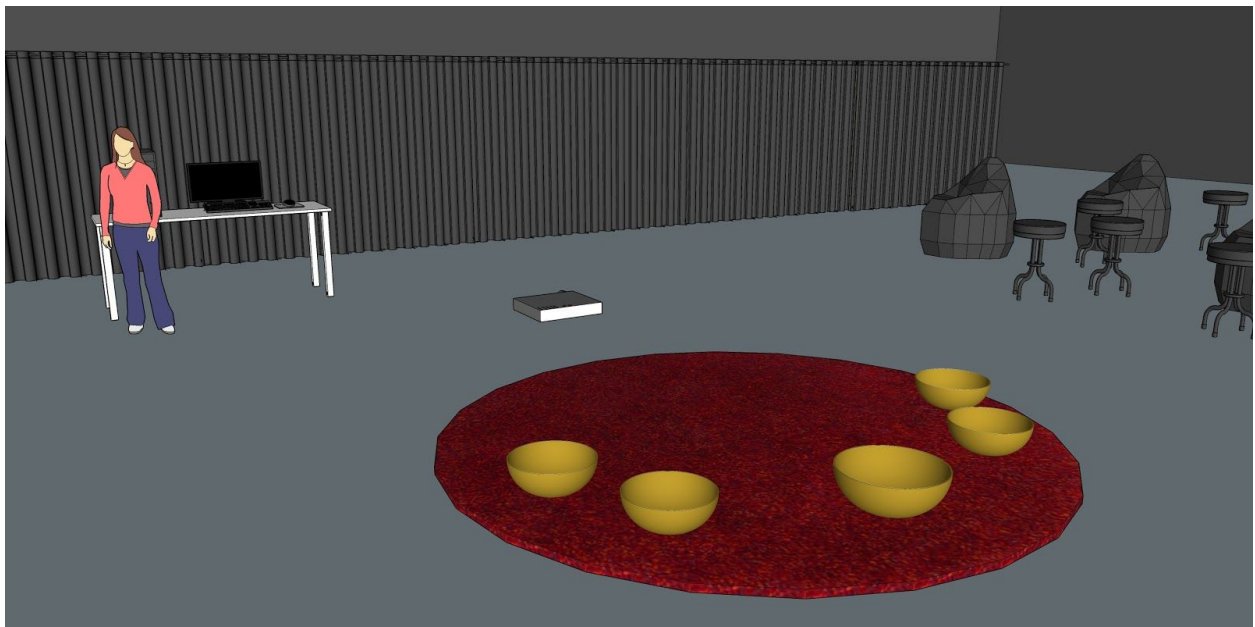


Figure 4: Placement of equipment in the space.

An area in the center of the floor has been defined as a stage space that performers will use to tell parts of the story. This area is highlighted in green in Figure 5 below. It is an empty space left free for performers to move. The green highlight is only for illustration purposes, not representing an actual form or object in the space.

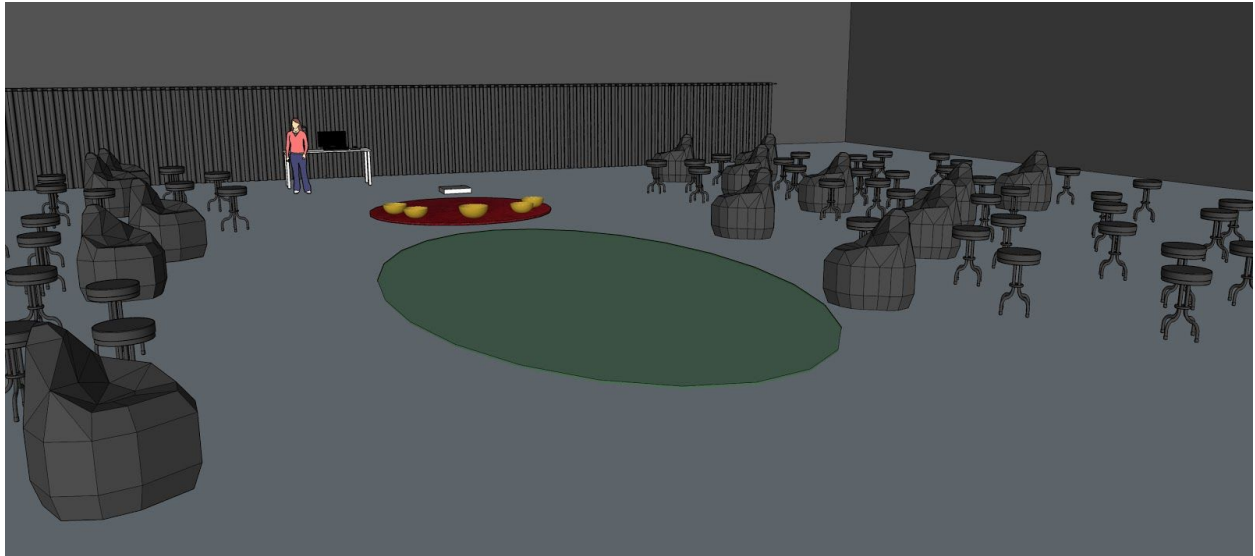


Figure 5: Stage area highlighted in green.

The projector on the floor will project images at the curtains of the Cube, as shown below in Figure 6:



Figure 6: Projector on the floor projecting at the curtains.

The Ideal Setup

The project was first conceived as an audiovisual performance for the Cube in the Moss Arts Center, in Virginia Tech. Ideally the project would happen in that space, using various media: fixed media, interactive programs with images reacting to sound, and live performance.

The spatial qualities of the Cube space are part of the composition of the project: Images and light spread around the space through the projectors of the cyclorama, at the circular cyclorama screen; another projector aims its light to the center of the curtain wall on one of the sides of the Cube; The sound is spatialized with ambisonics over the 140 speakers of the Cube. In addition, the ideal set up contains interactive pieces. The interaction consists of programs that allow sound input from performers in the space to affect and change the images being projected. This interactivity is a resource created for dramaturgical purposes in the story. For example, the character The Wind will change the landscape being projected with her voice and wind sounds. With images, sound and interactivity between them I'm aiming to create a dynamic, immersive art installation that tells a story through an audiovisual performance of that story.

Backup plan for the ideal setup

In case the programs with interactivity through sound input and images do not work at the moment of the presentation, there are recorded videos of the images moving and reacting to sounds. These videos would not require a live creation of movement through sound.

Story References, Archetypes and Motifs

Archetypal references, other stories and performances were studied during the process of artistic creation of this project. The artistic storytelling works studied as references in this project were divided in two groups for the purposes of analysis: Reference Stories and Reference Artistic Works in the Cube.

In the group of *Reference Stories* there are books, films, and animations. These pieces do have elements of literary craft, performance and visual art to tell stories, but that is not the reason they were selected as references. The focus for this group is on the content being told in the story, its structure and sequence of events. They were analysed in the Study of Fairy Tales, Folklore and Myth, which was undertaken because the story in this project makes references to other stories, folklore and Greek mythology. In the group of *Reference Artistic Works* there are art installations, performances and exhibits. These works may contain storytelling elements, but that will not be looked at in detail when analysing these artistic works. They were selected as references because of *how* they tell stories, the different media used, their layout choices, their performance and visual art. Some of these projects were showcased in the Cube, the same space that this project was designed for.

Reference Stories: A Study of Fairy Tales, Folklore and Myth

While studying theory of fairy tales, folklore and myth, a few questions were asked regarding definitions of terms from theory, such as “What is myth and why is it important for this project?”, “Why is it referenced in tales?”, “What is folklore?”.

Burkert, in *Structure and History in Greek Mythology and Ritual* explains that it can be difficult to reach a definition of myth: “If myth is defined as a tale about gods, or as a sacred tale, this would exclude central parts of Greek mythology, including Oedipus. Anthropologists have found a workable definition of myth as a tale about origins, things that happened in the remote past, *in illo tempore*. But as to Greek myths, most of them are situated in an epoch which the Greeks themselves regarded as historical, the epoch of the Trojan War and a few preceding generations. In various cultures there are differentiations of tale classes, one of which may be called ‘myth’; none of these is [sic] universal, and hardly any are applicable to the Greek evidence.”¹

Burkert argues that the most important aspect of myth doesn’t seem to lie in its structure, nor in the content of the specific tale being told, but rather in the use to which the

¹ Burkert, Walter. *Structure and History in Greek Mythology and Ritual*. Berkeley: University of California Press, 1982.

myth is put. In this way, Burkert stated his own definition of myth: “Myth is a traditional tale with secondary, partial reference to something of collective importance”. He explains that myth is a tale applied. It is a way to map reality by the use of a linear narrative, through language. Referencing myth in stories is a way to connect with the audience, by calling attention to cultural connections and shared experience.

In terms of whether myths are classified as fiction or non-fiction, scholars explain that ancient authors wrote myths to imply certain historicity. William Hansen in *The Book of Greek and Roman Folktales, Legends and Myths*² classifies myths as traditional credence tales. He explains this term as follows: “I use the term “credence narratives” for stories that ancient narrators shaped in such a way as to present, or imply, a claim to historicity. For example, in early Greek literature (epic poetry, lyric poetry, prose mythography) narrators handle narratives of prehistoric times respectfully as appropriate subjects for artistic treatment and retelling in dignified forms of literature. Although individual persons did not have to accept in full or even in part an implicit or explicit claim of veracity, hearers and narrators generally treated the issue of truth and historicity as something at least discussable by competent adults, as illustrated by the discussion of Socrates and Phaidros regarding the tradition of the North Wind’s abduction of an Athenian princess. In short, credence narratives were subject to listeners’ and readers’ evaluation of their truth-value (cf. Nagy 1990:59–72).”³

Stories are told and handed down, but they often change in the process of traveling and being told by different people. Oftentimes stories are told through different media, as from oral storytelling to written stories in a book. Stories are adjusted to the culture and tastes of places they travel to, making them connected to culture and historical periods.

Folklorists began to think about how to study, collect and catalog stories, so that it’s possible to understand more about the stories themselves as well as about new lenses through which stories are looked at as they become part of culture. A Finnish folklorist, Antti Aarne, created a catalogue system to collect and categorize stories, published in 1910, in German. It was translated to English, revised and expanded by the American folklorist Stith Thompson. This catalogue is *The types of the folktale: a classification and bibliography*, by Antti Aarne and

² Hansen, William. *The Book of Greek and Roman Folktales, Legends and Myths*. Princeton: Princeton University Press, 2019.

³ Idem, page 6.

Stith Thompson. It is helpful to study stories because it helps to identify, organize and analyse the structure of a tale. It is an extensive and comprehensive catalogue. The authors would collect as many stories as they could and list them. As they collected stories, they would notice similarities between certain tales, to the point that one would wonder if they are the same as another or if they are the “evolution” of another. Because of that they created the notion of Tale Types, which is an outline of the basic structure of a story. Each Tale Type has a number. Variations of a tale type receive the same number as their type, but followed by a letter. For example, Cinderella belongs to the Tale Type 510A. There are many versions of Cinderella, but if they have all elements that correspond to the structure of 510A, they are to be considered a Cinderella story. For example, it is part of the Tale Type 510A structure to have a persecuted heroine, to have this heroine receive help from animals or elements from nature, to have a meeting with the Prince, to make attempts to run away from the Prince etc. In this way Antti Aarne created a method to classify stories, known as the Aarne-Thompson system. Later the German folklorist Hans-Jorg Uther revised and expanded the Aarne and Thompson’s system, publishing a new catalog in 2004. For this reason, some authors refer to the tale classification system as AT, while others may be using the ATU system(Aarne-Thompson-Uther system).

Classifying stories may be useful to trace stories in their trajectories and to see patterns that one would otherwise not notice, but it doesn’t help the understanding of stories as much as knowing more about the context of a story. For this reason, some scholars offer critique about the Tale Type index. The scholar Graham Anderson suggests that it is important to look at motifs, to understand how a story is functioning. Another folklore scholar, Vladimir Propp, argues that the context, motifs and geographical adaptations of tales may help us understand a story, beyond the superficial reduction of a story to a type. Therefore, even though it is useful to refer to the ATU classification system, for this thesis project, stories that were relevant for informing the creative process of this work will also be looked at in terms of their context. The base for understanding of each story analysed will be the following: Tale Type structure plus context, motif, and how it functions.

Another important point to consider for this project is that stories can vary across media. During the creative process it is important to consider what different media can communicate, how different media help to communicate something else about the story, and how stories reference each other.

Definition of folklore

The tales studied for this project are part of folklore, and some of them are more specifically fairy tales. For the purposes of this paper, folklore has been defined taking into account the considerations by Graham Anderson in his book *Greek and Roman Folklore: A Handbook*, as well as comments from Vladimir Propp in his book *Theory and History of Folklore*.

Vladimir Propp, summarizes his understanding of folklore as the following: “We can now summarize our premises and say that by folklore we understand the art of the lower social strata of all peoples, irrespective of the stage of their development. For peoples before the formation of classes it is their entire art taken together.”⁴ Propp explores how broad the definition of folklore can be. He explains that it can’t be limited to a certain nationality, nor by certain structures that the story is supposed to have, nor by its form of transmission.

Graham Anderson, in *Greek and Roman Folklore: A Handbook*, points out that defining folklore is not an easy task because it can be very broad and difficult to pin-point. However, he explains what folklore is with an analogy: “Whatever is generated by folk [that] points the way to anonymously transmitted culture. [...] If we might describe a fairy tale as a ‘once upon a time story,’ we might just get off with describing folklore as the ultimate ‘or so they say’ subject: everything about it is doubtful and something we only have someone else’s (generally spoken) word for.”⁵

In this way, a working definition of folklore for this paper is that it is the expressive body of culture, that may have been created by a specific group of people, but which can be relevant for all peoples. It is usually anonymously transmitted culture and it can include many forms of expression, for example oral storytelling, music, written stories, poetry, rituals, celebrations, dances and rites.

Definition of fairytale

A fairytale is a type of tale within the larger category of folklore. What composes its specificity is the fact that it is an artistic rendition of a folktale, and it usually features magical

⁴ Propp, Vladimir. *Theory and History of Folklore*. Minneapolis: University of Minnesota Press, 1984, page 5.

⁵ Graham Anderson. *Greek and Roman Folklore: A Handbook*, page 4.

or fantastic creatures, or has magic or enchantments as part of the story. William Hansen, in *The Book of Greek and Roman Folktales, Legends and Myths*, defines fairytales as “complex (that is, poly-episodic), artistically formed traditional tales of fantasy that mix the supernatural into the natural”⁶, belonging to traditional fictions, within folktales. He also points out that this definition is for the stories known to English-speakers as fairytales. However, he also adopts the name *wonder tales* for fairytales, which is more adequate to indicate the characteristics of fairytales in general: “To folklorists they [fairytales] are magic tales (*Zaubermärchen*) or wonder tales (*Wundermärchen*), since the element of magic along with an atmosphere of wonder are characteristic, whereas fairies rarely appear in them. (...) In many such tales a young hero or heroine goes out into the world, where at some point he or she encounters the supernatural, overcomes obstacles, and triumphs by means of kindness, perseverance, and/or luck, achieving wealth or elevated social status or both. The wonder tale is the genre par excellence for happy endings in an atmosphere of the marvelous.”⁷

Tales studied for this project

A few tales were read and studied for this project because they contain many elements that are similar to some element of the story created for this project. The stories are the following:

- *At the back of the North Wind*, a book by George MacDonald.⁸
- *The Secret Life of Words*, a film directed by Isabel Coixet.⁹
- *The Little Match Girl*, a short story by Hans Christian Andersen.¹⁰

⁶ William F. Hansen. *The Book of Greek and Roman Folktales*. Princeton: Princeton University Press, 2019, page 26.

⁷ Idem, page 27.

⁸ MacDonald, George. *At the back of the North Wind*. Philadelphia, London, J.B. Lippincott Company, 1909.

⁹ *The Secret Life of Words*. Film. Spain and Ireland: Isabel Coixet, 2005.

¹⁰ Andersen, Hans Christian. *Dansk Folkekalender for 1846*. Kjøbenhavn : Fred Frolund & Flinch, 1845

- *Twelve Months*, an animated feature film produced by a partnership between Toei Animation from Japan and Soyuzmultfilm from the Soviet Union.¹¹
- “*Twelve Months*”, a short story by Samuil Marshak.¹²

These stories will be presented below, summarized by a framework to help understand what happens in the story instead of having the entire work transcribed in this paper. The story created in this project is also listed below with its framework for comparison. Although the story in this project was created independently, it is interesting to note and study stories that deal with very similar issues or have similar themes in content.

Framework of *At the back of the North Wind*:

- The story starts with an innocent child who doesn't know he will be in a bad situation.
- The Wind, a magical creature and natural phenomena personified, befriends the child.
- The child escapes a bad situation with the help of the Wind.
- The child is terribly ill, and falls unconscious.
- While the child is unconscious, he is advised and guided back to safety (back to life) by the Wind.
- The child has a lesson about love and kindness to his family and other people he meets.
- Led by the Wind, the child encounters death in a “healthy” and meaningful way.

Framework of the Secret Life of Words

- Before the Balkans war, a woman was a happy innocent nurse.
- She is kidnapped during the Balkans war and suffers extreme violence. Her daughter is killed.
- She finds hope of escaping by looking at the forest and thinking about running with the wind
- She escapes by running in the forest
- She becomes a nurse in an oil ship and takes care of a seriously injured man.
- She has a lesson about love and kindness by taking care of people. She is not disgusted by their wounds and illnesses.

¹¹ *Twelve Months* (世界名作童話 森は生きている, *Sekai Meisaku Dōwa Mori wa Ikiteiru*, *Двенадцать месяцев, Dvenadtsat mesyatsev*). Animated film. Japan and Soviet Union: Yugo Serikawa, Kimio Yabuki, Tetsuo Imazawa, 1980.

¹² Marshak, Samuil; Whitney, Thomas P; Stanley, Diane. *The Month-Brothers : A Slavic Tale*. New York : William Morrow and Company, 1983.

- The man falls in love with her. She fears that her emotional and physical scars make her unlovable and will sink them both. He says he can learn how to swim. She attempts to run away from him a few times. The last time she runs away, she forgets her backpack with him. The backpack has enough information about her. He looks for her and finds her.
- Marriage with the man.
- She sees her daughter playing in the garden, running away to the forest with the wind. She can now live a meaningful life in the present, less haunted by the past.

Framework of The Little Match Girl

- An innocent child is selling matches to survive on Christmas Eve, on a cold winter night. She can't go back home without money otherwise she will be severely punished by her father.
- She doesn't make any sales. She falls unconscious due to extreme cold. While in this difficult situation, she is advised and guided by the spirit of her grandmother.
- Encounter with death: The spirit of her grandmother helps her die in a "healthy" and meaningful way.

Framework of Twelve Months

- An innocent kind girl lives with an abusive step-mother and her unkind daughter.
- The kind girl is sent to the forest to look for galanthus flowers in the middle of a severe Winter. She is not allowed to return home without flowers. The Queen will give a basket full of gold for anyone who can bring her these flowers by New Year's Day.
- The girl helps people and animals she meets in her journey.
- The girl continues to wander in the forest and passes out from the extreme cold.
- The girl wakes up and sees twelve men gathered around a fire. They are the Twelve Months of the year.
- They help her by switching the seasons of the year in that part of the forest. She is able to collect galanthus flowers. They give her a ring to throw while reciting magical words that they tell her, if she ever needs their help again. They tell her not to tell anyone about them.
- The kind girl brings the flowers home. Her step-sister and step-mother get a basket of gold.
- The step-mother and the Queen want to know how the kind girl obtained the flowers and try to provoke her by throwing her new ring away. The kind girl recites the magical words. The Twelve Months appear, explain the importance of kindness and make the kind girl wealthy. Her step-mother and step-sister are turned into dogs.

Framework of the story in this project (Stories of the Wind):

- A child character explains her fascination with birds and trees, not knowing that it will go through difficult situations in her journey through life.
- The character meets the Wind.
- Start of a difficult journey with references from domestic violence to oppression on a larger scale, in institutions and in society.
- Encounter with death: While unconscious, she is advised and guided by the Wind to recover from difficult situations. Lesson about love and kindness.
- With the guidance of the Wind, she goes to a sound and image garden for meditation: She sees death in a “healthy” way. She can now live in the present, less haunted by the past.

All these stories have in common a transformation that the main character undergoes when facing extremely difficult situations. In all these stories there is an encounter with something fantastic or magical whether it is the Wind, the spirit of their deceased grandmother or daughter, or the Twelve Months. These visions or encounters account for the most fascinating aspect of the story, and they are the vehicles of the transformation.

The Twelve Months stories have similar variations and have been catalogued in the Antti Aarne and Thompson system as Tale Type 480 as “The Kind and Unkind Girls”. Stories like these exist all over the world. A folklore scholar, Warren Roberts, gathered more than 900 variations and researched older stories that have a link with this Tale Type 480 demonstrated by research, documented in his book *The tale of The kind and the unkind girls: AA-Th 480 and related tales*¹³. Following the trajectory of this story, older variations have an innocent kid as the main character (not necessarily female) who has to go on a journey to accomplish something impossible or face something very difficult. The kid has a supernatural encounter in the journey, but not all variations have a continuation after the supernatural encounter. In this way, “*The Little Match Girl*”, and “*At the Back of the North Wind*”, also fit in this pattern. The main common element in all these stories is that the hero or heroine encounters something fantastic in their hour of need, when all hope is lost. Focusing on that, John S. Gentile makes the following analysis of this tale in his article “*Meeting with Great January: an archetypal interpretation of the Slovak fairytale ‘The Twelve Months’*”: The Slovak fairy tale “The Twelve Months” is a variant of the international tale type known as “The Kind and the Unkind Girls” (AA-TH 480), of which

¹³ Roberts, Warren. *The tale of The kind and the unkind girls: AA-Th 480 and related tales*. Berlin: De Gruyter, 1958.

Charles Perrault's "Les Fées" or Andrew Lang's "Toads and Diamonds" may be the most widely known versions. While this story may initially appear to be about sibling rivalry, or female individuation, or dysfunctional family relations, from an archetypal perspective, this story is about an encounter with the *mysterium tremendum et fascinans*.¹⁴

Similarities between stories: the monomyth

In *The Hero With A Thousand Faces*, Joseph Campbell argues that there is a type of heroic journey that humans have been recounting for thousands of years. It is always the same story, but the hero may have a thousand faces. It is a monomyth that pervades human reality and consciousness, across all cultures. Joseph Campbell is redefining mythology as something that not only explains the natural world, but explains the human psyche.

Campbell defines the hero and the story of the heroic journey as follows: "... a male or female who ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man."¹⁵

It is interesting to note that this structure can be found in all the stories above, as well as in the stories of Jesus Christ, Buddha, Moses, Luke Skywalker, Harry Potter and many others. The structure contains three main parts: The departure; Initiation; Return. As part of this story model, the hero starts out living an ordinary life in the real world, but then receives a call or has a reason to depart on a journey. In this journey the hero receives help from a mentor figure. In the Initiation, the hero enters a new world, an otherworld, or super natural world, where he/she faces new dangers and challenges. There are many setbacks at this part, which can oftentimes be death. After that, the hero is rewarded for accomplishing his/her goal. In the Return, the hero returns to his world with the reward, having been transformed by the journey, with wisdom or spiritual power over both the real world as well as over the supernatural world where Initiation

¹⁴ Gentile, John S. (2017) *Meeting with Great January: an archetypal interpretation of the Slovak fairytale "The Twelve Months"*, Text and Performance Quarterly, 37:2, 129-137, DOI: 10.1080/10462937.2017.1349304

¹⁵ Campbell, Joseph. *The hero with a thousand faces*. Princeton, NJ : Princeton University Press, 1968

happened. Campbell argues that this hero's journey is inside of everyone, as a human element, part of the depths of consciousness: the story of innocence transformed into maturity.

Archetypes

Another important point from Campbell's book is the notion of Archetypes. He explains the presence of archetypes in stories, dreams, myths and many forms of spontaneous human expression. In the moment when the hero is in the Initiation, the hero can assimilate archetypes. For a definition of archetypes, Campbell references Jung and other scholars. Jung defined archetypal images as the following: "Forms or images of a collective nature which occur practically all over the earth as constituents of myths and at the same time as autochthonous, individual products of unconscious origin."¹⁶ However, Campbell makes a distinction between the archetypal images faced during the Initiation and symbols that appear in dreams. For him, archetypes are universal, while the symbols in dreams may only reflect one's personal views. In this way, Campbell argues that the hero is someone who has transcended his personal and historical troubles to learn from universal archetypes, which is why the hero returns from the otherworld with an important lesson for humankind.

Personification of the Wind

In the story told in this project, the wind is personified. In *At the back of the North Wind*, the wind is also personified and it is a character in that story, fulfilling the role of a supernatural help. The wind also befriended the main character, became a companion for small adventures, as well as a major helper in difficult times and a guide in the main character's *Transformation* or *Initiation*. It was a fortunate coincidence that for this thesis project to have found a book in which the wind was also the natural element chosen to be personified and be a guide or supernatural help. The book was found by accident in a thrift store after I had already begun writing the story, and it was also recommended by Professor Eric Standley before he knew I already had the book. The choice of making the wind into a character in this thesis project was a way to poetically represent the importance of this element in the experiences that inspired the pieces that compose the story. Personifying the wind is not a new idea. There may be many other stories that share this idea. One of the oldest ones is in the tale of Cupid and Psyche: the

¹⁶ Jung, Carl Gustav. *Psychology and Religion* [Collected Works, vol. 11; New York and London, 1958], page 88.

wind Zephyr helps transport people safely from a mountain to Cupid's household¹⁷. Zephyr is not a main character in the story and it is not essential to Psyche's transformation, but it is an example of a personified wind nonetheless.

Attempts to see and register the wind

The wind may be a difficult subject to register or see because it is movement of air, which is invisible. Part of the appeal of stories that feature the wind as part of it is the idea of the possibility of seeing and understanding this invisible element or force of nature.

Throughout the process of researching and making this thesis project, I've looked for ways to represent, see and register the wind. I've looked for references or examples of other works in which artists attempted to see the wind. Professor Kevin Concannon recommended looking at a show in which Yoko Ono is looking for a filmmaker to help her make a film about the wind. The show was a TV sitcom *Mad About You*, Season 4, Episode 6¹⁸. Yoko Ono made a guest appearance as part of the story, when the main character, Paul, tries to work with her to produce her idea of a film about the wind. Paul gets overwhelmed by the fact that he doesn't want to disappoint a famous artist like Yoko Ono and also wants to impress the company he works for. Paul is extremely nervous about how difficult it is to film the wind. It seems that in this case the artists failed to register the wind, and they argue in the story that it's just a bad idea. At the end of the show, Paul, his wife, and Yoko decide to make a film about Yoko in the Chrysler building, with falcons. Yoko playfully adds: "and it's windy!"

In this thesis project the challenge about seeing and registering the wind was solved through representing the wind with artistic resources in different media, by filming the movement of trees, recording wind sounds in nature and by animating paintings. The personification of the Wind was also a strategy for being able to see and register the wind, so that her presence and voice could be seen and registered in person.

¹⁷ Apuleius, *Metamorphoses (The Golden Ass), Volume I: Books 1-6*. Edited and translated by J. Arthur Hanson. Loeb Classical Library 44. Cambridge, MA: Harvard University Press, 1996, 207

¹⁸ Codename Kids Next Door Full Episode. "Mad About You - S04E06 - Yoko Said". Filmed [1995]. Dailymotion video, 21:56. Posted [2017]. <https://www.dailymotion.com/video/x5vf160>

Reference Artistic Works: Performances and Art Installations

Some of the works referenced in this section were art events I went to in person, while others were only experienced through videos online. Attending performances and art installations, as well as seeing art through other forms of documentation is part of my aesthetic education. It is important for artists to know other artists' work. Attending art events gives, beyond many other things, an invaluable sensory approach to learning and an opportunity to experience art. This sensual character seems to be heightened in certain artistic performances. For aesthetic education, seeing other artists' work helps with training of the senses and with learning how to interpret aesthetic symbols and perceptions. I learned a lot by attending art events freely available for students at the Moss Arts Center. Some performances in the Cube have a heightened sensory approach, creating an aesthetic experience that engages body and mind.

By including the references below, I'm highlighting elements from their aesthetic approaches that influenced this thesis project, without intending to explain or provide a comprehensive analysis of the works selected. In addition, these references were selected taking into account the fact that they used multiple media and technology creatively.

The Nature of Forgetting by Theatre Re was a performance with physical theater and live music presented at the Moss Arts Center in the Fall of 2018 by the theater company Theatre Re. It was about the life of a person with Alzheimer's disease, focusing on memory and powerful life experiences. The structure and details of the story, psychological factors affecting characters, and each character's personalities were all well-known to the performers and to the writers, but not explicitly narrated or described to the audience with words. Projected images in multiple media, lights, scenery, objects, movement and poetic storytelling transmit that content instead.

As a result, there were different views about the details of the story and different interpretations by the audience, as seen in the Q&A session with the actors and director after the performance. At the same time, most people in the audience demonstrated that they were deeply impacted.

Most people agreed on a basic structure for the story: we accompany the memories of an old man and get to see his story, starting with a happy childhood, some conflict from growing

up and becoming a teenager, memories from school days, the meeting of a special girl, friendship, dating, marriage with her, becoming a father, raising kids, aging, some problem with his wife, and the start of his problem of forgetting. We are taken back to the present from where we stopped in the beginning of the tale with his daughter and grandkids taking care of him and preparing for a family meeting.

It was interesting that all that information was given through the use of multiple artistic strategies instead of constant narration of events. Lights and projected images were combined with props, acting and music to convey meaning to the story.

Body, Full of Time was a performance by Scotty Hardwig, Zach Duer, Nate King and Caleb Flood. It was presented at the Cube in the Moss Arts Center in Spring of 2019. It involved the performer Scotty Hardwig's choreographic movements interacting with multiple visual media, along with music, sounds and a few words. It is interesting to note that this was an interdisciplinary work and involved multiple pieces of technology and multiple media. In an announcement about the show in the website of the School of Performing Arts in Virginia Tech, the work is described as follows: "Using motion capture, projection, and interactive avatar designs, the work presents a chimeric vision of the human body fragmented in the cyber age, examining the relationship between physical and digital versions of self"¹⁹

In a presentation about the work in an ICAT Playdate in the Spring of 2020, the artists who made *Body, Full of Time* explained that the work had five parts, each with one person responsible for it:

- Performance and artistic direction (Scotty Hardwig)
- Visual direction (Zach Duer)
- Animation and documentation (Nate King)
- Music (Caleb Flood)
- Stage, costume, lighting, scenic design (Estefanía Perez-Vera).

¹⁹ "Body, Full of Time" School of Performing Arts, accessed April 20, 2020, <https://www.performingarts.vt.edu/index.php/events/view/body-full-of-time>

It is important to note that the artistic work was organized and divided between various artists, to account for its complexity, multiple parts and multiple media, cohesion and interdisciplinarity.

In addition, the artists made research of references of other aesthetic works that resonated with their intentions and that was in the realm that their work was coming from. Some of the references mentioned in the artists' presentation were the following:

- *Coda*, by Martine Époque and Denis Poulain²⁰. This animation mixed digital technology with dance, creating fluid visuals. The space is overall dark, which contrasts with the light contours of the bodies of the dancers.
- *Eingeweide*, by Marco Donnarumma and Margherita Pevere²¹. This piece is performed by two human performers, one artificially intelligent prosthesis and out-of-body living organs. It also has a dark environment contrasting with the light on the performers, but seeing the performer's body, drawings on their skin, liquids spread around the stage and sand makes this piece very visceral. The artificial intelligence prosthesis seem to have reactions of their own, which adds to the idea of a struggle happening in the piece.
- *Exosphere*, by Gregory Bennett²². This piece combines 3D animation with motion capture. The visuals look very synthetic and the sound also sounds synthetic and different from acoustic musical instruments.
- *Choreography for the Scanner*, by Mariam Eqbal²³. This film explores moving frames, combinations of separate frames, paper images and frozen dance movements in frames of film. It makes use of film technology creatively, exploring arrangements and combinations of individual frames.

²⁰ The National Film Board of Canada. "Coda". Filmed [2014]. YouTube video, 10:51. Posted [Oct 2016]. <https://www.youtube.com/watch?v=MNx2apQwook>

²¹ Marco Donnarumma. "Eingeweide". Filmed [2018]. YouTube video, 04:27. Posted [Oct 2018]. https://www.youtube.com/watch?v=6X_mA_Jecds

²² Gregory Bennett. "Exosphere". Filmed [2018]. YouTube video, 20:48. Posted [Oct 2018]. <https://www.youtube.com/watch?v=vNMJe5fun6s>

²³"Choreography for the Scanner", Mariam Eqbal, accessed April 20, 2020, <http://www.mariameqbal.com/portfolio/choreography-for-the-scanner/>

- *Pas de Deux*, by Norman McLaren²⁴. This film combines dancing with the technology of cinema, especially with editing layered moving images. It has a lot of contrast and sensuality to the image.

Professor Scotty Hardwig explained that Professor Zach Duer invited him for a collaboration because of an animation that he (Zach Duer) had done, based on a script that allows the 3D image of a body in movement to have a limb get stuck for a moment, while the rest of the body continues to move. Professor Hardwig thought this would be a cool idea for choreography because it extends the body and Hardwig's work is based on the body. They started working with a skin-cyber simplified digital model of a body. In the middle section of *Body, Full of Time*, they had a cubistic monolithic approach to the imagery, with live motion capture of Hardwig's body as he danced.

A point made by the artists was that even though they had a working model of a 3D body that followed movement, they had to discuss and experiment a lot in the studio in order to see if it would actually be viable for use in their work, as Hardwig explained: "Just because you've engineered something that functions, it doesn't mean that it works dramaturgically."

The digital material they had was modelled from the body itself (Hardwig's body), which for the artists meant that the reference for this work came from a fleshy place. They explained that it is a hybrid artistic work between body and technology, keeping things rooted in the body. There is a lot of abstraction involved in the creative process by taking the body and abstracting it, but at the same time the body grounds the work in reality.

For sound, Zach Duer and Scotty Hardwig explained that they worked with the musician Caleb Flood, who made music from samples of sounds of nature, from rivers, rocks, earth and volcanoes, to create warped sounds and soundscapes that continue throughout the piece.

In terms of structure of the work, *Body, Full of Time* was divided into 3 sections:

- 1st section: Physical: mask, earthy
- 2nd section: Cyber: 3D model, lines
- 3rd section: Scanner: limbs, colors

²⁴ The National Film Board of Canada. "Pas de deux". Filmed [1968]. YouTube video, 13:34. Posted [Apr 2014]. <https://www.youtube.com/watch?v=WopqmACy5XI>

In addition, the artists had to work on transition material between sections. One of these transitions happened when there is a part from Plato's text Phaedrus recited by a 3D model on the screen, of an eye and a face with filters. The artists explained that this was a way to transition in time between sections while also having continuity in time during the performance. Phaedrus is describing the different kinds of love and devotion (aesthetic) and what is erotic connection between two people. That is a transition to the 3rd movement.

In the final section of *Body, Full of Time* there was a scanner going back and forth, appearing and disappearing, represented by movement of lights on the floor, with Hardwig following the images, trying to align his body with them as they appeared and disappeared on the floor. There were sounds and images that resembled amniotic fluid, organs or something visceral. Hardwig explained that this section represented a descent into the womb of the digital. The idea of a scanner was very clear to the audience because of the movement pattern and shape of the lights projected, along with the scanner sounds. The artists explained that this section was also about reconfiguring the body and about questions of replication.

The artists as a group harmonized different approaches toward the same material. For the scenic stage design, Estefanía Perez-Vera created a diagram with two altars opposing one another, and then vessels. She was referencing Maya aesthetics. In this way, her approach to the content of the work was about tectonics and architecture.

It took the artists about 7 months to complete their project work, from the moment they started, with inception, to the moment when they had everything ready to perform. They mentioned that a lot was figured out when they had a week to be in the space, very close to the date of the actual performance.

The artists also mentioned that communication between the artists in this work was not difficult. They didn't have obstacles because they worked in different disciplines. For example, Scotty is not only a dancer. He is also a multimedia artist and started working in music. They had a nice group of people and a lot of trust between them. They communicated often and were always producing material to experiment with.

The story behind *Body, Full of Time*, which is their inspiration was a feeling that Scotty had: he felt his age more and more. It is something difficult to put into words. He thought about

all things that had gone through his body, that came and passed, pre-birth, and things that will stay after death. He thought about a trajectory as being, based in time.

Drawing Restraint 9, by Matthew Barney was released in 2005. The project consists of a feature film, sculptures, photographs, drawings, books and art installations. It is part of a series called Drawing Restraint, which consists of 19 components in various media. This film was selected as a reference because the artist managed to combine multiple media and themes. In the trailer of the film²⁵, it is possible to observe that a lot of attention was given to the expression of certain materials such as plastic and fat. It transmits feelings of discomfort and mystery, as well impressions of very visceral moments.

Matthew Barney is interested in mythology, but his work is not to preachy about it and it's not so obvious in his work. Professor Eric Standley explained that Barney is more interested in the Jungian subconscious world.

Shakespeare's Garden was an interdisciplinary project by Amanda Nelson, Natasha Staley, Charles Nichols and Meaghan Dee. The project used the spatial audio system of the Cube in the Moss Arts Center to create an immersive theater experience, showcased in the Spring of 2018. A garden created inside the Cube composed of the sound of Shakespeare's texts narrated by actors, processed natural sounds, colorful transparent curtains, light and projected images and text.

There were independent stations in the Cube and it was possible to move from one station to another, and then hear sounds from one station that could only be heard when one was positioned inside the station. This independent atmosphere created by sound in the stations and its absence outside was very interesting.

²⁵ Peter Strietmann. "Drawing Restraint 9, trailer". Filmed [2005]. Vimeo video, 02:17. Posted [2013]. <https://vimeo.com/66283296>

Poe's Shadows was an immersive theater installation by Amanda Nelson, Natasha Staley, Ashley Reed, Tanner Upthegrove, and Meaghan Dee. It was showcased in the Cube in the Moss Arts Center in the Fall of 2018. This art installation used the Cyclorama and the spatial sound system in the Cube to tell one of Edgar Allan Poe's stories in an immersive theatrical experience. The images moving and circling through the space on the 360 degree Cyclorama screen combined with the spatial audio created a powerful artistic rendition of the story.

The images combined handmade drawings turned into animated virtual shadow puppets, created by Meaghan Dee. The text of the story was selected and curated by Amanda Nelson, Natasha Staley and Ashley Reed, then recorded and performed by acting students. The sound combined these recordings with the spatialization of that sound designed and engineered by Tanner Upthegrove.

What Bends was an interdisciplinary multimedia performance by Zach Duer, Erika Meitner, Charles Nichols and Rachel Rugh. It was performed in the Cube in the Moss Arts Center in the Spring of 2017. The performance used the cyclorama, the spatial audio system in the Cube, motion capture and also had live music performance of electric violin and computer, live performance by dancers with interactions between the dance, images and audio, along with live processing of spoken poetry. This multimedia work was made to explore life in Appalachia. This performance didn't have a clear story being narrated to the audience, yet I left the performance feeling transformed as if I had just heard a story about Appalachia.

The first part of the performance contained layered videos with landscapes of nature in Appalachia. The contrast of the images with darkness of the Cube was impressive, along with the fact that the screen of the cyclorama was surrounding the entire audience. This set up helped to call attention to the beauty of the images. In another part of the performance, one of the dancers had a sensor on her hand. As she moved she was also drawing on the cyclorama screen with strokes of projected light, and spatializing the music. The spatial audio mixing live music, computer sounds and processed spoken poetry were reinforcing the immersion in the experience and adding another layer of aesthetic experience.

This performance was an interdisciplinary work from a collaboration of multiple artists: Zachary Duer, video; Erika Meitner, poetry; Charles Nichols, music; and Rachel Rugh, choreography. Yet the work had cohesion as one performance and all the different artistic parts in the performance were interacting and merging with one another.

Cube Fest is a festival organized by the Institute of Creativity, Arts and Technology (ICAT) and the Moss Arts Center that has been happening every year since 2016. The layout of the Cube for the 2019 Cube fest allowed for the showcase of very different artistic works created for the festival, as well as smooth transitions between setups. The cyclorama was suspended, so that it was possible to see the 360 degree screen, but the space below it was free. Some of the Works presented at Cube Fest contain one or more of the following: spatial music composition and performance, live music, immersive and multisensory experiences, video art and other art installations. For some of the performances the audience was encouraged to move around to experience different spots of the space with spatialized sound. In other performances, the central part of the space and the cyclorama were occupied by the performers, and the audience could sit around them or move around that area. Another remarkable point about Cube Fest is that I was able to see a variety of works by artists making interdisciplinary work, many of which were at the intersection of images and sound. All these different pieces with different needs equipment were shown in the flexible stage layout for the Cube during the event.

The reference artistic works taught me about ways in which other artists used technology creatively, resources they used to bring their imagination to life and ways to articulate their artistic intentions. While readings and theory helped to frame my research and understanding, seeing these works allowed me to experience and oftentimes discuss the works directly with people interested in them or with the artists directly. Experiencing these art events was part of my aesthetic education, so that I could train my senses and learn more about how to interpret aesthetic symbols and perceptions.

Aesthetics

This project aims to combine multiple media, especially images and sound, leveraged by technology, in an artistic rendition of a story divided into pieces. Each piece is a short story.

Aesthetic choices were made during the creative process of this project, among them a fundamental choice of using different media combinations to tell different pieces of the story, as if each short story “required” different media to best convey its message. This created a concern about possibilities of lack of cohesion and unity in the work, yet as the work progressed, this choice continued to seem to be valid to support the overall rendition of the work.

Following advice from Professor Eric Standley, I started the reading of the book *Foams*, by Peter Sloterdijk to address the concern mentioned above and to understand why it may actually not be a problem, so that the most important was to continue to develop material for the audiovisual performance, maintaining the use of multiple media.

Critical Social Theory, including the work of Theodor Adorno and Gaston Bachelard often informed my work as a student who aims to be an artist scholar. Peter Sloterdijk critiques Critical Social Theory and the Frankfurt School, announcing that they are dead. In this way, it is interesting to read his ideas, even though it is possible to argue that many of the ideas of Critical Social Theory are still relevant.

Sloterdijk proposed a whole new way to think about society, about history, about the world and everything that there is. For the purposes of this work, the ideas of network, spherology and foams developed by Sloterdijk are helpful.

Before *Foams*, Sloterdijk’s previous books were *Bubbles* and *Globes*. With *Bubbles, Globes and Foams* he is retrieving the microcosm of the human soul. *Bubbles* is about microspheres: the author focuses on the idea of a personal microsphere and on interpersonal relationships. *Globes* is about the macrocosm of ancient cosmology.

In *Foams*, the author returns to the social mesocosm of the 20th century. Each person is inside of their own microsphere. Many microspheres are rubbing up against each other, creating a foam in society. Sloterdijk builds his analysis starting with Heidegger’s idea of Being-in-the-World (Dasein). To be in the world means *being* inside of a sphere. Human beings create cultural spheres.

Foams is a difficult read, with difficult content. The sociologist Bárbara Freitag Rouanet, in a lecture about her review of the trilogy *Spheres*, wonders “why the author made us read and

be exposed to so many heterogeneous and unsystematic materials”²⁶. Reflecting on that question, she concludes by wondering if the reason is because he is actually making a metaphor for the state of philosophy today. In her review, she classified Sloterdijk as a “philosophical bricoleur”, writing using “the logic of dreams and free associations”.

The notions of spheres and circles were important to structure the work in this thesis. There are areas where images are projected, performances, sound fields emanate all conceived as imaginary spherical areas, transmitting certain concepts according to the part of the project they represent. Defining these spheres was important for the organization of the project. At the same time, these spheres overlap and each one of them is not so unified and independent, because the resulting artwork is achieved from their interdependence.

This project also deals with the idea of being able to change dimensions and modify one’s reality. As the character goes on journeys, in a way, she is exposing her sphere to the foam of other places and to other spheres, which then helps with her transformation as these other ways of seeing become part of her ways of seeing. The journey is important because this way of seeing engages the body and mind, going beyond the divide between body and mind, and even of “self” and “other”.

In this project, a lot of attention was given to the space, the creation of spaces and the creation of images and sounds that are delimited or delimiting a space to guide the audience through an aesthetic experience. Sloterdijk creates a concept of positive isolation in architecture, which relates to the creation of spaces and articulation of artistic intentions in this project. The creation of artistic audiovisual pieces that define a space inside the space of the Cube to create an aesthetic experience resonates with Sloterdijk’s idea of architecture as a tool to create new social ecologies and new ways to be-in-the-world. Changing realities and creating new ways of being is what the characters in the story are doing. These transformations and experiences are communicated and come to life through these pieces composed of images and sounds in the space.

The most important transformation in the story happens in the Dream Landscape, where the main character realizes the fluidity of her reality. The image that reacts to sound in this

²⁶Bárbara Freitag Rouanet, “The Trilogy *Spheres* of Peter Sloterdijk.” IOP Journal, volume 21, (August 2011): 73-84. http://www.iop.or.jp/Documents/1121/Journal21_Rouanet.pdf

piece is composed of vertices, lines and triangles, which are so tiny that when agitated by the sound input, blend with one another, creating the impression of a piece of fabric moving, but also of waves.

Graphic Music and Graphic Scores

The book *The Sound of Painting* by Karin von Maur contains descriptions and analysis about connections and relationships between music and visual art, as well the influence that music has had on visual arts and vice-versa since the nineteenth century.

One of the topics discussed in the book is intermedia synthesis, when it seemed that the barriers between visual arts and music had been overcome: “As the two arts became ever more receptive to the factor of the process -painting led by Jackson Pollock, music led by John Cage- by integrating the production of sound or the making and remaking of the painted image, they inevitably converged. In 1960 they finally met and mingled in the live collages of the Fluxus concerts, in which acoustic, visual, and tactile materials were brought together.”²⁷

It is interesting to note that many of the artists who were part of Fluxus, mentioned in the quote above, were interdisciplinary artists and worked in multiple media, seeing them as connected by means of the artistic process, instead of separate areas of specialization that required the artist to have one focus with no relationship to other artforms. Making art at the intersection of music and visual art is one of the goals of this thesis project. Studying artists who were successful in doing so is a fundamental reference to inform the artistic-scholarship component of this project.

It is interesting to note that historically the connection between music and visual art happened before from the side of visual artists interested in music composition, while the other way around, music composers using visual art happened later, as noted by Maur: “Artists took an early interest in the way composers worked, with an eye to achieving a comparable autonomy for their pictorial means and treatment of space and time. Yet composers apparently did not see the need to reform their linear notation system until about 1950, when they realized that its traditional basis in diatonics and metrics was no longer adequate to the acoustic phenomena of

²⁷ von Maur, Karin. *The Sound of Painting*. Munich; London; New York: Prestel, 1999, page 110

the new music”²⁸ However, John Cage, who revolutionized modern music, started as a music composer only, but then his work expanded into various media, so that he saw even his own entire life as art.

Graphic scores contain graphic symbols to help communicate information in a musical score beyond the conventions from traditional musical scores. Understanding why an artist may want to make a graphic score starts from the realization that the traditional musical symbols and conventions in a traditional score are also graphics. In this way, the composer may write different graphics to convey different emotions or expressions or something musical that may be better communicated with a different graphic or a different way of writing graphics.

In this thesis project, graphic scores were used as part of the creation process. The graphic score for one of the pieces became an interactive painting that responds to sound inputs. The process and outcomes are detailed in the *Documentation of the creative process*.

Structured improvisation

This project draws from learnings about structured improvisation from studying the work of John Cage, Karlheinz Stockhausen, Frederic Rzewski and other New Music artists in classes such as the New Music Ensemble, Art Since the 1960's and Music Composition.

Structured improvisation in the context of this project refers to improvisation in music according to the interpretation of a non-traditional score. In the New Music Ensemble, for example, the class often used graphic scores, text scores or even no score. The group read the text or examined the score together, discussed what they thought it meant and then started to improvise music based on the score and on the discussion about principles and interpretations. The class also had structured improvisation with no scores as a practice about improvising as a group, the importance of listening and of learning to understand cues and the dynamics of the group. Once the group had discussed, it was up to the discretion of each performer to choose what sounds he/she was going to produce during the improvisation, but their choices were influenced by the understanding of the structure of the score or by the principles discussed.

²⁸ Idem, page 114

The New Music Ensemble worked on a variety of graphic scores I created with watercolor paintings. Some of the scores were a static painting on a piece of paper, others were videos of watercolor paintings moving. For structured improvisation it is important to work with the musicians in rehearsals talking to them about the structure of the piece and what some intentions were, as well as listening to their impressions about the symbols.

Other structured improvisations with the New Music Ensemble had text scores, with words describing something that the musicians would interpret musically. That also required discussion and repeated rehearsals to refine the understanding of the piece.

We also studied and worked on pieces that had props, objects, light and images used in different ways. The group was open to studying and performing contemporary pieces that often required interdisciplinarity or that involved aspects of visual arts and theater.

In classes such as Music Composition and Computer Music and Multimedia with Professor Charles Nichols, I could study graphic scores and the work of musicians who were interested in visual art, such as John Cage. A lot of reflection was given in class to the approach of multimedia when visual art and music were involved. In the class Art Since the 1960's with Professor Kevin Concannon, there was a comprehensive overview of art history, with attention to shifts in thoughts and values in the world during the nineteenth and twentieth centuries, which led artists to make work reflecting how they were affected by the world they lived in, or by these changes in the world, or as a reaction to them or as vehicles to inspire changes in society. In the class we had the opportunity to study in detail some of the work from artists from Fluxus, an international interdisciplinary community of artists in the 1960s and 70s. A lot of the interdisciplinarity was possible because emphasis was placed in the artistic process.

The theory, analysis and exercises from these classes were important to inform the work from this thesis project by expanding ways of knowing about the works studied. The strength of artistic-scholarship lies in the combination of research and analysis in essayistic form with aesthetic education and the practice of making, to help see and discover things that wouldn't be possible otherwise.

Guide for the Audiovisual Performance

The guide for the performance below is in the form of a program, with titles of each piece, performer's name, role and instruments.

Stories of the Wind

Program

1. **Birds and Trees**

Interactive Video

Singer: Rachel Hachem, the Wind

Storyteller: Aline de Souza

2. **About the North Wind**

Fixed Media

Tuba, Horn in F and Trombone

3. **Kitchen and leaves**

Fixed media

4. **Bureaucracy, Power, Abuse of Authority**

Voice, Trombone, Tuba, Drums and Wool

Storytelling: Aline de Souza

5. **Kafkan Nightmare**

Fixed media

6. **Dream Space**

I- The Floating Space

Interactive Video

Singer: Rachel Hachem

II- Recovering Consciousness:

A poem by Matt Dhillon. Interactive Video. Scissors.

Poem reading: Matt Dhillon

7. Sound and Image Garden

Fixed Media

Sound Therapy: BreAnna Martin
(Tibetan bowls, crystal bowls, gong, voice and bells)

Plot Summary

An innocent kid who is fascinated by nature goes on a journey as she lives her life. She encounters difficulties. These difficulties lead the kid to face death. The Wind guides her through this journey, so that her journey in the Unknown becomes a wonderful experience. After that, the kid learned something about love and kindness. The Wind takes the kid (and the audience) to a beautiful sound and image garden for meditation.

Script/Plot in Detail

Announcement: The storyteller will thank everyone for being there and say that this is her thesis project, presented as partial fulfillment of the requirements for the Master's in Creative Technologies. She will turn the lights off.

1. Birds and Trees

This is the 1st piece. The storyteller and The Wind will be in this piece. The storyteller starts a video for the Cyclorama and announces the story:

I would like to tell you a story.

It starts under the trees

I'm a child and I'm fascinated by the trees

the wind

it moved the leaves, it moved the light, it moved the shadows and the light

the shadows and light

the shadows and light

it created sound

She spoke to me

She spoke to me in a language that I could understand

She spoke to me

She spoke to me in a language that I could understand about a journey

About a journey

A difficult journey in my life

The Wind may start making windy sounds at any moment. The score for this piece is a text score for structured improvisation. The sounds made by The Wind trigger the appearance of images layered on top of the video that is already playing.

The storyteller continues:

The Wind told me that a poet is someone who is very excited about something, so much that they would like to communicate to others about it.

I didn't hear it with these words at the time

I wouldn't know them

The Wind spoke in a way that I could understand

About a journey and the Unknown

The video for this piece has a duration of 5 minutes, so the piece should last for 5 minutes. At the end of this piece, when the video fades to black, the storyteller will "interrupt" this piece by saying the following:

Here is another thing that the wind told me.

That is a cue for the next piece, *About the North Wind*. The performers for the next piece enter the stage after this cue.

2. About the North Wind

This piece is for trombone, horn and tuba. It has no lyrics or narration text. It has a video with images that cycle through the Cyclorama.

In the ideal setting (Cube): The performers will enter the stage after the cue at the end of the last piece. The storyteller will look at the performers and get a signal that they are ready, and give a signal to start playing, as set in rehearsal. The storyteller will start a video for the Cyclorama. The performers will have already started playing their score for this piece. The piece lasts about 3 minutes. When the piece ends, the performers will leave the stage and the video will fade out. The storyteller will start the next video, for the next piece.

Backup: A video for the piece will include trombone, horn and tuba sounds.

3. Kitchen and leaves

This is the 3rd piece: Kitchen and Leaves. It is a video for the cyclorama with sounds spatialized for the Cube with ambisonics. It lasts 5:33 minutes. As a backup option, the sound for this piece was mixed with binaural encoding, so the spatialization is now for headphones. The images that were meant to be in the cyclorama will be in a video together with the sound.

Below is the narration text in the video. Not all words are audible.

I just want to run

I watched a film called "The Secret Life of Words"

A woman is a survivor of violence in the War of the Balkans, in the 90s

In this film she is a nurse in an oil ship. While she is taking care of a soldier, she tells him all the horrors she survived.

She was kidnapped and repeatedly raped. She was forced to shoot her own daughter.

There are no scenes of violence, but I could see everything clearly, from her words

During the war, when she was suffering violence inside an abandoned hospital, she'd look outside

to the trees

and the wind moved the leaves of the trees

She'd think about how she just wanted to run

with the wind through the forest.

She ran.

She could flee from the war to Denmark

Later in the film, she is sitting in her own kitchen.

The soldier from the oil ship loved and married her, even though she was afraid that her physical and mental scars would sink them both. He said he would learn how to swim.

Looking at the beautiful garden, in her peaceful kitchen. Her own life.

She sees her daughter running in the garden, with the wind to the forest.

She said: I just want to run

I watched art films looking for solace for my own situation

Aunt Aquina sat in the kitchen one day, telling us about the violence from her husband

He beat her up, she was bleeding. She forced her to have sex. He put her outside of the apartment with her clothes torn apart. I offered her shelter in our house. My mother said shut up stupid girl you're 12 and you don't understand. Aquina, he is your husband. Go back home and prepare a good dinner.

I just wanted her to run

from her husband

I would always help in the kitchen, and clean and cook. I would be there

I would help my mother in her office. I was her secretary everyday.

but not my brother, not my father.

Why isn't my brother helping: he is a strong and independent man, they said

Please, help me, my brother is always trying to touch my chest and invade me

I don't know what it is, but it's not ok. I didn't know until I learned what it was called and until I got older and until it got worse.

I was the only one to defend myself.

Strong and independent man.

The place of the woman is in the kitchen

The place of the man is in the kitchen

Everybody's place is in the kitchen

The kitchen has food!

I mean, c'mon, if you want to argue that only women should be in the kitchen because it's inferior, you're missing out.

I will clean my own kitchen, far away,

in full humanity

In the ideal setting of the Cube, the storyteller will play the video. After the video ends, she will walk to the center of the Cube, as if to continue her narration from there.:

Next, I will tell you a story with watercolors for meditation - [interruption]

That is the cue for the next piece, and for a performer (Gabriella Marchetti from the New Music Ensemble) to enter the stage and stand in front of the storyteller, blocking her way. It is the start of the next piece.

4. Bureaucracy, Power, Abuse of Authority

This piece lasts about 5 minutes. In the ideal setting of the Cube, the storyteller will be in the center of the stage space, announcing the continuation of her story, but a performer will block her way. The storyteller will move to the opposite direction, but this performer will block her way again. That is a cue for the other performers in this piece to enter the stage.

The score for this piece is for trombone, horn, drums and voice. In the score, the performers assigned to "voice" will be holding threads of wool and walk in circles around the storyteller, wrapping her with wool as they sing the following text from the score:

“*We are the bureaucracy, power, abuse of authority.*”

Following the score, the performers will tighten the circle formation around the storyteller and scream words that will blend in noise confusion. The storyteller will fall on the floor. The words are a choice of the performers, but they were directed in rehearsal about the concept as detailed in the correspondent section of the *Documentation of the Creative Process* for this piece.

All performers will drop the wool threads and leave the stage. Performers playing trombone, horn, drums will also leave the stage. The storyteller will stay on the floor, still wrapped in wool.

The performer who is playing The Wind will start the next video.

It is difficult to provide a backup for this piece to replace the performance during the Covid-19 pandemic, since rehearsals and conversations with members from the New Music Ensemble were not recorded. A set of drawings were made to represent what happens. Making an animation of the piece is another possibility, but it is far from conveying the sense of an actual performance.

5. Kafkan Nightmare

This is a video for the cyclorama with spatialized sound with ambisonics for the sound system in the Cube. It lasts 2:41 minutes. In the Cube, the performer who is playing The Wind will start the video.

A video backup option for this piece was made because of the impossibility of being in the Cube during the pandemic. The audio was processed with a binaural encoder.

6. Dream Space

The images for this piece will not be projected on the cyclorama. The projection will be on the curtains of the Cube, from a separate projector that will stay on the floor near the stage, as shown in *Adaptations to different spaces, backups and limitations*, under *The Setup in the Cube*.

The image depends on voice inputs to move. This interactivity was programmed in Pure Data, as detailed in the *Documentation of the Creative Process*.

This piece was divided in two parts:

1- First the Wind and a volunteer from the New Music Ensemble will start the interactive video and turn the projector on. The Wind will sing on the microphone according to the structured improvisation score for this piece. The duration is about 3 minutes. The score that the Wind sings contains the following words:

The floating space in dreams

That space is in your skin

That light is Everything

The Wind, I moved in dreams

What is the wind like in this piece: She is mysterious and fascinating, with a full strong voice in the Dream Landscape.

2- With a pair of scissors, the Wind will cut off the wool from the storyteller that is still lying on the floor. The video and projection from the previous should remain on during this part. A poem by Matt Dihlon will be read while the Wind is cutting wool.

The poem is as follows:

I'm still breathing- which is a relief

every time I check, pushing and pulling

invisible strings- the act itself becomes invisible.

It's easy to stumble knowing that the breath

which animates dust- the same that I use

to fog the window where I print my palm-

*is the warm material of the living and, only a few
feet beyond, of empty space; which means
everything I am is that carefully close to nothing.
It isn't only those who walk on water or talk to trees
who are counting on miracles. Every day something
comes out of nothing. Just look at the wind
pushing wrinkles through the grass, the trees bending
and rising to swat the sky, your hair, too, rising
to join this motion, this faith in things that sweep out
of the unknown and the farther unknown
where they're going.*

After removing the wool, the Wind and the storyteller will go back to the spot by the microphone where the Wind was singing. The storyteller will resume the narration by saying:

While traveling in the Dream Landscape, the Wind showed me a Sound and Image Garden. We are now going to that space.

The storyteller will follow the Wind walking away from the stage and to the computer table. The storyteller will make the lights of the Cube dark for a moment. BreAnna will walk to the stage, to the spot where the round rug and Tibetan bowls are. A spotlight will light BreAnna with her bowls. She will strike the first bowl, starting the next piece, the *Sound and Image Garden*.

As a backup option in case any part of the interactive idea for Dream Landscape fails at the moment of the performance, or if it is not possible to physically be in the Cube, a video was

made with the image moving from a recorded track of the Wind's voice and of the reading of the poem. A drawing sequence illustrated the removal of wool.

7. Sound and Image Garden

In the Sound and Image Garden. BreAnna Martin plays Tibetan bowls, crystal bowls and bells. In the cyclorama, there will be a video with watercolors of trees and flowers.

BreAnna's bowls and musical instruments will have been standing in the space from the beginning of the show. At the moment of her performance she will walk to the stage and start playing the bowls. There is a specific sound she always makes as a cue in her sound therapy sessions indicating that the session is over. I will go back to stage after that, bring the lights back and thank everyone for attending the event.

Since we are not in the Cube due to the Covid-19 pandemic, BreAnna will record herself in her house and I'll put that in the video with watercolors.

Documentation of the Creative Process

General Process

Pre-production, production, experimentation, post-production, research, analysis: these stages are in constant dialog with each other. For organization of thoughts and of the artistic process, notes in a logbook were taken during the creative process, which compose this Documentation of the Creative Process.

For my thesis project, I wanted to present something to reflect the various skills, multimedia techniques and artistic ideas I had the opportunity to learn throughout the Master's Program in Creative Technologies. I started by imagining an exhibition with a mixture of installations and videos about different stories and meditation, but an experience of discrimination for my national origin by a figure of authority in the department, supported by his partner who is also in the department, made me change the ideas for the thesis completely.

This difficult academic situation jeopardized my studies because it contained threats, bullying and harassment. It required extreme resiliency to keep up with school work during that time. It was important to write down events and look for help from people and resources at university for cases of conflict, as the situation got worse. This was only my voice and my version of the situations, which cannot be verified as truth unless I could get witnesses to speak, or unless the person admitted doing or saying what I said was done and said. Without the help from resources at school, I would not have been able to maintain my schedule and fulfill my academic obligations.

As I reflected about what was happening, I remembered the work of Franz Kafka, Victor Hugo, Trond Reinholdtsen, and Theodor Adorno. With that, I had the most important tools to shift my attention from being worried about the worsening of my situation to documenting the facts according to my perceptions and reflections. This situation was used as material to compose *Bureaucracy*, *Power*, *Abuse of Authority* and *Kafkan Nightmare*, the bad parts of my story, fusing elements of the realistic and the fantastic, as well as of specific and autobiographical elements with general critique of incomprehensible socio-bureaucratic powers.

Without having to mention names or describe what I claim to have happened to me at university, I could make aesthetic renditions of my experiences, which constitute the bad times in the story of the thesis project. This made the story have an arc of development, problem and resolution, instead of being flat. In addition, because of the content of what I perceived as attacks, I ended up reflecting on issues about my experiences growing up, experiences of people who have to leave their countries because of war problems, and experiences of people who travel by choice. Because of that I produced another piece, *Kitchen and Leaves*, to contribute to the bad part of the story of thesis project, about a subject I had been meaning to make art about for a while, but didn't know how to approach. For recovering from the bad parts, I created *Dream Landscapes*. Therefore, in a way, I'm highly indebted to the two people in positions of authority in the department who provided me with this difficult time at university.

I organized different pieces of stories and different media and techniques to form one story that mixes my own experience with imagination elements. First I thought about an outline of the story with an arc of *beginning*, *development with difficulties*, *transformations*, *recovery*, *resolution* and *end*. Then, although I was certain that I was going to use my own experiences to make this work, I had to decide whether the telling of the experiences was going to be more

poetic, vague and abstract or more factual and autobiographical. I decided on a mixture of both: a work that draws from personal experience, mixes imagination and uses technology creatively to convey emotions with visual arts and music. In addition to creative approaches to my experiences, I let my imagination roam free, in my artistic practice.

Meditation and positive transformations were also main inspirations for the project. They would constitute the *recovery, resolution and end* parts of the story. I was in a somewhat serious accident at the age of 16 and stayed unconscious in a hospital for about two days. Part of it was a wonderful experience and not something I am able to explain with words, and perhaps something I am not able to explain at all. However, it left the impression on me of something tremendously magical. Related to that experience of wonder or magic is my fascination as a kid with nature, birds, trees, any plants and gardens, as well as with art and poetic approaches to dwell in this planet. Air is an element that always captured my attention. I would notice the wind moving tree tops, or making gentle and stronger sounds, as well as birds flying.

I experienced transformations by traveling and observing the world around me. I was marvelled by how airplanes can fly and by how birds too can catch wind currents. As I travelled, I became more aware of dynamics that were present in the world, such as marks left in societies because of colonialism, imperialism, civil rights movements, post World War changes in ways that people think, and other things that I had learned about in history, geography and art classes at school, or in readings. These classes and readings helped with understanding of things from the world I lived in. At the same time, traveling and getting to know different places and cultures help me understand readings that were part of my education at school or university. In addition to that, traveling to other places is also marked by a process in which I'm getting to know unfamiliar people for me and these people are getting to know me as an unfamiliar person. In this process people may get to test stereotypes they had about each other, be excited about how different certain ways of living in one place are different from another place. I have observed through traveling that it seems that people around the world have certain stereotypes associated with certain nationalities. Sometimes they are positive, sometimes not. Sometimes people want to avoid having these stereotypes about others. In this way, while traveling, I personally didn't want to be put in a drawer of stereotypes associated with my nationality, skin color etc, and not be perceived as an individual. These thoughts about learning about self and others through traveling were important to compose the story.

In *Memories, Dreams, Reflections*²⁹, Carl Jung relates his travel experiences and how he got to be in touch with and study people from all over the world, from very diverse cultures and ways of living. He noticed that human beings have very similar struggles, aspirations, tribulations and quests, whether they are in a busy city like New York in a more isolated tribe in a remote location in Africa. The more he was getting to know the “other”, the more he realized that the stranger was himself. This notion of non-difference or non-duality is sometimes experienced even further by people who go through the so-called near-death experiences, or who take certain drugs, as argued by Alan Watts and Aldous Huxley, or who practice meditation: it is the notion that there really is no difference between what you think of as yourself and anything that is outside of “yourself”. It is not an intellectual way of knowing, but a certainty that is part of the composition of your body. This was an important element of my experience being unconscious for a few days after an accident, and was brought to the story as well.

Other themes that compose the story are difficulties of being a human being in general, problems from the experience of other people I got to know, and experience of works of art who tell about the experiences of other people.

Method for working in the entire project

I had a general method of work to make this thesis project that applies to all parts of it. I made decisions about space, themes and media in general, including the possibility of making multimedia work. I brought studies from classes throughout my MFA because they were fundamental to inform my artistic practice as an artist-scholar who combines research and analysis with artistic practice. For example, in Professor Simone Paterson’s class of Motion Graphics, I learned how to use After Effects to animate 2D images, polish the images and their movements, and also keep notes and sketches about my process and continue to strive for better aesthetic qualities to match my artistic intentions.

I chose a theoretical framework to identify the angle and analysis of the thesis work. These are organized in the section of this thesis paper about *References, Archetypes and Motifs*,

²⁹ Jung, Carl, G. *Memories, dreams, reflections*. New York: Pantheon Books, 1963.

and in *Aesthetics*. When I was a teaching assistant in Professor Eric Standley's class, Foundations of Art and Design, we revised the allegory of the cave or Plato's Cave. It made me think about the need to mediate between what you sense and imagine, see and hear. This is how the theoretical work impacted the art making in this thesis project.

The exhibition space added new dimensions for the project. The choice of the Cube as the space for the project had an additional sound dimension, as well as additional light and imagery dimension. In addition, the way I approached the composition of visual art and music was by having spatialization not just as a special effect. It was really necessary because it can help tell a story and create soundscapes and landscapes. I drafted a layout of the space in the Cube in the beginning of the project, to help understand how to make the parts of the project. The layout became more consolidated as the pieces were being more consolidated and I reflected on my intentions for how the work appeared to the audience. All these dimensions of the Cube have their own technical challenges to work with, and also open possibilities for immersion and exploration of image and sound. I also chose to use the Cube as it is a theatre where I could share the work with the university community, as well as the community of local people in the town of Blacksburg and in the New River Valley area.

I took the class Electroacoustic Research with Dr. Eric Lyon specifically to learn how to spatialize sound, focusing on ambisonics in spaces such as the Performance Studio and the cube in the Moss Arts Center. The class provided knowledge and tools to make explorations in spatial sound and also helped with reflections about aesthetic approaches. I still needed to be familiar with the space and to test ideas *in loco*, which was done by reserving times in the space. Oftentimes when I went to test sound in the Cube, I needed help from ICAT staff to learn how to setup and operate the system. Tanner Upthegrove, Brandon Hale and George Hardebeck helped me with times when I had pieces to test and ambisonics recordings to setup, as well as figuring out how to make the interactive programs I had work in the system of the Cube.

For learning about making videos and images for the cyclorama, a class in the Winter semester of 2018 with Tanner Upthegrove and Zach Duer was helpful to learn about making work in the Cube in general, as well as to learn about the documentation for using resources there, including dimensions and recommendations for the cyclorama. When I focused on testing images, videos and interactive images for this thesis project on the cyclorama, ICAT staff George Hardebeck, Tanner Upthegrove and Brandon Hale also helped me to understand more

about the cyclorama, put my images through World Viewer, the software that connects with the projectors, and make the interactive images in MAX/MSP with live processing be displayed correctly on the cyclorama.

In order to tell one story, I divided it into small pieces. Different moments of the story called for different media and different approaches, which is why it was easier to divide the story. Each piece is a complete work in itself that when put together with others could form one story. For the making of every piece in the story I had working questions, goals and sometimes hypotheses, which helped me to stay focused. These were sometimes revised during research and composition of each piece.

For each piece I collected sounds and imagery, and worked with imagination. Helpful questions and prompts were the following: What phenomena am I studying? Imagine form, observe, reflect on. Decide what form.

There was different equipment necessary for each piece. It was important to check out equipment and organize time to use it. I spent time with each software and equipment to familiarize myself with what the equipment or software could teach me about what it could do. Every piece has a list of equipment, including notes, and a list of strategies.

A logbook helped me with the process: trial, error, experimentation, feedback. It wasn't the result that counted, but the process with failures, new beginnings and learnings.

Another important step in making is recording and cataloguing. Many of the rehearsals with performers and tests in the Cube were not recorded. This became a problem after the start of the pandemic. It would have been extremely important to have had this material. It left the learning of the importance to document everything from the beginning, including moments that seem trivial.

In the process of making the project I had a collection of a variety of sounds and images: natural sounds, synthesized sounds, hybrid sounds, handmade watercolor paintings, experiments bringing that craft or aspects of painting to technology, 3D modelling, experiments breaking models. These had to be organized, keeping in mind how they made sense in the story and how to make it work dramaturgically.

Bringing the community to participate or collaborate is something I value in my artistic practice. This thesis project would be greatly enriched by having the inputs and contributions from other artists in different parts of the work. I wanted my role to be that of a creative technologist, providing structure to images and art with technology. I was planning the work and being a director. The project is an audiovisual performance, which means that there is room to bring in people for performance, voice, music, poetry and many other areas that are required to tell the story.

A few collaboration ideas that worked were the following:

- Inviting Rachel Hachem, music major in voice, to be the performer who plays The Wind.
- Inviting the New Music Ensemble to play wind instruments for About the North Wind, and to perform the multiple roles and play instruments in Bureaucracy, Power, Abuse of Authority.
- Inviting the musician BreAnna Martin (The Singing Hare), who makes sound therapies in Blacksburg, to make music and perform in the Sound and Image Garden.
- Inviting the poet Matt Dihlon to make a poem for recovery from difficult parts of the story.

Rachel Hachem sang from scores that I composed. The original idea was to work with structured improvisation from images, but later in the semester the performer didn't want to do that anymore. She reiterated her interest and commitment to participate in the project, except that she wanted all her parts to be carefully notated in a traditional score, with no improvisation. I decided that it was more important to keep an experienced performer who was really committed to being present to sing than it was to find another performer who was open to trying structured improvisation. So I improvised looking at images, notated my improvisation and created a traditional music score. The original idea was that the singer was going to be contributing voice textures from reading text scores and looking at images. In this type of music improvisation, it is as if the performers are composing, in a way, by interpreting the non-traditional scores, even if they do so by regarding certain prompts, structure, direction and constraints. Except that in this case I improvised and then gave the performer a score.

The New Music Ensemble has experience with musical performances that involve less traditional ways of making sound, as well as performing graphic scores. Experimenting with New Music that is different from tradition is part of their regular artistic practice, so that they quickly understood the scores for the pieces to which they were invited to perform. The group was interested in keeping regular rehearsals. Members of the ensemble continued to be committed to participating in this project in case it can be performed in its ideal setting after the Covid-19 pandemic.

Some collaborations didn't happen due to lack of experience in organizing a large audiovisual performance combined with lack of resilience to maintain confidence during difficult academic times mentioned above, when I wasn't sure if people would like to work with a person who had a conflict with two figures of authority in the department. The following are collaborations that may be thought about for future developments of the work:

- Someone to work with Lighting Design.
- Someone to work with Scenographic Design.
- Someone to work with Costume and Make-up Design.

The list above is not definitive. There may be other ideas for other functions, participations and ways to collaborate according to feedback and critique of the work

The pandemic also affected communication with some of the people who were participating in this project. I momentarily lost contact with BreAnna Martin, who was going to record her sound therapy from home, but contact was recovered in time for the production of a video for The Sound and Image Garden. I could maintain contact with some members of the New Music Ensemble, mainly Caden Vandervort, Gabriella Marchetti and Jennifer Webbert. I completely lost contact with Rachel Hachem, but recovered it in time for her to send a recording of one piece, before the day to present the project. I adapted the videos to have something done by the time of the thesis project presentation even if I couldn't get a response from any performer, but it cannot replace performers with in-depth, multi-year music practice.

Documentation of the Process of Individual Pieces

1- Birds And Trees

1.1 - Stages of making:

1.1.3 - Intentions

My intentions for this piece were the following: Express memories of childhood from observing birds and trees from a distance, as well as from the viewpoint of standing under tree canopies and observing the sunlight being filtered by the leaves of the tree tops; Communicate how fascinating these moments were for a child; Tell a story in which the wind is speaking to a child who is fascinated by nature. My goal is to lead the audience through imagery, actions and soundscape.

1.1.4 - Imagination

In this stage I imagined a vision for this part of the story and thought about ideas to articulate emotions. The images and sounds from my memories are the following: a blend of images of tree tops, with leaves moving with the wind, the sunlight passing through the leaves, the light flickering by the movement of leaves blocking and unblocking the light. I imagined that if I could record nature images and sounds, I could use software to blend, layer and distribute these images and sounds in space to articulate the idea of wind's magical impression, and the accumulation and mixing of these images in memory.

1.1.5 - Field trips

I recorded images and sounds in nature. I had working questions for field trips which are the following: What I was looking for? Birds and trees. Where to look? What would the wind show me? Trees, leaves, light changing between leaves. What sounds to listen to? What would the wind tell me?

Ears focus and adjust to particular sounds. Eyes focus and adjust to particular images. In memory I also make a selection of things I remember. However, recording devices capture everything. Therefore, sometimes I needed to get close to what I wanted to record. Going on field trips allowed me to be in touch with what I was looking for, as well as inspire ideas for experimentation with the material from the recordings. Below are pictures of videos from field trips, in Figure 7 and Figure 8.



Figure 7: Picture from video from field trip.



Figure 8: Picture from video from field trip.

1.1.5.1 - List of Equipment used for Field Trips: Camera Panasonic HC-VX870, Camera Sony Cybershot DSC-HX400V, Canon DSLR camera, Tripod, Zoom H5 Recorder, Smartphone.

All equipment, with the exception of the smartphone that belongs to the author, was borrowed from the Media Design Studio A in Torgersen Hall.

1.1.6 - Images that are copyright free

The bird videos are copyright free videos from Pexels.com. I struggled to get good shots of birds, and after the pandemic it became impossible to continue to borrow equipment from Torgersen Hall. I found copyright free videos of birds and consulted with Eric Standley about using these images. A list and link to the videos can be found in the Appendix, under this number, under the section for Birds and Trees.

Pexels' License is stated as follows in their website:

“What is allowed?

- All photos and videos on Pexels are free to use.
- Attribution is not required. Giving credit to the photographer or Pexels is not necessary but always appreciated.
- You can modify the photos and videos from Pexels. Be creative and edit them as you like.

What is not allowed?

- Identifiable people may not appear in a bad light or in a way that is offensive.
- Don't sell unaltered copies of a photo or video, e.g. as a poster, print or on a physical product without modifying it first.
- Don't imply endorsement of your product by people or brands on the imagery.
- Don't redistribute or sell the photos and videos on other stock photo or wallpaper platforms.”³⁰

1.1.7 - Composition of Soundscape

I wrote a narration text and a text score for structured improvisation. The text score is a set of instructions to help direct improvisation and requires rehearsals. The narration and text score are as follows:

Birds and Trees

Narration text for the storyteller

I would like to tell you a story.

It starts under the trees

I'm a child and I'm fascinated by the trees

³⁰ “License. Legal Simplicity” Pexels, accessed May 17, 2020, <https://www.pexels.com/license/>

The wind, it moved the leaves, it moved the light, it moved the shadows and the light
the shadows and the light
the shadows and the light
It created sound

Text Score for Improvisation of Wind Sounds

Instructions: The Wind may start making sounds at any moment during this piece. Your sound input from the microphone triggers the appearance of a second layer of images on top of the video that is already playing on the screen.

Quiet, prolonged whoosh sounds crescendo.

Whispers with words

Rhythmic breathing sounds

Breathing sounds that turn into humming

Humming

Sing one vowel sound with a rising and falling pattern, like an envelope

Start with one vowel and transition to another vowel, also with an envelope

Buzz sounds

The narration from the storyteller and the wind sounds from the performer of *The Wind* were meant to be performed live, but because of the Covid-19, I had to create a video of this project, so I recorded my voice reading the narration text to put in the video. I also recorded myself improvising according to the text score and instructions that were meant for the performer.³¹

In my studio space at home, I thought about working questions and intentions for composition of visuals and sounds. For the soundscape of the story, I organized the recordings from the field trips as source materials to be processed with reverberation in Reaper or granular synthesis in CSound. I plucked strings in my harp, recorded these sounds and processed them with granular synthesis in CSound. I applied reverberation to the recordings of my text narration and improvisation of wind sounds. Finally, I organized all these sound files in a

³¹ I had written the text and score early in the process of making this thesis, around August of 2019, and reviewed it a few times during the creation process before the pandemic, met with the performer to talk about it and rehearse. However, during the pandemic communication with all performers became difficult. The performer couldn't meet over zoom, but promised to send recordings. I understand that everyone was struggling during the pandemic, so I prepared myself for not having her recordings, and recorded my voice improvising according to the text score. I couldn't get her recordings for this part, so I used the version with my voice.

timeline in Reaper, divided by tracks. Then I automated each track with an ambisonics encoder plug-in to mix the sound for the space of the Cube, organizing the sound in the space with azimuth, elevation and distance. I also applied reverberation on some of the tracks with sounds created in CSound. After that, I adapted this mix for the video to be presented because of the Covid-19 by using a binaural decoder that decoded the ambisonics mix into two speakers, simulating the environment of the Cube in the environment of headphones.

Below in Figure 10 is the picture of my granular synthesis code in CSound Qt, which I learned about in the Computer Music and Multimedia class with Professor Charles Nichols. I used variations of granular synthesis code I created for class and another piece of code from class, combined. This code uses the opcode *grain*. Opcodes, as the CSound Floss Manual explains, are basic building blocks in CSound: “‘Opcodes’ or ‘Unit generators’ are the basic building blocks of Csound. Opcodes can do many things like produce oscillating signals, filter signals, perform mathematical functions or even turn on and off instruments.”³²

The opcode *grain* generates granular synthesis textures. It is important to write the syntax with the parameters that this opcode asks for in the Canonical CSound Reference Manual, which comes with CSound and is shown on the right part of the picture. I don't completely understand how the opcode works, but I learned to follow the parameters and understand how I can change numbers to create experiments.

In Figure 9, the code is for a simple granular synthesis using the opcode *grain*, with parameters to vary pitch, grain density, and grain duration. It also randomizes amplitude and pitch, but controls the maximum amplitude and pitch deviation in relation to the amplitude and pitch of each grain. I can also change and control the grain duration in seconds. Experimenting with each of these parameters gives me different results.

³² Floss Manuals. *CSound* Retrieved from <http://write.flossmanuals.net/csound/b-csound-syntax/>

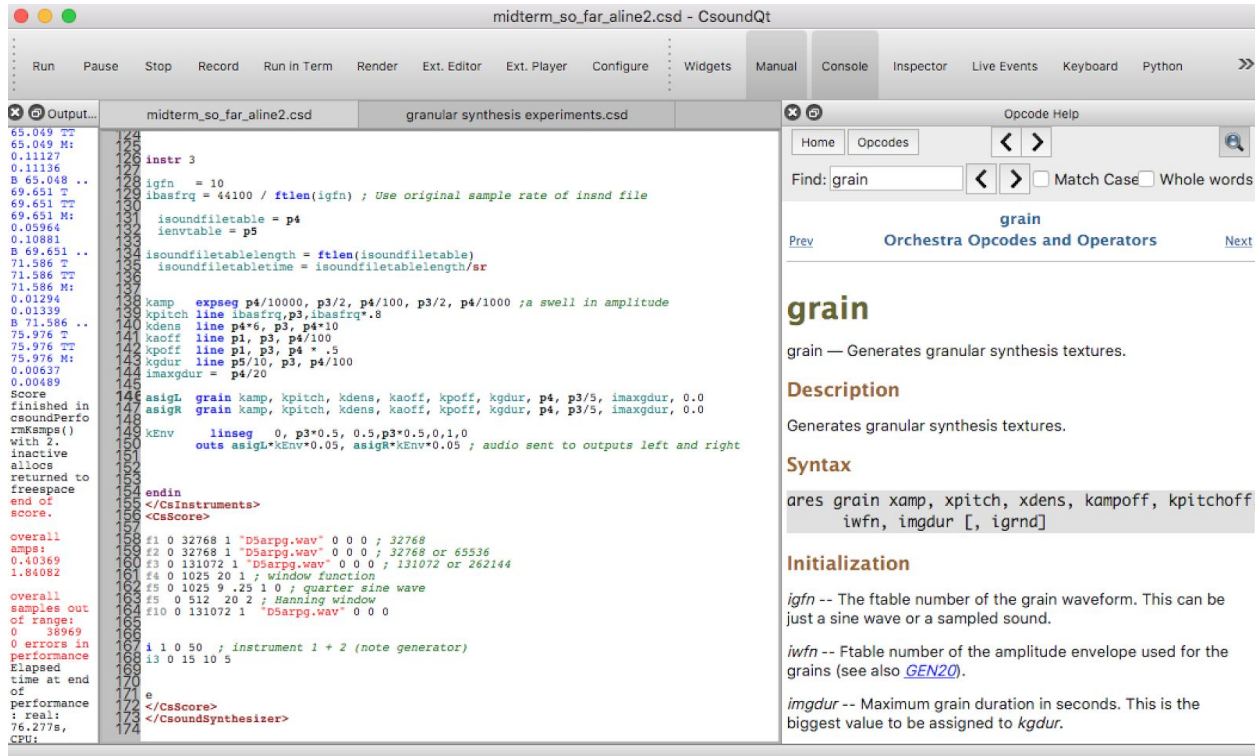


Figure 9: Picture of granular synthesis code in CSound Qt.

Below in Figure 10 is a picture of my Reaper file with sounds organized in a timeline and also with parameters of ambisonics automated, reverberation applied and binaural encoding applied. The ambisonics encoder is a VST plug-in called RoomEncoder (IEM) (64ch), which I learned about in Professor Eric Lyon's class that I took to learn how to spatialize sound for the Cube. The binaural decoder is a VST plug-in called BinauralDecoder (IEM) (64ch). When the pandemic hit, the class had to be adapted to this situation of having to have everything in computers at home. So Dr. Lyon taught the class how to decode our ambisonics mixes prepared for the Cube into a simulation of that mix for headphones. I applied this idea to adapt all ambisonics mixes in this thesis project. Creating work for this new environment of headphones calls for different strategies, as it is a different space. I made a different spatial composition as I reviewed the files to adapt them for this new space.

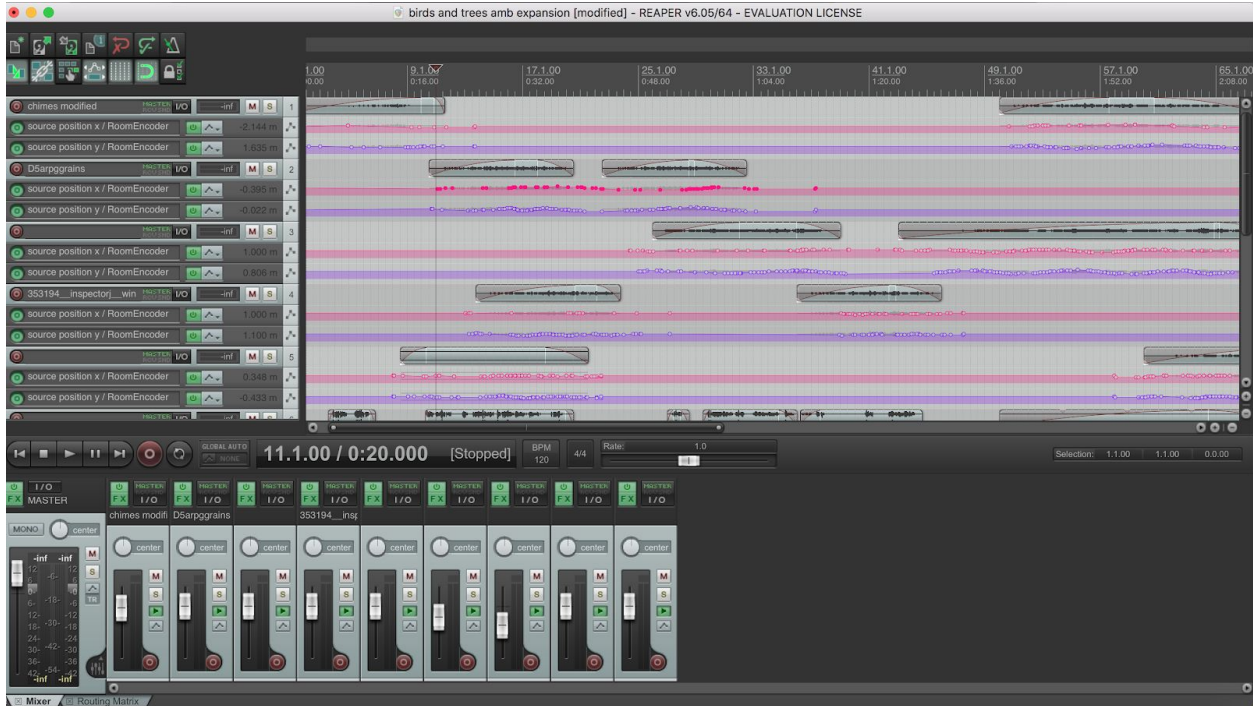


Figure 10: Picture of my Reaper file.

When creating or processing these sounds, I also had similar questions from those of the field trips, such as “What to listen to? What would the wind tell me?”.

Other things I took into consideration for making the soundscape for this piece were the following:

- Distance of the voice: should it be closer or further away?
- Voice with too much reverb will be more difficult for people to understand. When I introduce narration, I create an expectation to understand.
- Work with equalization in each track for emphasis for higher range when the sound peaks and it doesn’t sound good or it is too loud.
- Have different sounds in different locations around your head with headphones.
- The story is articulated by the sense of space.

1.1.8 - Composition of Imagery

For the composition of images for this piece, I created an interactive instrument in Max/MSP, which is a visual programming language environment to create sounds and images. I

studied how to use Max to display my interactive works on the screen of the cyclorama and because Max is used in the sound system in Cube and for Professor Eric Lyon's class.

I used tutorials to learn to work with blend modes and to connect a sound trigger to open videos in Max. The list of tutorials I used is in the Appendix.

Some of the objects I used were out of date, which made my patch work perfectly sometimes and not work on other times without apparent reasons. When I tested the patch in the cyclorama in the Cube before the pandemic, George Hardebeck from ICAT helped me with updating these objects and making connections. The test was successful then, without unpredictable failures, but as with many tests I made in the Cube, I did not take pictures of how the image looked in the cyclorama, taking for granted that the performance would happen in that space.

To make the imagery that shows in the display of the Max patch, I put together all the videos I had with bird images into one video sequence and made *video1*. Then, I put together all the videos I had from field trips with tree images into one video sequence and made *video2*.

In the performance of this piece, in the Max patch, I manually press play for *video1*. The Max patch is capturing the sounds from the microphone that the performer is using. When the microphone of the performer receives sound, it triggers *video2* to play on top of *video1*, layered with blend modes inside max to be transparent and additive.

Below are Figures 11 and 12, with pictures of my Max/MSP patch with *video1* playing, then receiving sound input, which triggered *video2* on top.

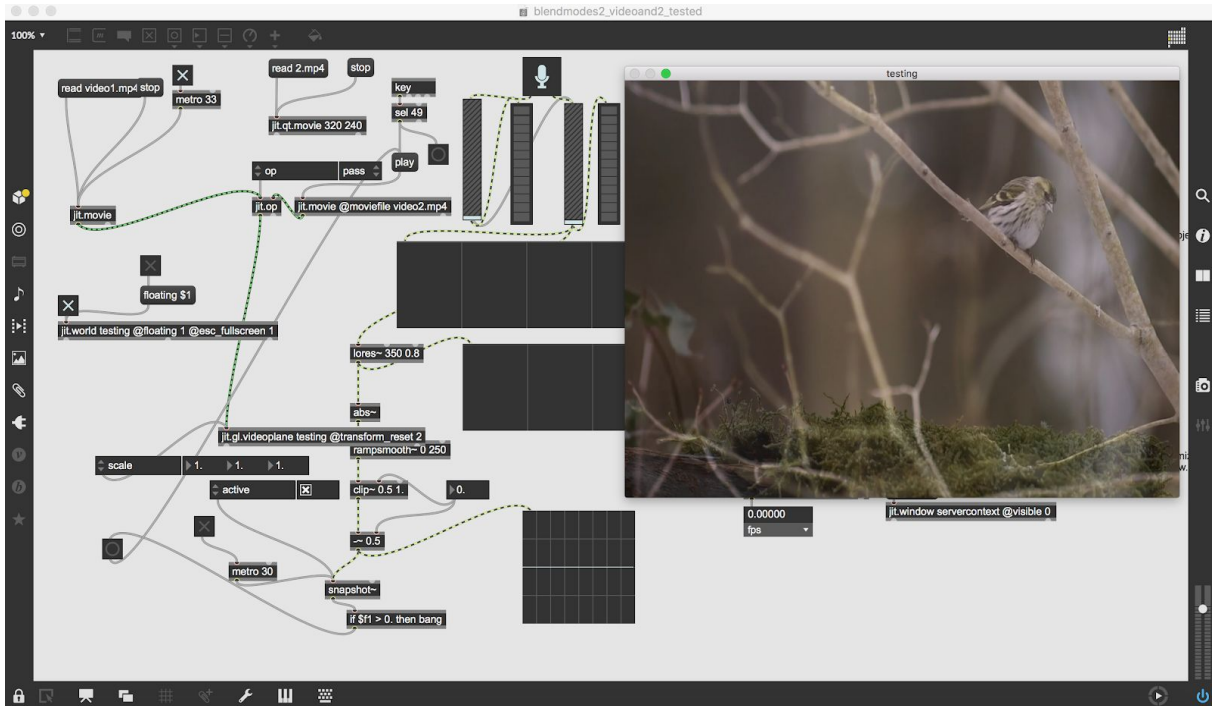


Figure 11: Picture of Max/MSP patch with video1 playing, before receiving sound input.

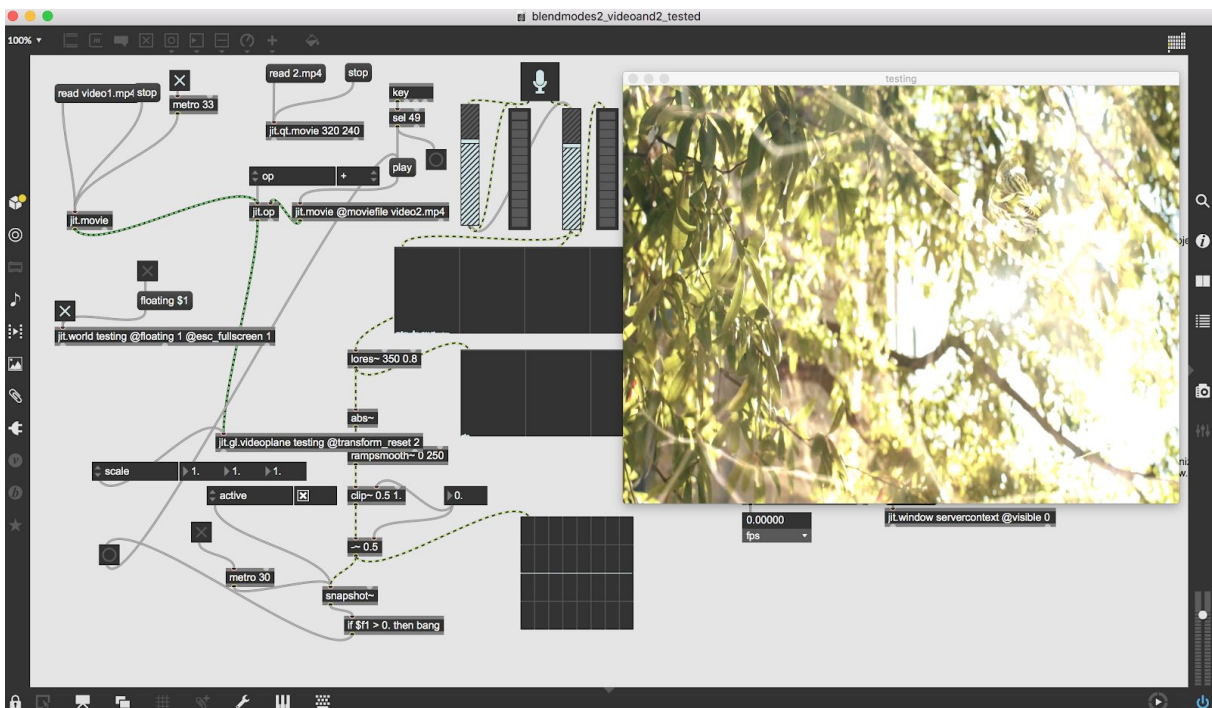


Figure 12: Picture of Max/MSP patch after receiving sound input, which triggered video2 to play, layered on top of video1.

A backup was made before the pandemic, and became very useful afterwards. If the Max/MSP patch fails for any reason, a video will be played for Birds and Trees instead, which simulates the interaction of sound and layered images created in Max. To make this video, I recorded a video of the images in the display inside the Max environment with a video recording functionality inside Max. For the pandemic adaptation, I put together this backup video with soundscape composition in Premiere Pro.

1.2 - Rehearsals and Improvisation

Apart from the exceptional situation of the Covid-19 pandemic, the performance of this piece is based on the technique of structured improvisation, a technique I studied when learning about John Cage's work, as well as when learning about how to practice it with the New Music Ensemble.

The score for this piece is a text with words and instructions. After looking at the score, the performer thinks about how she can interpret it. It is important to rehearse to evaluate how these ideas work. During rehearsal, it is very important to listen and not start making sounds at random, without paying attention to the dynamic of the group.

1.3 - Plot for this piece

This piece shows the experience of an innocent little kid who is fascinated by the nature around her, mainly birds and trees. She notes that the Wind moves the leaves of the trees, producing interesting colors and reflections with the sunlight. She also notices the windy sounds from the Wind and the sounds it makes moving leaves of trees. She notices the birds singing too.

2 - About the North Wind

2.1 - Stages of making:

2.1.1 - Intentions

My intention was to convey something that the wind is telling you without words, and only with wind instruments sounds and imagery that looks atmospheric, light and fluid. I also hoped to convey a sense of journey or announcement of that journey by the wind.

2.1.2 - Imagination

I imagined musical motives of the wind moving through space with very transparent watercolor moving through space as if it was being carried by currents of air.

2.1.3 - Music Composition

For the music composition I thought about starting by exploring sounds from wind instruments that are not the usual sounds that the instruments make when played properly, such as clicking on the instrument's valves, tapping lightly on the instrument. These sounds are not present in the mix prepared for this video, but they are notated in the score. I invited the New Music Ensemble to play it, and they accepted, but I did not record rehearsals of this piece, once again taking for granted the possibility of group meetings before the pandemic.

I explored motives of notes doing up and down in the scale, rapidly, and then having another instrument recall a motive that was just played, as successive layers of wind. I was visualizing wind movement in my mind when composing the music, with a more visual approach to sound, but the notation is done so that I can give a traditional score for the musicians, with symbols I created to represent the non-traditional sounds, along with explanations for these symbols and sounds. This piece was only possible because I was studying music composition with Professor Charles Nichols, to learn about how to compose and think about my aesthetic intentions musically. To notate, I used the notation software MuseScore. I did not try asking for a recording from the performers of the New Music Ensemble because I lost touch with some of them, but kept in touch with others who are still very interested in participating and will be in the ensemble next semester. I exported the midi render of these notes from MuseScore to use as a way to convey some of what I composed for this piece. I prepared a concert score and separated parts for each musician. The concert score is as follows:

About The North Wind

Aline Souza

Mysterious, expressive $\text{♩} = 100$

A **B**

Horn in F
valve sounds only p stop valve sounds mf valve sounds only $pp < mf$

Trombone
 $pp < mf$ valve sounds only p stop valve sounds mf $pp < mf$ mp

Tuba
valve sounds only mf stop valve sounds p mf

C

10

F Hn.
 $p < mf$ mf mp $p < mf$ $p < mf$

Tbn.
 p mf $mf > p$ $p < mf$

Tba.
 mf mp

16

F Hn.
 $p < mf$ mf

Tbn.
 p mf p mf

Tba.
 p p f

21 **D**

F Hn. *f* *p* *p* *mf* *p*

Tbn. *mf* *p* *mf* *mf* *p*

Tba. *mp* *p* *p* *mf* *p*

28 **E**

F Hn. *p* *mf* *mp* *p* *p* *mf* *p* *mf*

Tbn. *mf* *p* *p* *mf* *p*

Tba. *p* *p*

35 **F** **G**

F Hn. *mp* *mp*

Tbn. *mp* *mp* *mp*

Tba. *mp* *p* *mf*

39

F Hn. *mp*

Tbn. *p* *mf*

Tba. *mf* *mf*

42 **H**

F Hn. *mf* *mp* *p*

Tbn. *mp* *p*

Tba. *mf* *mf*

46 **I** **J**

F Hn. *p* *mf* valve sounds only stop valve sounds *p* *f*

Tbn. *p* *mf* valve sounds only valve sounds only stop valve sounds stop valve sounds *p* *p*

Tba. valve sounds only valve sounds only

52

F Hn. *p* *mp*

Tbn. valve sounds only stop valve sounds *p* *mf*

Tba. stop valve sounds *dim.*-----

2.1.4 - Painting watercolors

For this piece I painted a few watercolors with layers of light brush strokes. The colors fade out in a gradation to transparency. I also explored transitioning from one color to another and mixing colors, always fading them with water gradually reaching transparency. I painted a few leaves and made paintings of isolated clouds in the sky, with the idea of volume. Below are pictures of some of the paintings in Figures 13 and 14:



Figure 13: Picture of some of the watercolor paintings



Figure 14: Picture of some of the watercolor paintings

2.1.5 - Composing the imagery

I scanned the watercolor paintings and cropped them in Photoshop to isolate the images I wanted and have transparency around the shape, sometimes applying a feather mask to my selection. Some examples of the images after this process are as follows in Figures 15 to 21:



Figure 15: Watercolor painting after processed in Photoshop



Figure 16: Watercolor painting after processed in Photoshop



Figures 17, 18,19, and 20: Watercolor paintings after processed in Photoshop

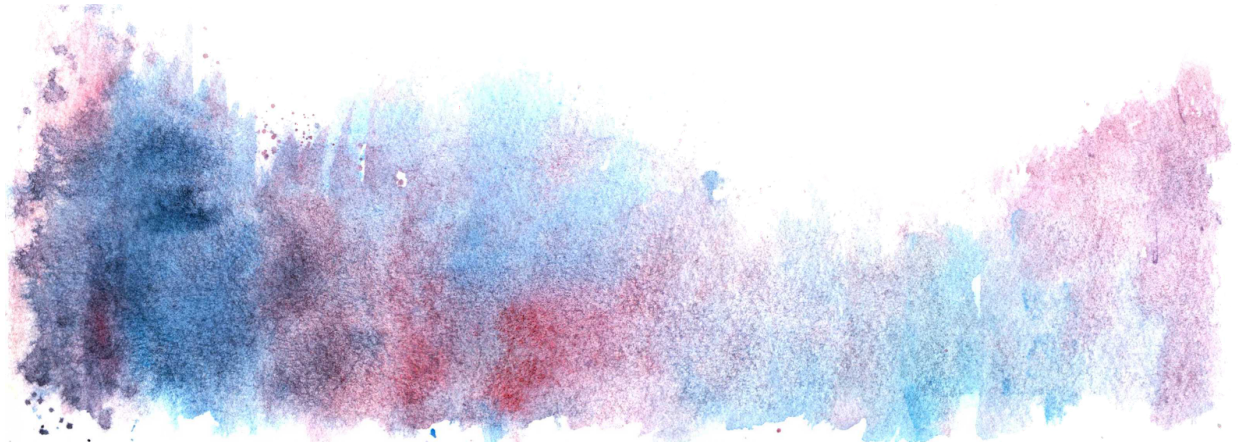


Figure 21: Watercolor painting after processed in Photoshop

After that I animated some of these shapes in After Effects and rendered the animation into a video changing its position to make it move from one side of the screen to another, but also using the puppet tool to make it change shape, expand and contract in interesting ways. I learned about these tools in Professor Simone Paterson's class. Below in Figure 22 is a picture of one of the After Effects animation projects.

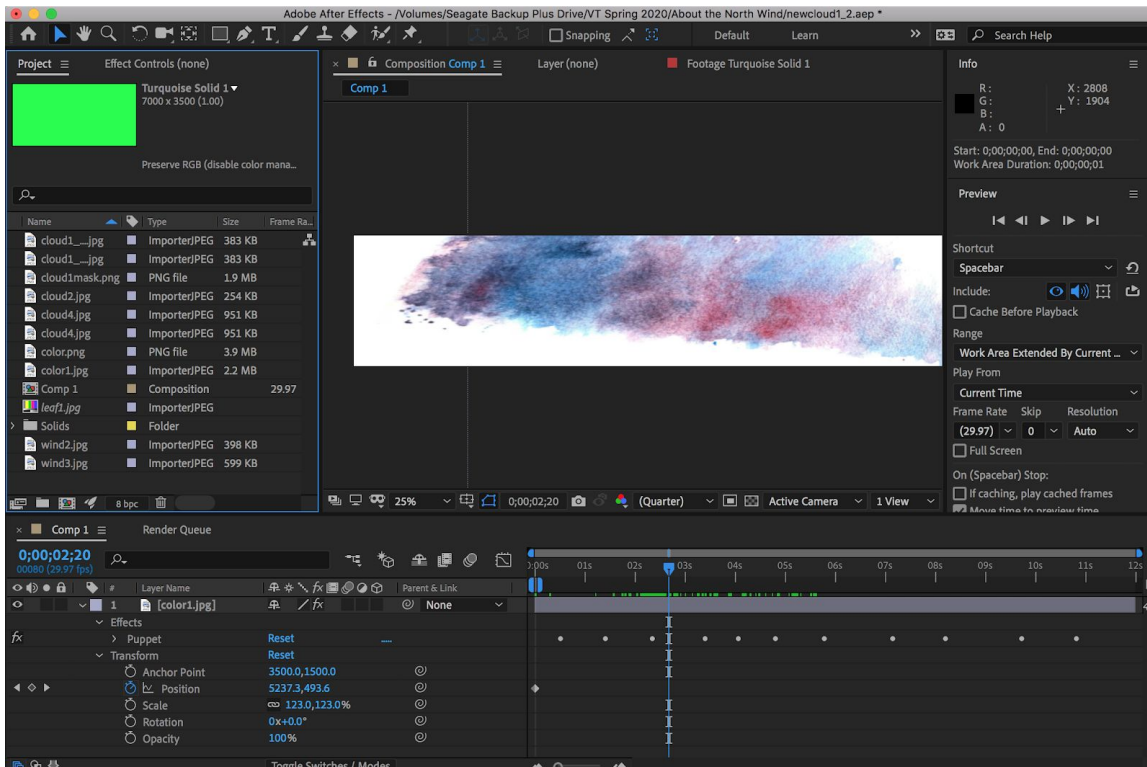


Figure 22: Picture of one of the After Effects animation projects.

I put the sound exported from Musescore in Premiere Pro and layered all these videos and images in a timeline in Premiere Pro, making them transparent and using a variety of blend modes, this time to give a sense of depth and hierarchy between images.

I also brought in some of the watercolor paintings I made for another section of this project, the flowers from the Sound and Image Garden, from which I took large pictures of details instead of a picture of the entire image. These images became more layers to be moved around in the timeline for this piece. I considered making images to represent every piece of the larger story to show moving fast in this piece, but as I experimented I didn't like the results and preferred the "aerial", "atmospheric" looking layered images of abstract watercolor brushes, as well as clouds and leaves.

I altered the speed of the animations, and animated some of the images in Premiere too. I took into account the appearance and reappearance of colors and lights in images due to blend modes as movements in the imagery. I looked to create movements in the images that matched, contrasted or highlighted movements in the music, which was my vision for this project. Below Figure 23, a picture of the timeline in Premiere Pro.

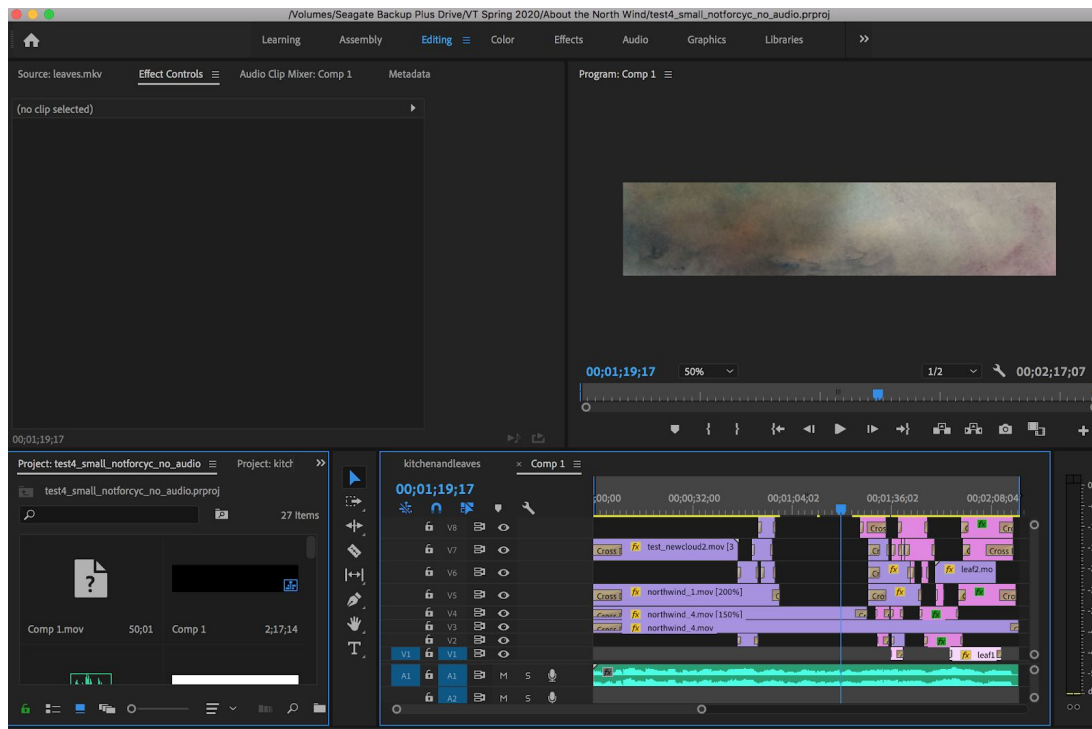


Figure 23: Timeline in Premiere Pro.

3- Kitchen and Leaves

3.1 - Stages of making:

3.1.1 - Intentions

My intentions for this piece were the following: Start the development of the bad part of the story. Talk about stories of women who suffered violence, how they reacted to it and invite reflections about it. I want the message of leaving to be clear. I wanted to speak about my opinions of not being “tragically woman”, an idea I’ll explain below. I condensed some of my reflections about sexism and domestic violence all over the world, and class problems according to my experience and perceptions in Brazil.

3.1.2 - Reflections

Below are reflections from my logbook that I wrote during the process of making this piece, which helped me with ideas and aesthetic choices:

I think that when a person is living with a violent husband, they need to leave this situation. When someone has been kidnapped and is being raped every day, I think they need to leave this situation. When someone is being enslaved, they need to leave that situation. This may seem obvious, but it's not so easy sometimes. Viktor Frankl talked a lot about the fear of running away from the concentration camp in his book *Man’s search for meaning*³³, a recommendation from Eric Standley when I started this thesis work. Stockholm Syndrome is something that some people experience when living in extreme abusive situations: the control by the abuser is such that the victim person becomes sick and can’t get past barriers created by their own mind.

Some people manage to physically leave their oppressive situations, but after that the person also needs to work internally to leave their past as well. In the film that I’m referencing in this piece, the woman who ran away from the war was at the same time rejecting a man who she loved, who treated her well and who loved her. She was rejecting a proposal to start a new and happy life. The rejection was because she thought that she had too many scars from her horrible past and would cause too many problems for someone trying to live with her. Later in the film, when she sees her daughter running away in the garden, it is a symbol of how she

³³ Frankl, Viktor. *Man’s search for meaning*. Boston: Beacon Press, 2006.

healed from her past, so that she can now live in the present. It's something that can only be understood by watching the film, because the symbolism is clear in the film.

Brazil is a world leader in domestic violence, in 5th place in the list worst countries for violence against women in the world. Without looking for these stories, I accumulated many stories of women and girls around me who were in difficult situations, including my own. I chose to bring to this piece my experience of listening to my grandmother's friend relate her domestic violence incident, and the advice given to her. As a twelve-year old, I was very shocked and realized that I really couldn't understand what I perceived as the "adult world". Around that same time, our neighbor also went to ask for help because of domestic violence from her husband. This situation was not related in the piece, but I always remember it in comparison with the other woman. Our neighbor asked if we had heard her screaming the night before, because her husband almost killed her. We did not hear anything. Her house was a large mansion and it rained that night. My family happened to be living in a rich neighborhood in an old small house owned by the airforce, because of father's work. That woman related an equally shocking incident of violence, but her reaction to my mother's sexist advice was different. She was going to the police, she was looking for witnesses to help her, and she was leaving her husband. Her trajectory was not simple, but after two years she had a new life somewhere else. For me, it marked the importance of leaving.

I observed through my experiences growing up, that house activities and work such as cooking and cleaning seem to be considered despicable inferior activities to be done by women, who are considered inferior for some reason. Although I really appreciate the emergence of the feminist movement, it seems to me that there is a lot of emphasis put in making women stay away from house activities as if these activities were inferior. I argue that rather than staying away from housework, it is better to bring men to join the work as well. Cooking, designing a meal and serving food are beautiful activities that can be useful for living.

In this way, I wanted to craft a way of thinking so that I didn't live burdened by the tragedy of being a woman, by recognizing valuable things in my identity and experiences which helped me be sensitive, empathize with other people, learn about emotions and think critically

about the society I live in. Caroline McHugh mentions the idea of being *untragically woman* (a word she made up) in her talk about the art of being yourself.³⁴

Brazil has a strong culture of having maids. Maids are usually poor women who are terribly paid, mistreated and oftentimes live in the house where they work. It is a clear heritage of slavery. My family was an exception because we never had maids, but then I felt that the treatment for people working on house activities in my house was not dissociated from problems in that culture. As I grew up, I started to see my ability to clean my space and help in the kitchen as skills to help me take care of my life.

Art films, books, music and education allowed me to see and understand aspects from my reality from which I would have been alienated otherwise. Art education can help people be humane and develop empathy towards others. Traveling also provides some form of learning, which is different from formal education, but maybe complementary to it. It allowed me to see different perspectives and ways of living directly.

In this piece I'm putting together my shock as a young girl to these situations, and the realization that these can change when people leave and actively work on themselves. I focused on keeping this as a dark moment in the story. The part of working in one's mind to live in the present after leaving an abusive situation is what the Wind guides the storyteller to do, through the Dream Landscape.

3.1.3 - Imagination

This idea for imagery in this video was taken from a dream I had last semester. In the dream I saw a kitchen that was all metallic green, even on its doors and walls, except for the floor that was made of black and white tiles. There were lots of leaves on the floor. The wind burst the door open and pulled the leaves outside. They all went out, "sucked" by the wind into a forest in a distance, which I could see only for a moment, because there was very bright light outside. I realized that the kitchen was the only room in this place. I didn't see walls anymore at that point, but the door was still standing. The view from a hole on the top wall of the sink was a garden. It was the same as the view from a window on the top of the sink from a film I watched a long time ago, called *The Secret Life of Words*, referenced in this piece. I heard a sentence

³⁴ *Tedx Talks*, "The art of being yourself | Caroline McHugh | TEDxMiltonKeynesWomen," February 15, 2013, video, 26:23, <https://www.youtube.com/watch?v=veEQQ-N9xWU>

about running and leaving, which is from that part of the film. I woke up remembering this film and the women whose stories I referenced. It was a pretty dream, so I thought I wanted to try to model and render similar things. It was not scary or sad at all because it focused on the moment in the film when the main character is able to transition, stop being haunted by her past and live in the present. I thought it was funny that my brain made a play with leaves and the verb *to leave*.

I imagined scenes of leaves moving and the outline of a kitchen. I imagined sounds and text that could condense these stories I had in mind, but also allow me to express opinion. I had new ideas as I slowly learned about rendering in Blender.

3.1.4 - 3D Modelling and rendering in Blender

Access to the DAAS lab was oftentimes difficult, so I had been trying to find ways to be independent from the DAAS lab even before the coronavirus crisis. I started to learn how to use Blender and I already had a notion of how to model with that software, but I still had a lot to learn for rendering, and I had no idea how to model and animate leaves.

I also believe that this software is an important tool to learn for the future, because using free and open source software can be more conducive to creative experimentations. I could easily find tutorials for modeling and animating leaves realistically in Blender, while it was very difficult to find it for Maya. The animation resources in Blender for physics seem more robust and flexible. I was not interested in falling leaves, but in leaves that were moving horizontally, blown by the wind. The tutorials used are listed in the Appendix.

Learning how to model and animate leaves was the most important part of this process. During the render I also kept in mind that I wanted to mix and blend these images with blend modes in Premiere Pro once they were ready, so I thought about colors that would help me with desired effects for editing in Premiere. I also put the kitchen model in Maya in the DAAS lab before the pandemic to test materials and consider rendering the kitchen there, but I did not like the idea of having a green kitchen after making experiments. I chose a neutral color to help me create the outline of a kitchen later in Premiere. Below are Figures 24 and 26, showing the Blender projects for the kitchen and leaves, made in a Linux operating system, followed by Figure 25 with the rendered leaves animation and Figure 27 with the first kitchen render with a working color scheme for base images. The Blender tutorials are referenced in the Appendix.

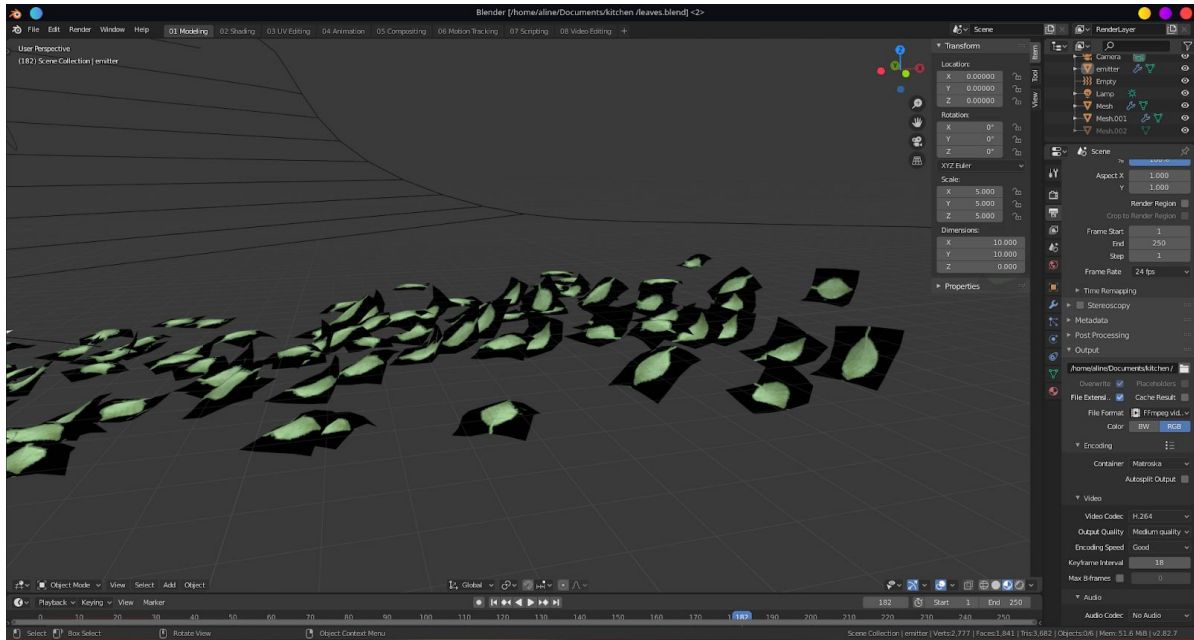


Figure 24: Blender project for the leaves animation.

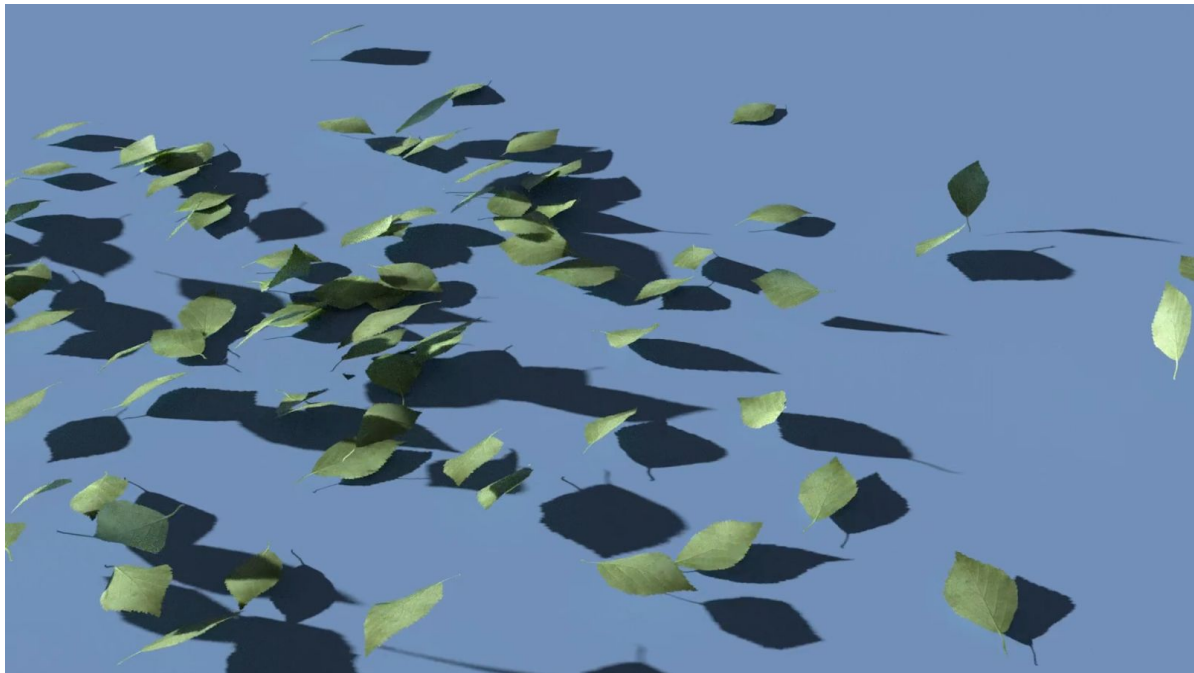


Figure 25: Rendered leaves animation.

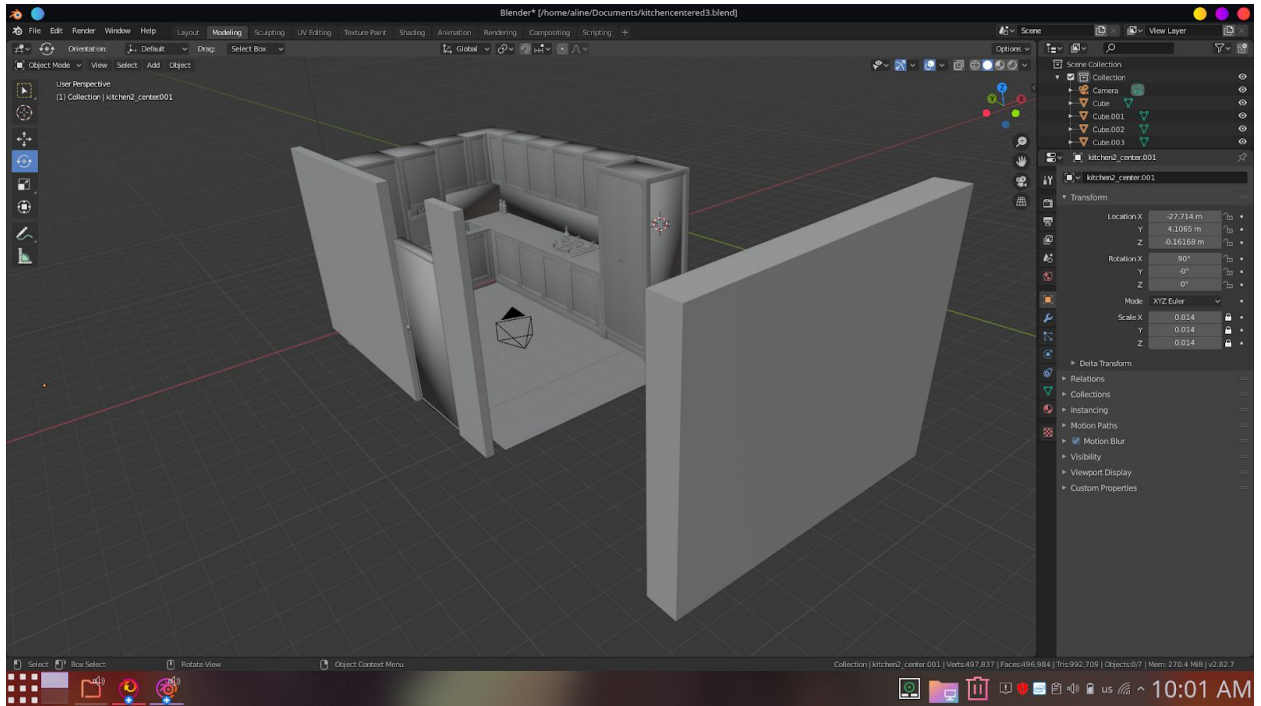


Figure 26: Blender project for the kitchen.



Figure 27: Rendered Kitchen.

3.1.5 - Text writing and recording

During the time it took to learn Blender, I thought about the reflections written above and wrote the following text:

I watched a film called "The Secret Life of Words"

A woman is a survivor of violence in the war of the Balkans, in the 90s

In this film she is a nurse in an oil ship. While she is taking care of a soldier, she tells him all the horrors she survived

she was kidnapped and repeatedly raped

she was forced to shoot her own daughter

there are no scenes of violence

but I could see everything clearly, from her words

During the war, while she was suffering violence inside an abandoned hospital, she'd look outside

to the trees

The wind moved the leaves of the trees

She'd think about how she just wanted to run

with the wind

through the forest

And she ran

She could flee from the war to Denmark

Later in the film, she is sitting in her own kitchen

The soldier from the oil ship loved and married her, even though she thought that her physical and mental scars would sink them both. He said he would learn how to swim.

Looking at the beautiful garden, in her peaceful kitchen. Her own life.

She sees her daughter running in the garden

she said: I just want to run

I watched art films looking for solace for my own situation

A friend of my grandmother's sat in the kitchen one day, telling us about the violence from her husband

He beat her up, she was bleeding. She forced her to have sex. He put her outside of the apartment with her clothes torn apart. I offered her shelter in our house. My mother said shut up stupid girl you're 12 and you don't understand! He is your husband. Go back home and prepare a good dinner.

I just wanted her to run...from her husband

I would always help in the kitchen, and clean and cook. I would be there

I would help my mother in her office. I was her secretary everyday.

but not my brother, not my father.

Why isn't my brother helping: he is a strong and independent man, they said

Please, help me, my brother is always trying to touch my chest and invade me

I don't know what it is, but it's not ok. I didn't know until I learned what it was called and until I got older and until it got worse.

I was the only one to defend myself.

You brother is a strong and independent man. It's great that he is not gay.

I just want to run

The place of the woman is in the kitchen

The place of the man is in the kitchen

Everybody's place is in the kitchen

The kitchen has food!

I mean, c'mon, if you want to argue that only women should be in the kitchen because it's inferior or something, you're missing out!

I will clean my own kitchen, far away

in full humanity

To record this text, I asked for help from ICAT staff to teach me how to set up an ambisonics microphone in the Performance Studio at the Moss Arts Center, to record the text in B-format and register my voice as I walked and moved around the room. Tanner Upthegrove and Brandon Hale taught me how to set up the microphone, as well as the reaper plug-ins and an ambisonics Max/MSP patch in that studio made by Tanner.

I had recorded a version of this text with a zoom recorder borrowed from Torgersen Hall, but I discarded it after I could get help to learn about the B-format recording.

3.1.6 - Synthesis and processing sounds

I put the recorded voice sounds in a timeline in Reaper to begin to organize the story. I experimented with applying large amounts of reverberation to parts of the recording to make it as eerie as possible. I also went on a field trip to record sounds of running on grass and leaves. I added these sounds to Reaper and processed them with reverberation as well. Finally, I created sounds through subtractive synthesis by making a collage of opcodes in CSound, by starting with pink noise as a source and then applying multiple successive opcodes that parse a sound and make small parts of it ring, as well as multiple successive bandpass filters to filter that noise, and multiple envelopes. I added these sounds to the timeline in Reaper as well.

I was able to mix this composition inside the Cube before the pandemic. After the pandemic, I used again the strategy from Dr. Lyon's class about processing the ambisonics recordings with a binaural decoder. Below is Figure 28, a picture of my Reaper timeline and Figure 29, the CSound collage.

The sounds in this composition seemed very dark to me, which made me want to create dark images to go with the story.

3.1.7 - Composing the Imagery

In Premiere Pro, I created many layers of images by using the rendering from the leaves blown by wind, the kitchen images, a tree video from the field trip of Birds and Trees and a copyright free video of light on trees from Pexel (see Appendix), and occasionally layer of a dark solid shape. I put the sound file on PremierePro's timeline and organized all these images on that timeline according to what I was looking for in the narration. In addition, I added blend modes to create different effects for the layered images. I used transparency and the blend modes Darken, Multiply, Color Burn, Color Dodge and Hard Light. Below is Figure 30, a picture of the PremierePro project, with the images organized on the timeline. My main priority with these images was to create a sense of darkness, but also convey some of the beauty I remember from my dream images of leaves being taken away by the wind.

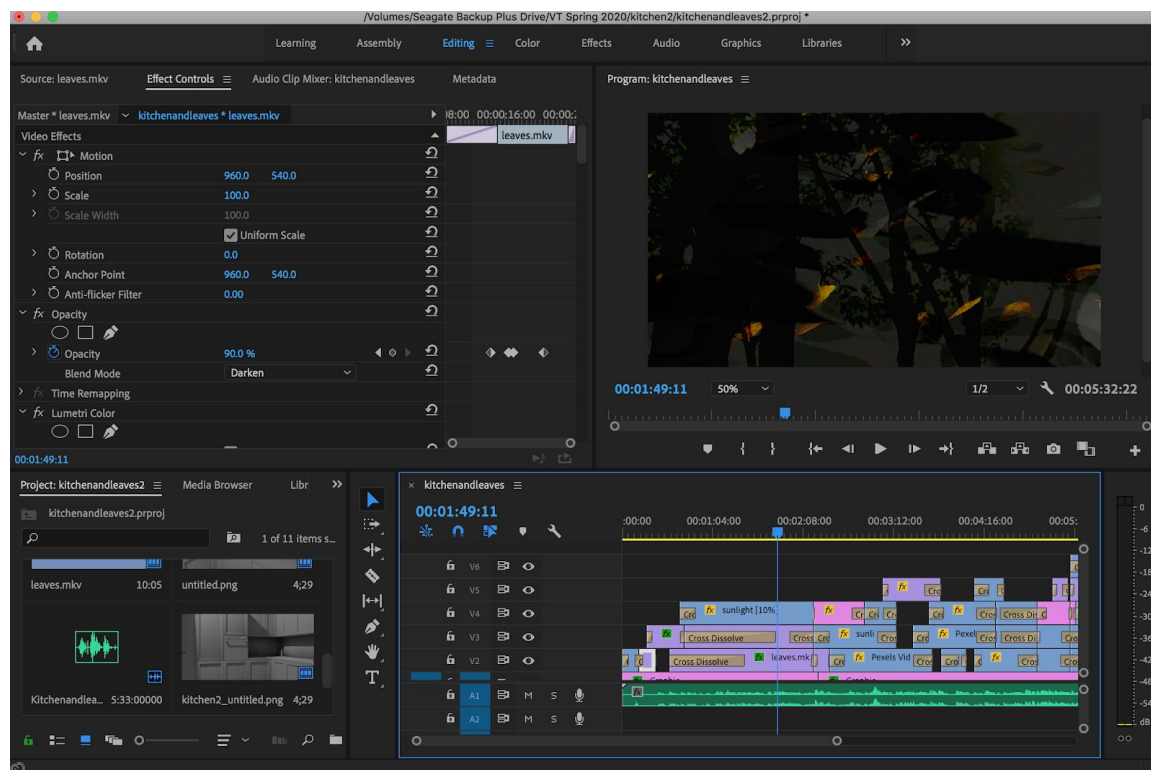


Figure 30: The PremierePro project, with the images organized on the timeline.

4 - Bureaucracy, Power, Abuse of Authority

4.1 - Stages of making:

4.1.1 - Intentions

My intention is to show an unexpected sudden difficult situation that unfolds into a longer, more complicated entangling situation that I do not want to be in. It is also meant to be a piece that was not meant to be, preventing the storyteller from continuing her work of telling the story. It represents episodes of being blocked by a person when walking from one place to another. It represents the systems, people and dynamics in society that were at play, in my view, when I felt that my studies were jeopardized by a problem of discrimination. I meant to represent the personal and impersonal, as well create symbols of oppression and allude to archetypes.

4.1.2 - Incidents, reflections, imagination, and text.

Some incidents from what I claim to have happened to me inspired reflections which helped my imagination to create this piece. I looked for help in resources at school in various stages of this problem, and in order to be organized in telling my story, before I spoke with the counselors or people helping, I would write down a list of events, spoken words as I remembered them, and my own feelings, responses and difficulties for each of these situations. Looking at these writings also helped me imagine and create content for this piece. It became a text I used as inspiration for composition of instructions for the performance and music composition.

Some of these incidents made me feel that I had *less freedom* at university to express myself artistically and to move on campus. Threats and conflicts are scary because of the *power game*, and *authority* weight of the people involved. The actions and words became worse over time, in my perception, so that I felt entangled in a problem I didn't want to be in, but who looked for me as I walked from one class to another. Sentences learned from the Ombudsperson were used as strategies, such as "I'm not comfortable talking about this. If you need to speak with me academically, we can schedule a time." and "I'm not comfortable talking about this. Can we please focus on my work?", but they did not work. There were academic meetings scheduled that were not academic or rules that were not true, which made me think about the *weaving of rules* for this piece, and the idea of using threads of wool, and how messy yarn can be

when unrolled from the thread. Since I was so afraid of this figure of authority and his partner, also a figure of authority, and of consequences of their evaluations, threats and absurd conditions, I thought about a reference to the Moirai (the Fates) from Greek mythology, who control people's destinies by spinning their fates. However, taking from the example of Greek mythology, it is possible to escape from labyrinths and horrible situations with yarn itself, so I imagined that going through the suffering from this piece would show a problem and mark the start of a nightmare, but also provide a means for recovery somehow.

During this process I also learned that witnesses are afraid of retaliation, afraid to create a conflict for themselves and of losing career opportunities with the figures of authority by getting involved in a problem that is not theirs after all. It made me wonder if these types problems of discrimination, other types of conflicts and abuse of power happen because there is a system of fear to keep them happening. With these things in mind, I remembered a work by Trond Reinholdtsen called *The Norwegian Opra*³⁵, and reflected about his criticism³⁶ in his work and things that for me resonate with details from my experience that inspired this piece. In *The Norwegian Opra*, the performers are wearing costumes. I imagined, then, that it would be good if the performers from this piece also wore some sort of costume, especially something to render them impersonal and also a bit bizarre or scary, to represent *oppression*. I thought that kraft paper may be a good choice. It is affordable, easy to cut, wrinkle or adjust as necessary to fit, and I imagine that it would look weird and bizarre.

I would like the performers to represent some sort of anonymous oppression too. I chose not to focus the execution of this piece in re-enacting the experience that happened to me, not only because there are too many situations to describe and it gets boring, but also, and mainly, because this is not an isolated case of this type of problem in the world. In this way, I imagined a vision of this piece with the performers wrapping the storyteller in wool, preventing her from continuing her work, restricting movement, terrorizing, and representing bizarre and incomprehensible systems of socio-bureaucratic power and oppression.

One last message that I imagined this piece may convey is the idea that this is a bit funny. Although I was terrorized as these things were happening in my experience, some of the

³⁵ Trond Reinholdtsen "The Norwegian Opra", <http://www.thenorwegianopra.no/>

³⁶ Trond Reinholdtsen "CRITICAL REFLECTION ON THE NORWEGIAN OPRA (as part of Artistic Research Doctorate)", March 2014, http://www.thenorwegianopra.no/Trond%20Reinholdtsen_critical%20reflection.pdf

sentences and events were so absurd that they seemed to be funny. A person dressed in that costume, with their movements and noises from the kraft paper might be funny.

4.1.3 Illustrations of imagined scenes

I created the illustrations below (Figures 31 and 32) to communicate the idea of oppressors in kraft paper costumes carrying threads of wool, preventing movement, making a circle around the storyteller and wrapping her on yarn.



Figure 31: Illustration of a performer in Kraft paper costume blocking the way of the storyteller

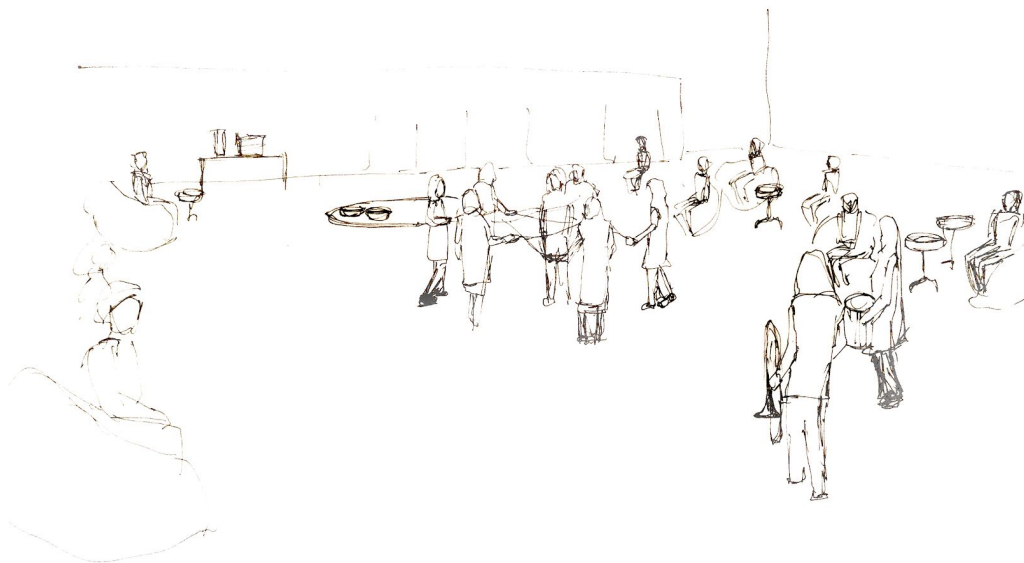


Figure 32: Illustration of the performers in Kraft paper costume wrapping the storyteller with wool

After the storyteller is wrapped in yarn, she was left in a complicated situation as shown in Figure 33. She will remain lying on the floor wrapped in wool yarn for the next pieces, because I didn't know what to do to get out of it and continue to tell the story. In this way, I decided to spend more time in her nightmares for the next pieces and resolve the entanglement later.



Figure 33: Storyteller lying on the floor wrapped in wool yarn.

4.1.3 Music composition and performance

After I had the images and practical movement issues developed, I thought about music and sounds that the performers could make. To compose, I used a technique of humming and singing, recording the humming, and then notating it, which I learned in Charles Nichols' Music Composition class. This composition required notes because the sounds are associated with the actions of walking, wrapping wool, screaming etc.

In rehearsal I explained to the performers details of the issues and situations that inspired this composition, so they can keep these things in mind for movement, screaming and expression. In the theatrical piece *The Nature of Forgetting* by Theatre Re, one of the artistic references for this thesis paper, the director explained that he and the actors knew a lot of detail from the story and personalities of each character in their story, but they did not narrate all these details. The details were important for the expression of the actors, and were transmitted in different ways, through colors, light, sounds, movement and objects. As a result, not everyone

in the audience interpreted details in the same way, but there was a core story that everyone understood. In the same way, the details of my experience will not be communicated, but I aimed to communicate an abstract idea of oppression. Below is the score for this piece.

Bureaucracy, Power, Abuse of Authority

Notes and Instructions

After the piece “Kitchen and Leaves”, the storyteller will go to the center of the stage and announce that the next piece is a watercolor meditation. This is a cue for one performer to go on the stage and block her way. She will try to get away by changing directions. Go ahead and block her way again. This is a cue for the score to start.

The performers will be walking in pairs and holding threads of wool. In each pair, one person will hold the thread, the other will hold the tip of a line, extending the line as they walk.

The performers march and move at the rhythm of the drum beats.

The goal of screaming and arguing is to produce a confusing unintelligible noise in which it is not possible to distinguish the content of the words and sounds produced. Make sounds and sentences you choose, according to rehearsal. You may pick sentences from the list below if you'd like, mix, change or come up with sentences of your own, and make unintelligible screaming sounds of your choosing.

List of sentences

- I know what you're doing!
- I know what you're trying to do!
- I know what you are trying to do and it can't be done!
- You don't care about being an artist. You have no commitment with your studies!
- The human condition!
- You have to go!
- Consider leaving the program.
- Is your boyfriend always nice to you? He is American!
- Your friends are not healthy people!

Bureaucracy, Power, Abuse of Authority*

*See notes, illustrations and instructions

Seriously, grave ♩ = 90

Enter the stage marching at the beat of the drums. When you reach the storyteller, start wrapping wool around her.

Opressors

we are the bu reau cra cy

Enter the stage marching at the beat of the drums. When you reach the storyteller, start wrapping wool around her.

Opressors

po wer

Stand in the middle of the stage with one Opressor who blocked movements first.

Storyteller

Trombone

mf

Tuba

Concert Bass Drum

f *mp*

6

O.

we are the bu reau cra cy

O.

a buse of au tho ri ty po wer a buse of au

S.

Tbn.

Tba.

Con. BD

mp

The musical score is written in 4/4 time with a tempo of 90 beats per minute. It features several parts: two Opressors (bass clef), a Storyteller (treble clef), Trombone (bass clef), Tuba (bass clef), Concert Bass Drum (drum clef), and vocal parts for O. (bass clef), S. (treble clef), Tbn. (bass clef), Tba. (bass clef), and Con. BD (drum clef). The lyrics are: 'we are the bu reau cra cy po wer a buse of au tho ri ty po wer a buse of au'. Performance instructions include 'Enter the stage marching at the beat of the drums' and 'Stand in the middle of the stage with one Opressor who blocked movements first'. Dynamics include *mf*, *f*, and *mp*.

11

No drums, no movement

Back to movement. Continue to wrap wool. Make a tighter circle. Argue and scream. (See notes)

O.

No drums, no movement

Back to movement. Continue to wrap wool. Make a tighter circle. Argue and scream. (See notes)

O.

tho ri ty

S.

Spoken text

*Why is this happening?
Let me go!
I don't have time for this.*

Tbn.

p

p

Tba.

Con. BD

p

mp

mp

p

16

Stop screaming. Drop wool threads and walk away from the stage in a row with the other performers.

O.

Stop screaming. Drop wool threads and walk away from the stage in a row with the other performers.

O.

Stay on the floor of the stage.

S.

Walk away from the stage in a row with the other performers.

Tbn.

Walk away from the stage in a row with the other performers.

Tba.

Con. BD

p

5- Kafkan Nightmare

5.1 Stages of making

5.1.1 Intention

I want to express the agony of suddenly finding yourself compressed in an environment where you are being accused of something that you don't know what it is, but it's really bad. I wanted to talk about the world of Kafka's books and a complex, incomprehensible socio-bureaucratic power.

5.1.1 Imagination

I envisioned a room with a table, chair and windows, taking as inspiration an environment I found myself in, in meetings with a person. I imagined that the environment could break, to make it more surrealistic and scary. I imagined sounds that were very digital combined with atmospheric sounds, sounds from microphone feedback and voice with reverberation for the soundscape.

5.1.2 3D Modelling in ZBrush and Recording the Screen

In the 3D modelling software Maya I built basic shapes for a table, chair, windows, and a rectangular plane for the floor. In the 3D modelling software ZBrush, added details to the basic shapes and recorded a video of the screen while I continued to model, change material, stretch and pull shapes with large brushes with strong intensity, break the geometry, move shapes and undo the movement, as shown in the Figures 34 to 38 below. I used a tutorial to learn how to record the screen from ZBrush, which can be found in the Appendix.



Figure 34: Picture of recorded video while sculpting in ZBrush.



Figure 35: Picture of recorded video while sculpting in ZBrush.



Figure 36: Picture of recorded video while sculpting in ZBrush.

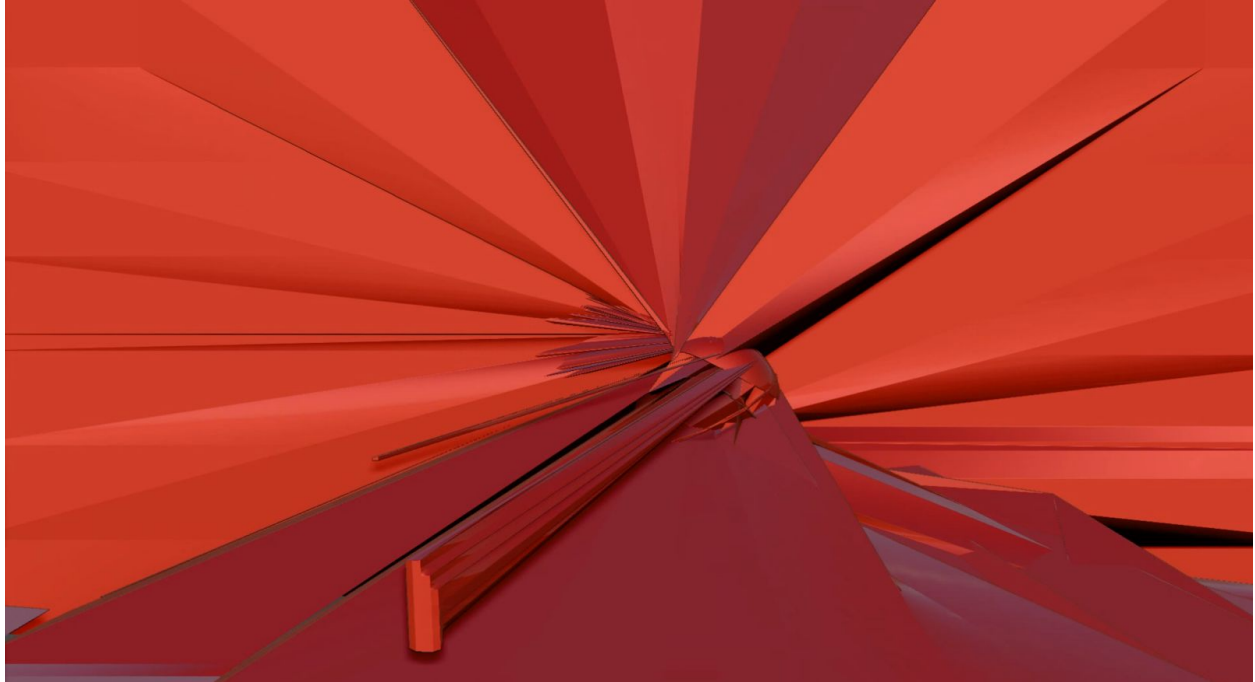


Figure 37: Picture of recorded video while sculpting in ZBrush.

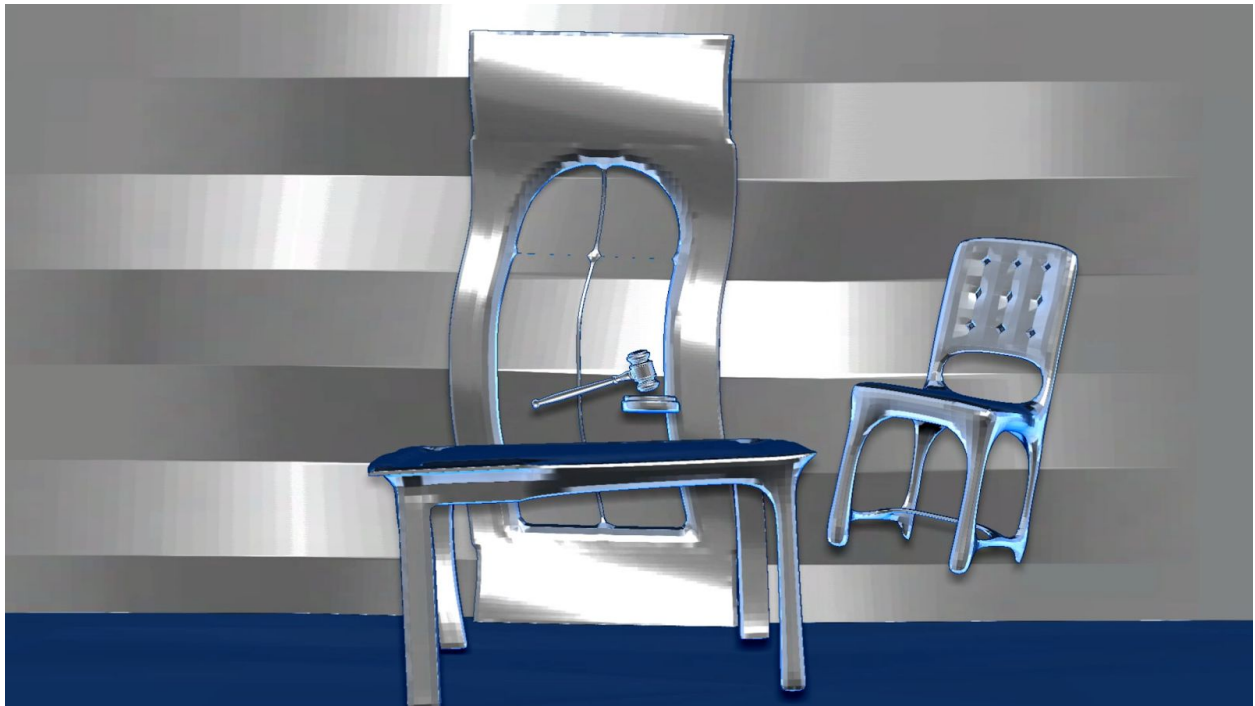


Figure 38: Picture of recorded video while sculpting in ZBrush.

I experimented with a variety of brushes, such as Groom Spin Knot, Groom Twist, Standard, Inflat, Smooth, Curve Mesh. I recorded many videos with different colors, different

brush size and intensities and also removed some of the basic shapes from the scenes, changed the scene and put them back.

5.1.3 Text

Even though I'm familiar with Kafka's work, I searched about him, his books and films based on his books, looking for words and impressions to compose a text that would become voice material to compose the soundscape of this piece. The list of reference inspirational works can be found in the Appendix.

In addition, I made a small reference to Victor Hugo's novel *Les Misérables* in this text by adding the lines "*as they tear your dreams apart, as they turn your dreams to shame*", which are part of the song *I Dream a Dream*, composed by Claude-Michel Schönberg, in the musical *Les Misérables* from the 1980's based off the novel *Les Misérables* by Victor Hugo.

I also made up the word "Kafkan". Normally when people refer to something with a reference to Kafka, they use the word *kafkanesque*, but I wanted a word with less syllables to reference Kafka. I wrote the following text or group of words:

*Welcome to your Kafkan nightmare
I know what you did
I know what you're trying to do
And it can't be done
Human emotional spectrum
which we now call kafkanesque*

*Perspective and relief
Kafka's world is unpleasant
it feels in many ways like a nightmare
and yet it is a place that
where many of us,
even if only for a time
Dark
dark periods of our lives
end up*

*Power, power, powerless in front of authority
judges, aristocrats, industrialists, politicians, fathers
Our destiny is out of our control
bullied, humiliated mocked by society
squashed without mercy
inconvenient, rather disgusting*

*Those in power are psychologically abusive
those who could protect you are too weak to protect you*

*The metamorphosis
The trial
The castle
America*

*Dynamics he endured
inadequate, unwanted, unwelcome*

*“You were an innocent child, really
but at heart, you were a diabolical human being”*

*Horrific arbitrary judgement
Vast legal apparatus with judges lawyers guards and extensive bureaucratic procedures
He doesn't know what he was charged with
It's impossible to understand and find out
He was charged with everything
The list doesn't make sense
Your accuser is furious
They want you out of here*

*He can no longer do his job properly and is defeated in a game of politics
A knife into his heart*

*Wake up one morning transformed into a beetle
Terrifying arbitrary power
The family held a council and decided that the insect has to go*

*He dies quietly
the family is slightly ashamed of their behavior
but only slightly*

*The hunger artist
After he dies is replaced by a panther
an animal with a voracious appetite*

“as they tear your dreams apart, as they turn your dreams to shame”

dreams to shame, dreams to shame, dreams to shame

*He wrote
He knew that
“art can reconnect us with feeling that might be otherwise unbearable to study
but which desperately need our attention”
Art is “the axe of the frozen sea within us”*

The text was recorded in the studio space in my house with the assistance of audiotechnologist and musician Brandon Hale. He made the following system for voice recording in a mono setup:

In a separate room, there were two microphones, one SM57 and one Samson C01 condenser for me to record the text. The microphone input went into the computer with an audio interface. It was recorded using the software QTractor.

He gave me two files of the same recording so I could choose which sound I liked better.

5.1.4 Creation and composition of sounds.

I downloaded an explosion sound from Freesound.org, whose reference can be found in the Appendix, and processed it with the *paulstretch* effect in Audacity. I also processed parts of the recordings of my voice to make them delayed and added reverberation in Audacity.

The composition of sounds was structured by the voice text, which was chopped, processed and reprocessed, then organized in a timeline in Premiere Pro. Whether the text was intelligible or not, it created a structure over which I added all the sound experiments and images.

To make the microphone feedback sound, I removed the attacks from the bell sounds created with the opcodes *fbells*, stretched the sound and added envelopes. I created a variety of sounds with CSound by experimenting with opcodes to make ringing sounds and atmospheric sounds in the mix.

I used again a collage of opcodes to make subtractive synthesis and granular synthesis, with variations experimenting with the same code I used in *Kitchen and Leaves*. The sounds created with CSound and the voice recording were processed with granular synthesis. After processing one sound, I would process it again to see the results. I also cut the recording of my voice and processed parts of it differently, so that the text is not completely intelligible throughout the piece. Some of the main CSound opcodes I used are the following: *reson*, *grain*, *fbell*, *foscil*, *pluck*. Below are Figures 39 and 40 with pictures of CSound experiments:

fmbell

fmbell — Uses FM synthesis to create a tubular bell sound.

Description

Uses FM synthesis to create a tubular bell sound. It comes from a family of FM sounds, all using 4 basic oscillators and various architectures, as used in the TX81Z synthesizer.

Syntax

```
ares fmbell kamp, kfreq, kc1, kc2, kvdepth, kvrate[
  ifn4, ivfn, isus]
```

Initialization

All these opcodes take 5 tables for initialization. The first 4 are the basic inputs and the last is the low frequency oscillator (LFO) used for vibrato. These all default to a sawtooth table.

The initial waves should be:

- ifn1* -- sine wave
- ifn2* -- sine wave
- ifn3* -- sine wave
- ifn4* -- sine wave

The optional argument *isus* controls how long the sound lasts, or

Figure 39: CSound experiments

expseg

expseg — Trace a series of exponential segments between specified points.

Description

Trace a series of exponential segments between specified points.

Syntax

```
ares expseg ia, idur1, ib [, idur2] [, ic] [...]
```

Initialization

ia -- starting value. Zero is illegal for exponentials.

ib, *ic*, etc. -- value after *dur1* seconds, etc. For exponentials, must be non-zero and must agree in sign with *ia*.

idur1 -- duration in seconds of first segment. A zero or negative value will cause all initialization to be skipped.

idur2, *idur3*, etc. -- duration in seconds of subsequent segments. A zero or negative value will terminate the initialization process with the preceding point, permitting the

Figure 40: CSound experiments.

5.1.5 Composition of Images and Soundscape in Premiere Pro

In Premiere Pro I organized the videos recorded from ZBrush in a timeline, layered videos and applied blend modes to create effects. I put the sound parts in the timeline to align sounds with certain effects from the blend modes and from videos cross fading in and out. I also accelerated and decelerated the speed of videos and combined videos with different speeds in layers. This time the organization of parts of images happened at the same time as that of the sounds. Figure 41 below is a picture of the project in Premiere Pro:

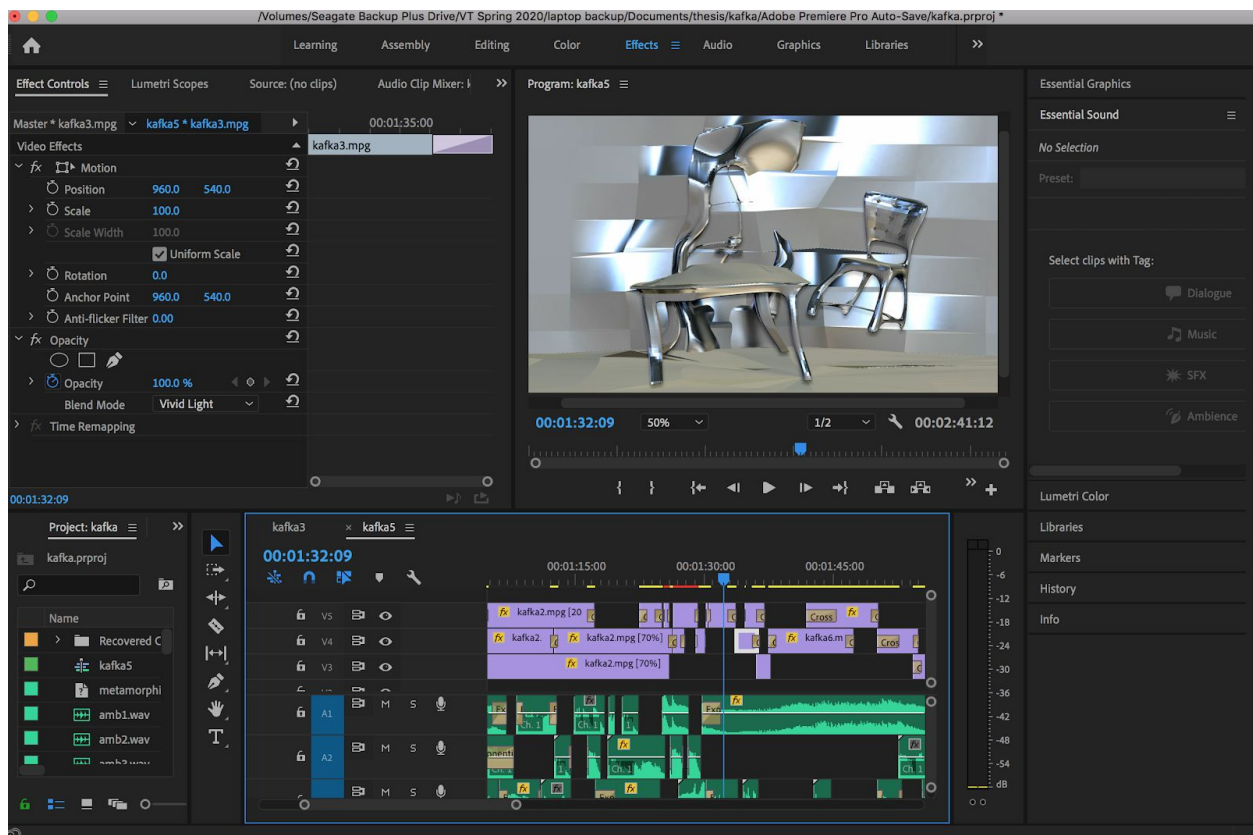


Figure 41: The project in Premiere Pro.

5.2 Testing and Adapting

It was not necessary to render a video for the cyclorama's aspect ratio because in tests in the Cube the video worked well when scaled and mirrored with World Viewer.

6 - Dream Landscape

6.1 Stages of making

6.1.1 - Intention

I wanted to create a fluid landscape to reference the world of dreams, an alien world, a surrealist space and experiences of being unconscious. I wanted to make something interactive that reacted to voice. I also wanted a painting full of depth and variation from watercolor layers. I also wanted this part of the story to be a moment when The Wind is guiding the storyteller through this dream landscape. In this way, it should be the voice of The Wind that should make the painting move. In addition, it was a moment where the problem of the storyteller being wrapped in wool could be resolved if she recovered consciousness.

6.1.2 - Imagination

The vision for this project was to make one of my paintings move in a flowy, light way, according to voice. I thought I might be able to find solutions by experimenting with GEM objects in Pure Data. This part of the piece will not be projected in the cyclorama because it was easier to connect my computer with Pure Data to a projector in that way, and also because at this moment in the story, the storyteller's world is somewhere else. It is an otherworld, farther than normal dreams and nightmares from when a person is alive and sleeping. These images will be projected from a different projector, on the walls of the Cube, outside of the cyclorama screen.

6.1.3 - Painting

I painted a few experiments of dream landscapes and decided by the image below, Figure 42, to be the one I would use inside the Pure Data environment.

Before I started painting, I put masking fluid on some parts of the paper in circular shapes, to leave that area untouched by painting, creating white spots after I removed the masking fluid, after I was done applying paint. I also used bleach on some parts of the painting and let it reach, creating textures on the paper.



Figure 42: Painting used inside the Pure Data environment.

6.1.4 - Making the instrument in Pure Data

I had a problem, which was “how to affect an image behavior with sound input?”. I began to put together copies and combinations of objects in Pure Data, trying to connect them to solve the problem. I looked for Professor Ico Bukvic to help me, and undertook an Independent Study, which was called “Study of Image Behavior Affected by Sound in Pd-L2Ork”.

In this study, an instrument for music visualization was developed in Pure Data (Pd-L2Ork). It can be used in performances to process an image with sound. In addition this instrument is a base for other developments from copying and adding elements, creating new forms of expression of the instrument.

Pure Data (Pd) is a free and open source visual programming language developed by Miller Puckette in the 1990s for creating interactive computer music and multimedia works³⁷ Pd-L2Ork is a branch of Pure Data created by Professor Ico Bukvic to be used in the Linux Laptop Orchestra, a class that he teaches. “[Pd-L2Ork] is a free open-source real-time graphical programming environment for audio, video, and graphics processing”.³⁸ In the context of Pd-L2Ork, an instrument is a working program created with the programming language of Pd-L2Ork that does something artistic with sound and/or images, and can be used to process or manipulate its content in some way.

As I became more familiar with objects that I could use in Pd-L2Ork to try to solve my problem, I established that my goal with this study was to create an instrument that could be used by a performer to give movement to an image by sound. The sound is the sound input from a microphone as the performer speaks or sings to the microphone. This sound input affects the image, making it move according to the sound amplitude and frequency. The instrument was made for an audiovisual performance about a dream landscape to help with telling the story. I wanted to have a surface that looked light and that could be affected in movement by sounds produced by performers singing or playing instruments. In the context of the performance, sound is standing for wind, as it is only the performer who plays The Wind who can affect the dream landscape with her voice.

The instrument makes use of GEM (Graphics Environment for Multimedia) to allow for the creation of the image and assign behaviors to it. GEM generates real-time computer graphics in the environment of Pure Data. The instrument started with the creation of a flat 3D shape (a cuboid) that looks like a flat rectangle in space with GEM. The surface of this shape is composed of triangles that build the surface. A jpeg image was applied as texture to the surface of the shape. The vertices of the triangles of the shape have been programmed to move up or down according to data from sound amplitude.

When Pd-L2Ork receives audio input from the microphone, numbers from that audio data are parsed and scaled to match the length of movement of the vertices of the triangles that

³⁷ Wikipedia. *Pure Data*, last modified November 2019 https://en.wikipedia.org/wiki/Pure_Data

³⁸ L2Ork Linux Laptop Orchestra. *No, Really, What is L2Ork?*, <http://l2ork.music.vt.edu/main/what-is-l2ork/>

compose the surface of the 3D shape. Sound is also being changed in this instrument by the addition of reverb to the output of sound from the microphone.

Below is a list of objects used in the project and Figure 43, a picture of the instrument inside the P2-L2Ork environment.

List of objects used in the project:

- *gemhead*: It allowed the connection of gem objects with a window in which images would be rendered.
- *pix_image*, *pix_draw*: They allowed for a 3D object, images and textures to be rendered in the space.
- *newWave*: assigns a wave-like behavior to be rendered in the gem object.
- Translate, rotate and scale: help to manipulate the image in space
- *adc~* and *dac~* provide real-time audio input and output
- *moses*, envelopes and scales: these objects were important to organize numbers received from audio data, use them as numbers and data, scale the range of numbers to map them according to a range of possible length of movement in space that vertices of the image can move.

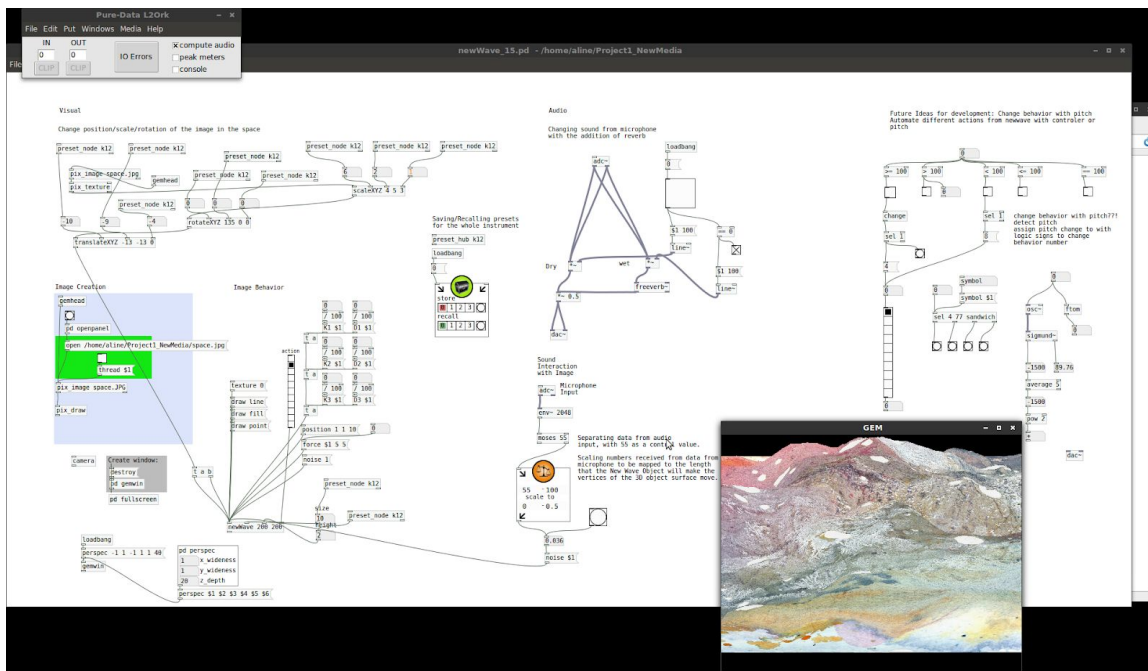


Figure 43: Picture of the P2-L2Ork instrument.

6.1.5 Storytelling decisions

In this part of the story we are traveling through the Dream Landscape with the guidance of the wind, and hearing her windy sounds. The score for part was supposed to be the painting, as a graphic score. The performer would then improvise, keeping in mind that she is The Wind, looking at the painting and at the way her voice was altering it. I called Rachel Hachem to be The Wind and she was always committed to performing. We met, talked about the work in the Cube, and rehearsed. Later she didn't want to make an improvisation any more and asked for a score. I considered that it was better to keep a performer whose work I admire, and who is really committed to the project, than to look for someone else.

I considered that this would be a good moment in the story to deal with unconsciousness and recovery of consciousness. I called a local poet, Matt Dhillon, to ask if he wanted to collaborate in this project by making a poem for some part of it. He looked at the story as a whole and was interested in making a poem about the recovery of consciousness.

I decided that while this poem was being read, The Wind could go help the storyteller by cutting off the wool yarn, which means helping her to recover consciousness. Since the projected had to be adapted to be a video, I made an illustration of that moment to represent what would happen in performance, shown in Figure 44:

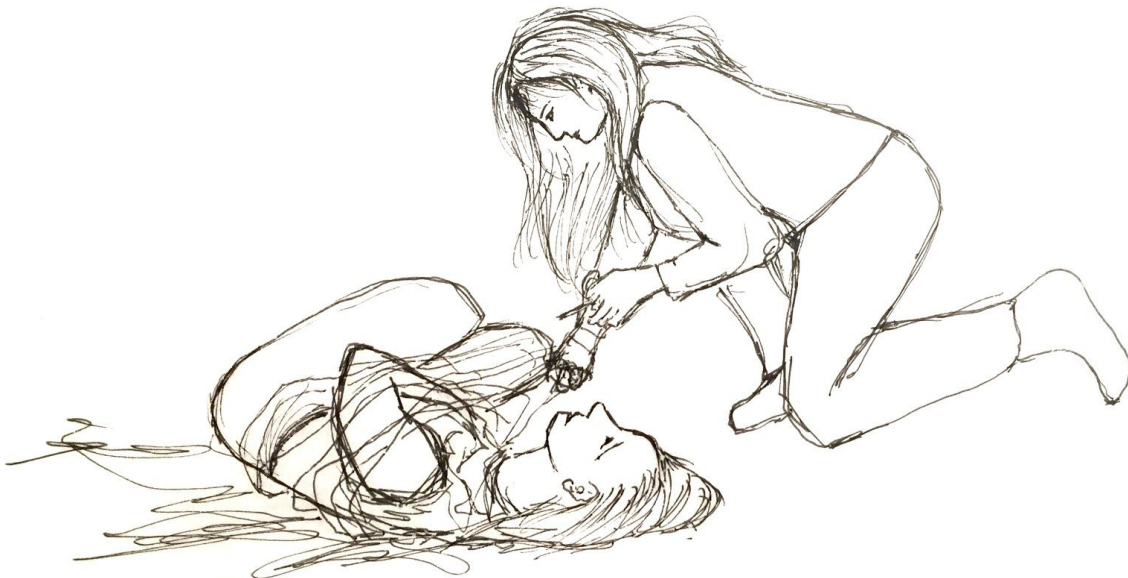


Figure 44: Illustration of the Wind helping the storyteller by cutting off the wool yarn.

I divided this piece in two parts:

- I- The Floating Space: when the storyteller is still unconscious on the floor, and the Wind changes the landscape of the space with her voice.
- II- Recovering Consciousness: while Matt Dhillon reads his poem, The Wind will liberate the storyteller from the yarn, making her recover consciousness, so the story can continue

The storyteller will then announce that while she was travelling in the World of Dream, the Wind told her about a Sound and Image Garden, which where they are going now. This is a transition for the next piece.

6.1.6 - Music Composition, Structured Improvisation and Recording

To compose the part that The Wind sings, I opened the Dream Landscape Pure Data instrument and improvised observing how my voice was changing. Then I notated my improvisation using Musescore and created the score below.

Rachel Hachem recorded herself singing the score, despite all the problems that the Covid-19 pandemic put in her schedule. She sent a raw version and a processed version in which she applied compression, equalization and reverberation. The raw version was already splendid, but I chose the processed version for the video.

Chant I for Dream Landscape

Aline de Souza

Mysterious ♩ = 110

windy sounds windy sounds windy sounds end of windy sounds

pp *p* *mp* *mf*

5
p *f* *p* *p* *mf* *p* *p* *mf*

14
f *p* *p* *mf* *p* *p*

19
p *ppp* *p* *f*

22
mp *mf* *p* *mf*

26
p *mf* *p* *mp* *mf* *mp* *mf*

The floa ting space in dreams That space is in your skin That light is E -

35
p *dim.*

very - thing The wind I moved in dreams

6.1.7 - Making a soundscape for the poem reading

Matt Dhillon wanted the song *Try and catch the wind* by Donovan to play in the background while he was reading the poem. I didn't want to use material whose copyrights I don't own or that is not copywrite free. Initially he sent a recording of himself reading the poem with this song playing in the background. I chopped a few seconds of the recording and made a series of experiments with it using granular synthesis in CSound. The CSound code was the same used for *Kitchen and Leaves*, with minor variations and the difference that the sample was this chopped part of the recording. I also stretched a few seconds of chops from the recording, and added delays and reverberation in Reaper. I sent these experiments to Matt, who gave me feedback, then I made more parts. I organized these experiments on timeline in Reaper and started creating a track to play on the background, but something that we crafted instead. Matt sent a recording with his voice only, without background music, which I layered on top of the experiments that were already in Reaper. Below is Figure 45, a picture of my Reaper file.

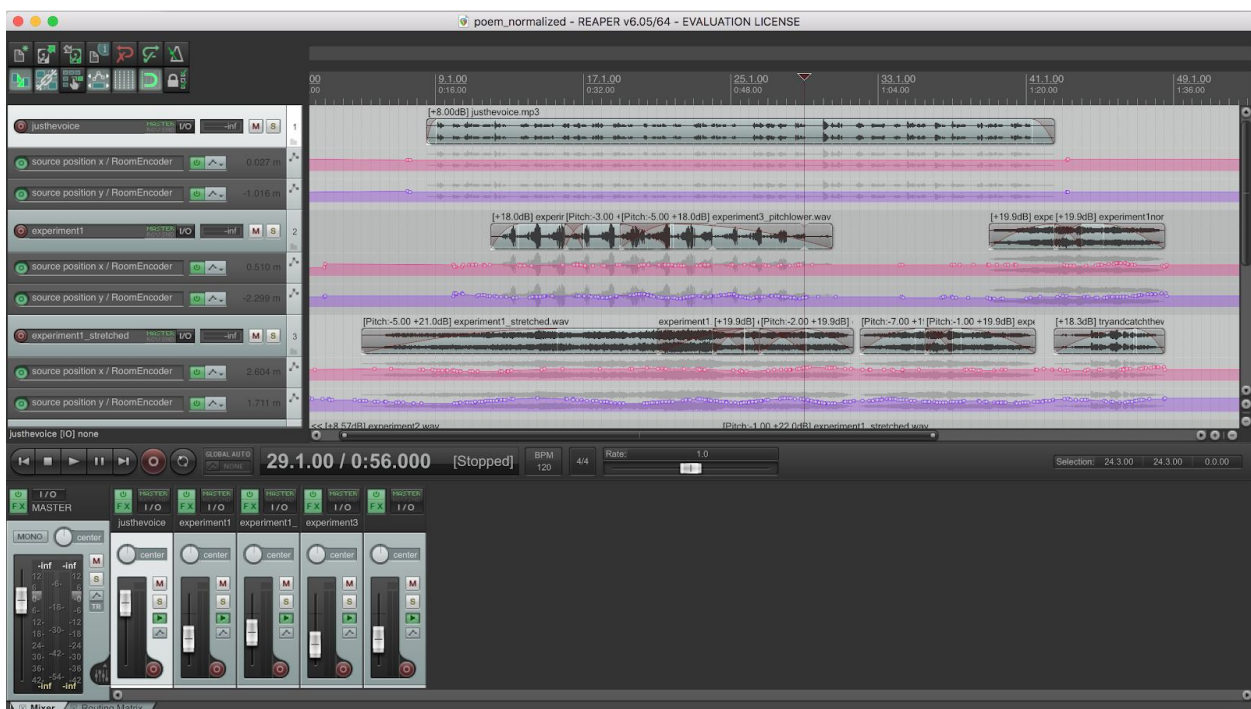


Figure 45: A picture of the Reaper file for Matt Dhillon's poem reading.

7 - Sound and Image Garden

7.1 Stages of making

7.1.1 - Intention

In this moment in the story, a transformation already happened through the Dream Landscape. This is a place for meditation, relaxation, contemplation of beauty and an aesthetic experience. I wanted to create images for a sound therapy meditation and wanted to have BreAnna Martin's sound therapy in the Cube. Her sound is therapeutic and involves beauty beyond just appearance or something superficial.

7.1.2 - Imagination

I imagined BreAnna's space in the Cube as a center of a sphere marked by the round rug and the distribution of her Tibetan bowls and other instruments around the rug. Around her space are images of watercolor moving in the cyclorama to illustrate garden plants. The architecture of this garden is made with sounds and images projected in the space.

7.1.3 Painting watercolors

I painted these watercolors based on my experience with botanical illustration when I took a specialization course on it with Professor Marcos Silva e Silva at the University of Brasília, in Brazil. However, at the time I would collect plants, keep them in one position and make a more exact drawing, trying to represent the proportions and parts of the plant as accurately as possible, and make color studies to achieve precision with that too. I also had access to the plant, which was right in front of me. Presently, I sometimes think that I'm forgetting some things about plants I used to be familiar with. I painted these plants thinking about memory and lack of it. When I had a plant in mind, for example, *Campanula persicifolia*, there were details I remembered about its shape, and put them on paper. However, there were other parts which I really didn't remember, so I made them blurred and undefined, corresponding to my problem in memory. I continued to make more paintings, letting my imagination roam free as I listened to BreAnna's sound recording. At times I only made abstract brush strokes with color combinations, because that was what some parts of her sound that

sounded like “sand” reminded me of. There were 43 paintings made for this piece. Below are some of the pictures of the paintings, in Figures 46 to 52.



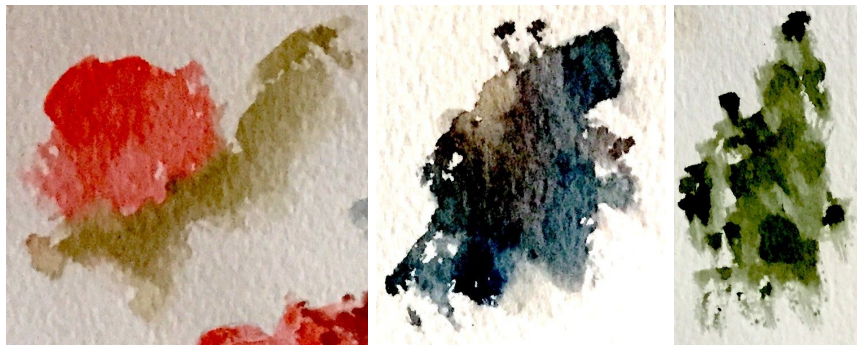
Figure 46: One of the watercolor paintings made for Sound and Image Garden.



Figure 47: One of the watercolor paintings made for Sound and Image Garden.



Figure 48: One of the watercolor paintings made for Sound and Image Garden.



Figures 49 to 52: Watercolor paintings made for Sound and Image Garden.

7.1.4 Painting processing and animation

I processed every picture in Photoshop by selecting only the painting and deleting the paper around it to have a transparent background, as shown in Figure 53 below. Followed by that is Figure 54, with the animation process in After Effects. I selected some of these paintings and animated them with the puppet tool to create a movement of slow expansion and

contraction. Animations in After Effects and processing of images in Photoshop for animation were skills I learned in Professor Simone Paterson's class of Motion Graphics.

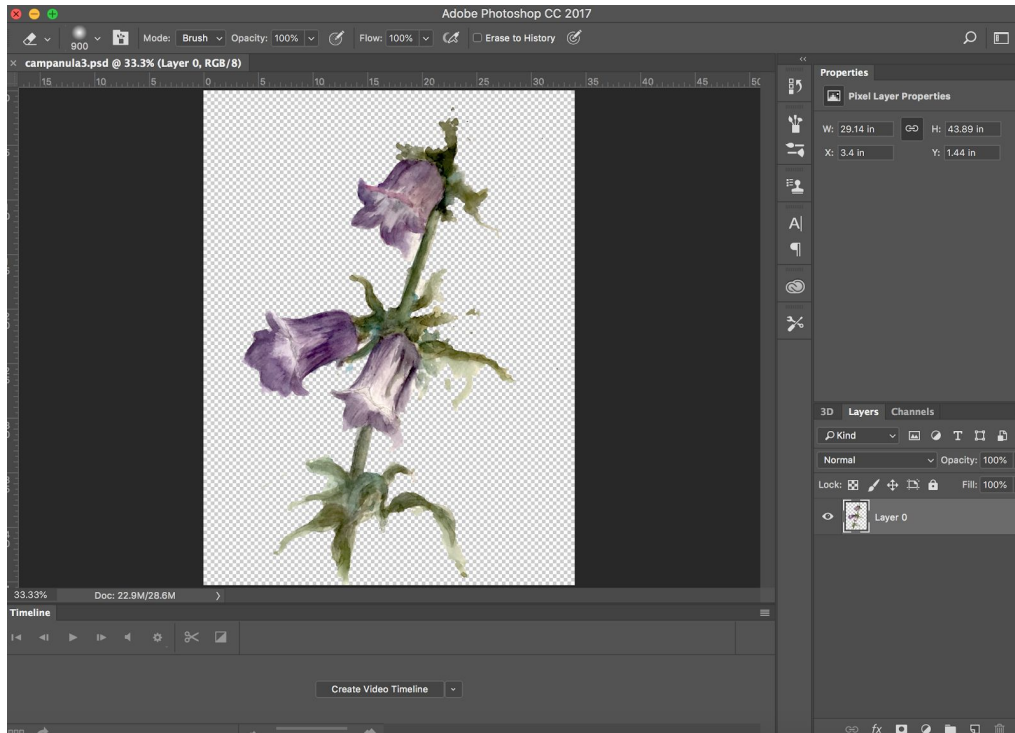


Figure 53: Watercolor painting processed in Photoshop to remove background.

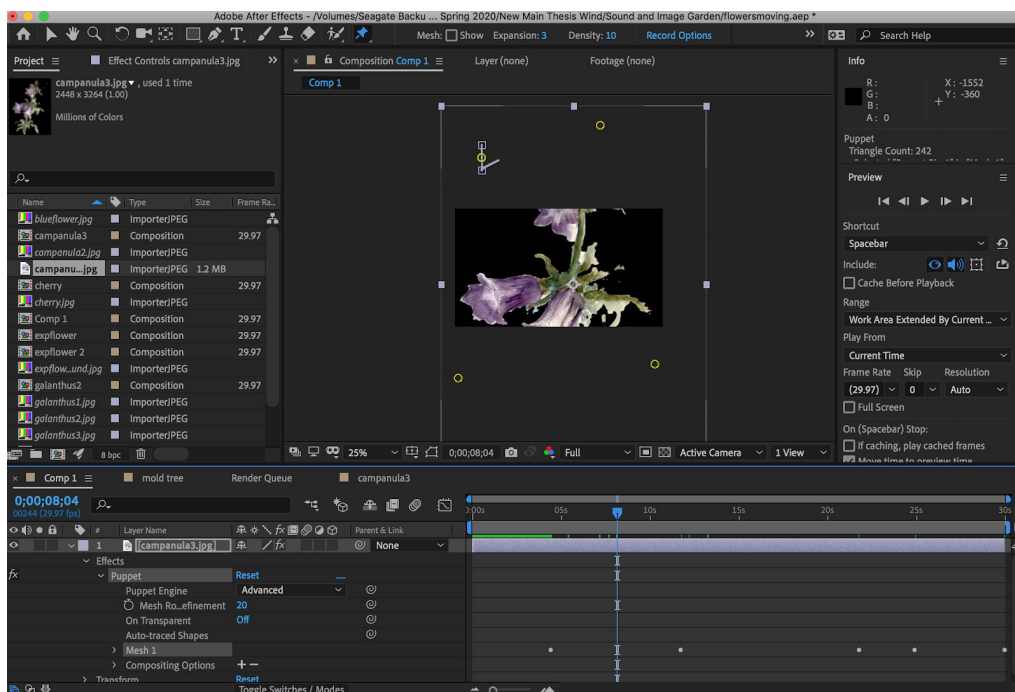


Figure 54: The animation process in After Effects.

7.1.5 BreAnna Martin's sound recording

Because of the Covid-19 BreAnna Martin recorded herself playing the sound therapy instruments. She made a recording of about 12 minutes leaving a lot of breathing space between the sounds.

7.1.6 Composition of Video in Premiere Pro

I put BreAnna Martin's sound in the timeline in Premiere Pro and organized my paintings and animations of paintings in the timeline, as shown in Figure 55. I used blend modes and transparency to compose the video. I made two different videos for each screen of the cyclorama. For the video adaptation for Covid-19, I combined the two exported videos in one video to show the two different sets of images for each screen at the same time, as shown in Figure 56. I also made a sketch to represent BreAnna playing with the sound therapy instruments, shown in Figure 57.

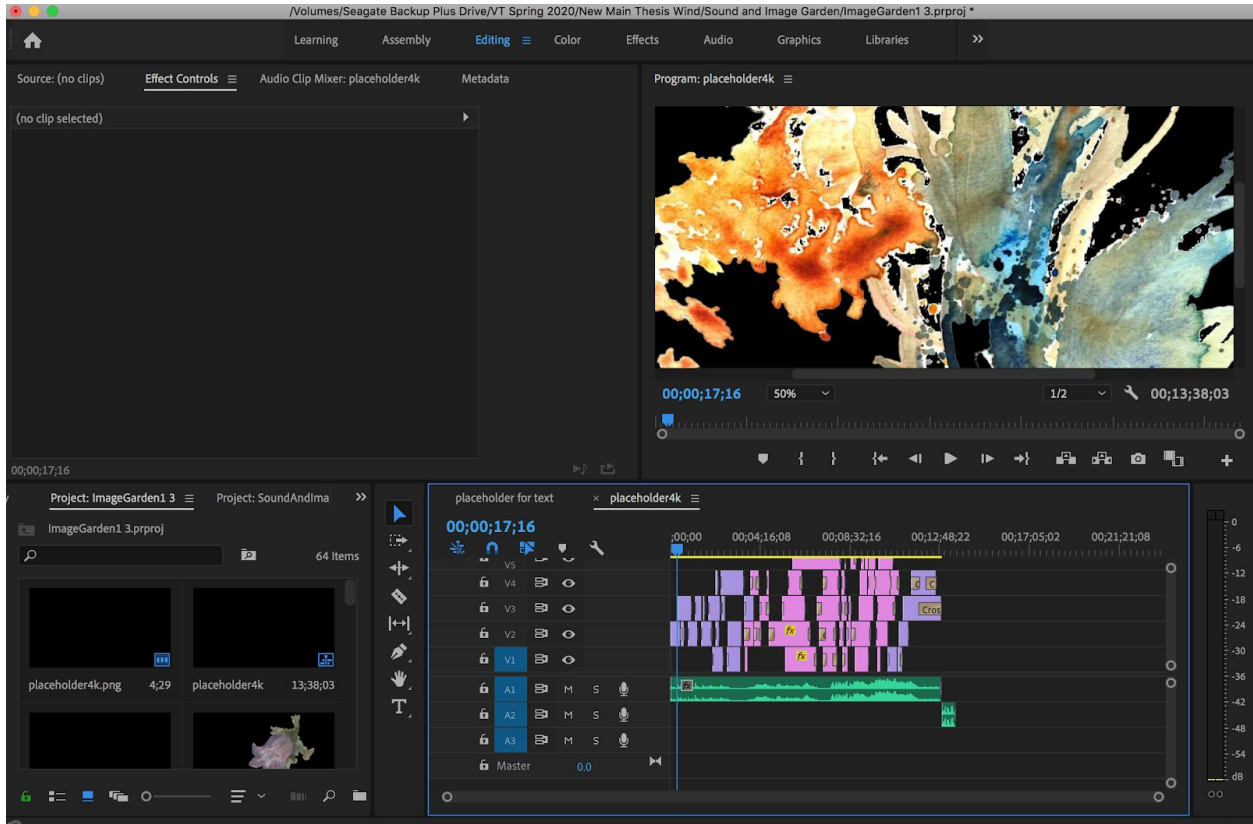


Figure 55: The timeline in Premiere Pro with BreAnna Martin's sound and my paintings and animations organized.

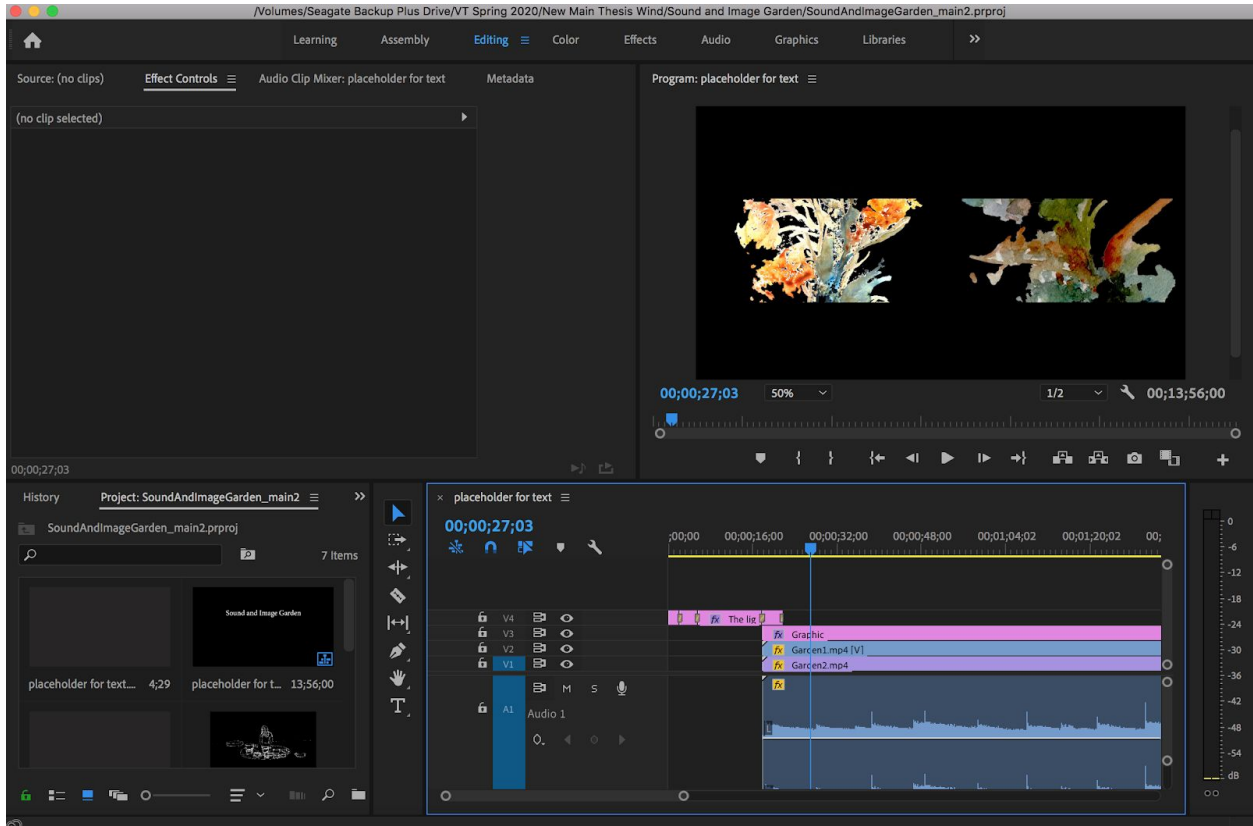


Figure 56: The two exported videos combined in one video in Premiere Pro.



Figure 57: A sketch to represent BreAnna playing with the sound therapy instruments.

8- Other adaptations and adjustments

All the material for the seven pieces of the story was put in a sequence in Premiere Pro, shown in Figure 58, to make one main video of the entire story, which was the product I presented for the thesis defense. It is a video showing how this project would have been, if the Covid-19 pandemic had not happened at this time. If this project can ever be executed in real life, this may be a useful guide for performers and other people working on the project execution.

I made illustrations for each part to show performers in the space, or to help viewers imagine how certain things would look like in the Cube. I also put texts between some pieces to explain what was supposed to happen if we were in the Cube. I recorded an introduction text transcribed below. It plays before the story starts, explaining that the video is a way to show my project because of the Covid-19, with an illustration of the layout of the project in the Cube. This introduction also explains the space for people who don't know the Cube. I recorded other parts to be explanations between pieces. All these recordings were made using GarageBand, with the built-in microphone in my Mac computer.

Introduction text:

“This video is an adaptation of a project that was made for the Cube, a theater space in the Moss Arts Center at Virginia Tech. Due to the Covid-19 it was not possible to present this project where it was planned for. In this video there are titles and illustrations to help you understand what is going on because we are not in the space of the Cube, but in the actual performance these texts and illustrations do not exist. Instead you would be given a paper with a program at the before the show starts. This illustration shows the layout of the project in the Cube. On top we can see the Cyclorama, a large circular screen to project 360 degree video. It is actually composed of two screens, and that is why you may see a double video on some of the pieces in this video. The sound system in the Cube has 140 speakers on the walls, floor and ceiling. On center there is a stage space, with a round carpet and bowls that will be used later in the show. The audience can sit on these benches or on these bean bags or even on the floor with blankets and cushions, to relax and meditate during the last piece.

My name is Aline de Souza and this is the presentation of the thesis project for a Master's Degree in Creative Technologies at Virginia Tech. Thank you for watching!”

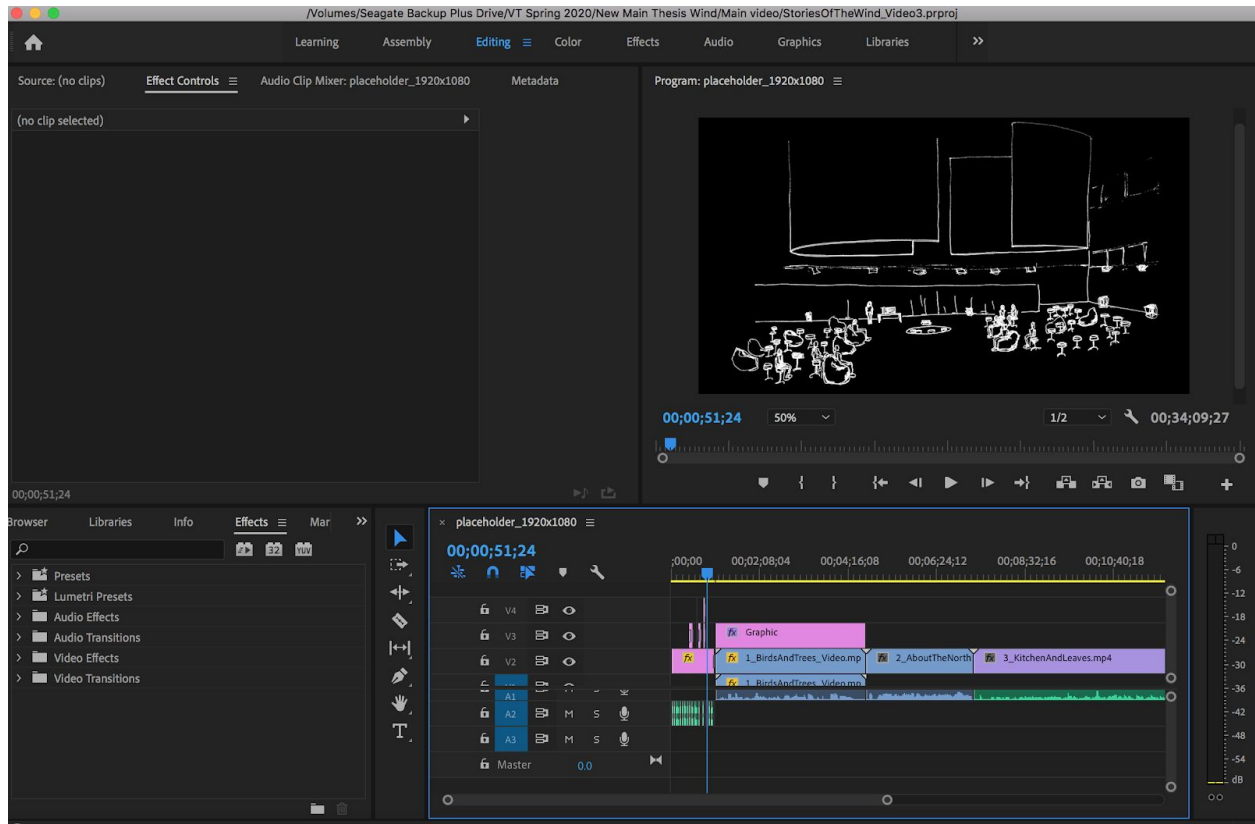


Figure 58: All seven pieces of the story in a sequence in Premiere Pro.

Conclusion

This story takes you from childhood memories, to unpleasant and tense moments to explorations of a surrealist landscape to a sound therapy and watercolor meditation. The different media and technology in the seven pieces are connected through storytelling. My work as an artist-scholar is strengthened by the combination of theory with artistic practice. In this thesis project, the work was strengthened by the studies of folklore, myth, art history, Sloterdijk's writings and reference stories and artistic works, combined with artistic practice and the articulation of artistic expression in various media and technologies.

As a take-away, I hope that the audience can have an aesthetic experience beyond appearance, with the spaces created by sounds, images, light and performance as spaces that articulate reality shifts. I hope that people can take away some of Sloterdijk's message about possibilities of change of one's own reality, as most of the characters in these stories have transformed their realities.

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Appendix

1- Birds and Trees

1.1 - Stages of making:

1.1.6 - Images that are copyright free for bird videos:

List of copyright free videos from Pexels used in *Birds and Trees*:

Video by [Adriano Marques](#) from Pexels:

<https://www.pexels.com/video/bird-feeding-on-grass-2087654/>

Video by [Kosma Kurlowicz](#) from Pexels:

<https://www.pexels.com/video/bird-perched-on-branch-2030260/>

Video by Pixabay from Pexels:

<https://www.pexels.com/video/video-of-morning-sunshine-855018/>

Video by [Oleg Magni](#) from Pexels:

<https://www.pexels.com/video/silhouette-of-maple-leaves-1510090/>

1.1.8 - Composition of Imagery

I connected the following tutorials so that a certain volume of sound would open a video with a blend mode:

Tutorial for working with blend modes in max msp:

Blending and masking in Max with jit.op by [zeal](#)

https://www.youtube.com/watch?v=Xd6DCV_n4EA

Tutorials for connecting a sound source to trigger something in max:

MAX MSP REQUEST: AUDIO REACTIVE PATCH by [Programming for People](#)

<https://www.youtube.com/watch?v=NvZ90pZCE5c>

Max 7 Tutorial #45: Using Audio to Drive Effects by [dearjohnreed](#)

<https://www.youtube.com/watch?v=t7yGSNenS8I>

3- Kitchen and Leaves

3.1 - Stages of making:

3.1.4 - 3D Modelling and rendering in Blender

I went through the following tutorials to learn about rendering:

Part 6, Level 1: Rendering - Blender Beginner Tutorial by [Blender Guru](#)

<https://www.youtube.com/watch?v=ZTxBrjN1ugA>

This tutorial helped me adjust the camera for rendering:

Blender 2.8 Camera to View Tutorial by [Jayanam](#)

<https://www.youtube.com/watch?v=Pggu1asGdVc&t=33s>

The following tutorials teach how to make leaves and animate many leaves moving as if blown by wind:

CGC Classic: Animating Leaves Blowing in the Wind (Blender 2.6) by [CG Cookie](#)

<https://www.youtube.com/watch?v=-YmGUVwcFKs>

how to animate leaves blowing in the wind in blender 2.8 by [TopChannel1on1](#)

https://www.youtube.com/watch?v=7BB_zRvmRnI

3.1.7 - Composing the Imagery

Copyright free video used, from Pexels:

Video by [bruce lam](#) from Pexels

<https://www.pexels.com/video/sunlight-peeping-through-the-trees-in-the-woods-2455151/>

5- Kafkan Nightmare

5.1 Stages of making

5.1.2 3D Modelling in ZBrush and Recording the Screen

I used the following tutorial to learn how to record the screen from ZBrush while modeling:

Making History Movies with zBrush Tutorial by [Nick DuPree](#)

<https://www.youtube.com/watch?v=KsisLtLmILU>

5.1.3 Text

List of reference works I looked at to write the text for the voice material of the soundscape for this piece:

Kafka, by The School of Life:
“*LITTÉRATURE: Franz Kafka*”, video file, 10:32, YouTube, posted by The School of Life, April 22, 2016, <https://www.youtube.com/watch?v=g4LyzhkDNBM>

Kafka’s wikipedia page:
https://en.wikipedia.org/wiki/Franz_Kafka

Orson Welles, dir. *The Trial*. Jericho, N.Y.: Video Treasures, 1985. VHS Tape.

Robert Hossein, dir. *Les Misérables*. Paris: 1982. Film.

5.1.4 Creation and composition of sounds.

Explosion sound by [ALLANZ10D](#) from Freesound.org, under the [Creative Commons 0 License](#), with no copyright.
<https://freesound.org/people/ALLANZ10D/sounds/235426/>