

Vessels:
Designing for Autonomous Sound

SHARON RESHEF

A THESIS SUBMITTED TO
THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF FINE ARTS

GRADUATE PROGRAM IN THEATRE
YORK UNIVERSITY
TORONTO, ONTARIO

September 2019

© Sharon Reshef, 2019

THE ABSTRACT

This thesis explores the process of designing for nature's autonomous soundscape through an experimental meditation on the phenomenology of acoustic resonance: the sonic vibrations of objects. Manifested in a series of sculptural resonant cavities, formed from found objects, these vessels became instruments, listening devices and reliquaries of a resonant relic through creation, performance and preservation. The intent of this thesis was to design for nature's soundscape to expose sound as a powerful medium capable of eliciting intimate, self-reflective moments with nature.

THE ACKNOWLEDGMENT

I would like to thank Alec Hussey for braving the wet and the cold to take these beautiful photographs that are exhibited.

To Lucas Olscamp for his endless support and inspirational moments that will endlessly resonate with me.

To Shawn Kerwin, Doug Van Nort, Ian Garrett and Teresa Przybylski for guiding me through this sonic journey.

Lastly, to friends and family who have helped me bring this project to life.

TABLE OF CONTENTS

The Abstract.....	II
The Acknowledgment.....	III
Table of Contents	IV
List of Figures	V
The Introduction	1
The Origin.....	4
The Artistic Practice.....	4
The Autonomous Performer.....	9
The Origin Story	18
The Resonance	24
The Creation.....	31
The Reliquary	31
The Structure	32
The Vessels.....	42
The Performance	54
The Ritual.....	54
The Locations.....	58
The Visits	62
The Listening Ritual.....	64
The Moments	66
The Preservation	73
The Reliquary Effect	73
The Conception.....	76
The Components	81
The Exhibition	88
The Reflection	98
The Response to the Moments.....	98
The Hesitation vs. Impulse.....	101
The Experience of Resonance.....	104
The Artist's Presence	105
The Conclusion	108
Bibliography	110
Appendices.....	113
Appendix A: The Moments.....	113
Appendix B: The Installation	117
Appendix C: The Curated Moments	120
Appendix D: The Exhibition.....	123

LIST OF FIGURES

Figure 1: Preliminary design of reverb chamber, Sharon Reshef, 2018	20
Figure 2: Orlando performance with vessel prototype, Amnon Reshef, 2018	24
Figure 3: Diagram of ear anatomy.....	33
Figure 4: Eavesdropping listening device: Kircher, Athanasius.....	35
Figure 5: Aurolase Phones, 19 th century	36
Figure 6: McKeown Chair, 1879,.....	37
Figure 7: Sound locator from USA, 1921	38
Figure 8: Sound locator from The Netherlands, 1930	39
Figure 9: Portable sound locator, 1917	39
Figure 10: Duchamp, Marcel, <i>Bicycle Wheel</i> , 1913	40
Figure 11: Duchamp, Marcel, <i>Fountain</i> , 1917.....	40
Figure 12: Beuys, Joseph, <i>Fat Chair</i> , 1964	42
Figure 13: Vessel no. 1, Sharon Reshef, 2019	46
Figure 14: Vessel no. 3, Sharon Reshef, 2019	46
Figure 15: Vessel no. 2, Sharon Reshef, 2019	49
Figure 16: Vessel no. 4, Sharon Reshef, 2019	51
Figure 17: Vessel no. 5, Sharon Reshef, 2019	53
Figure 18: Ufan, Lee, <i>Relatum-Silence</i> , 2010	78
Figure 19: Kosuth, Joseph, <i>One and Three Chairs</i> , 1965	80
Figure 20: York University Gales Gallery Floor Plan, Sharon Reshef, 2019	90
Figure 21: Vessel no. 1 + 3 moment, Alec Hussey, 2019.....	113
Figure 22: Vessels no. 1 + 3 close up, Alec Hussey, 2019.....	113
Figure 23: Vessel no. 2 moment, Alec Hussey, 2019.....	114
Figure 24: Vessel no. 2 close up, Alec Hussey, 2019	114
Figure 25: Vessel no. 4 moment, Alec Hussey, 2019.....	115
Figure 26: Vessel no. 4 close up, Alec Hussey, 2019	115
Figure 27: Vessel no. 5 moment, Alec Hussey, 2019.....	116
Figure 28: Installation process 1, Sharon Reshef, 2019.....	117
Figure 29: Installation process 2, Sharon Reshef, 2019.....	117
Figure 30: Installation process 3, Sharon Reshef, 2019.....	118
Figure 31: Installation process 4, Sharon Reshef, 20.....	118
Figure 32: Installation process 5, Sharon Reshef, 2019.....	119
Figure 33: Installation process 6, Sharon Reshef, 2019.....	119
Figure 34: Vessels no. 1 + 3 curation, Sharon Reshef, 2019	120
Figure 35: Vessels no. 1 + 3 curation 2, Sharon Reshef, 2019.....	120
Figure 36: Vessels no. 2 curation, Sharon Reshef, 2019.....	121
Figure 37: Vessels no. 4 curation, Sharon Reshef, 2019.....	122
Figure 38: Vessels no. 5 curation, Sharon Reshef, 2019.....	122
Figure 39: Exhibition curation, Sharon Reshef, 2019.....	123
Figure 40: Audience in exhibition, Sharon Reshef, 2019	123
Figure 41: Exhibition curation 2, Sharon Reshef, 2019	124
Figure 42: Audience in exhibition 2, Sharon Reshef, 2019.....	125
Figure 43: Audience in exhibition 3, Sharon Reshef, 2019.....	126
Figure 44: Audience in exhibition 4, Sharon Reshef, 2019.....	126
Figure 45: Audience in exhibition 5, Sharon Reshef, 2019.....	127
Figure 46: Children in exhibition, Sharon Reshef, 2019.....	128
Figure 47: Children in exhibition 2, Sharon Reshef, 2019.....	129
Figure 48: Audience in exhibition 6, Sharon Reshef, 2019.....	130
Figure 49: Audience in exhibition 7, Sharon Reshef, 2019.....	130
Figure 50: Audience in exhibition 8, Sharon Reshef, 201.....	131

Figure 51: Audience in exhibition 9, Sharon Reshef, 2019	132
Figure 52: Audience in exhibition 10, Sharon Reshef, 2019	132
Figure 53: Audience in exhibition 11, Sharon Reshef, 2019	133
Figure 54: Exhibition curation 3, Sharon Reshef, 2019	133

THE INTRODUCTION

“From one body to the other, a thread is made that stitches the two together in a temporal instant, while remaining loose, slack, to unfurl back into the general humdrum of place. Sound might be heard to say, this is our moment.”

-Brandon LaBelle, *Acoustic Territories*, xvii

Sound is incorporeal energy that travels through the air that fuels life, to spark the auditory senses for a transitory moment. When sound stimulates the senses, it exuberates a visceral, psychophysical experience, grounding an attentive listener in place, space, and time. Intangible but bodily stimulating, spontaneous but purposeful, alive but dying, sound is deserving of a stage *and* an attentive audience to perform its fleeting symphony. Sound deserves a designer.

The sound I chose to design for was nature’s soundscape; a continuously performing symphony of orchestrated sonic entities that have become a victim to the progression of humanity’s technological advancements. Being a designer, not a composer of sound, I chose a sound source with sonic autonomy that needed to be heard and preserved before eternally silenced. The soundscape of nature is in need of a designer to amplify and enhance its melodies so an audience attentively listens and experiences a visceral, self-reflective moment with their natural environment.

To elevate nature’s autonomous soundscape, performing self-written compositions, I designed an architectural host that encapsulated and amplified the presence of sound. Bridging architectural acoustics and performance design generated a transcendental interaction between sound and listener. Sound became sacred and valued as it engaged

with a sonically responsive space. Implementing an acoustic structure that resonated and amplified nature's soundscape in a transformative duet of sonic symphonies elevated the listening experience into a sanctified, spiritual moment of deep euphoria. The sonic environment, within that moment, became an autonomous sonic entity of divinity.

Resonance, the voice of vibrating architecture, became mine and nature's sonic partner. The assembled resonant cavities that transformed into the vessels, were designed acoustic spaces that became resonant interfaces between nature's sonic performance and a listener. The vessels were taken to landscapes to perform with nature's soundscape while an attentive listener performed ritualistic listening. These sonic events were documented with audio recordings and photographs. The moment resonance interacted with the divine sounds of nature it transformed into a sonic relic, an object that is sanctified after physical contact with a holy entity. The vessels became reliquaries, containers for relics, preserving resonance's memories of its collaborative performance with the divine.

The vessels rested in a curated space for an audience to experience the memory and sanctity of nature through resonance. Exhibited in a gallery, the vessels and their associated documentation narrated and preserved their moment with nature's soundscape. The immersive and interactive exhibition engaged the audience visually and sonically, transporting them through place, space, and time to the captured, sacred moments. By giving value and sacredness to nature's soundscape, the audience experienced a powerful, intimate moment with nature through sound that made them re-evaluate their relationship with their environment.

Through the vessels, resonance and the sounds of nature transformed in a transcendental duet. Reconfiguring the dramaturgy of relics sanctified and established resonance as a preserver of a sacred sonic moment, endlessly resonating with its memories of nature's soundscape. This thesis amplified nature's divine sound through creation, performance, and preservation of resonance for an audience to meditatively self-reflect on their relationship with nature.

THE ORIGIN

The Artistic Practice

Sound became my primary medium because of its ability to instigate a relation with a listener by encapsulating the mind and body with sensory excitement. The attentive listener experiences a visceral, psychophysical moment with sound. Brandon LaBelle describes the intense visceral experience of sound in his book *Background Noise*:

“Sound is intrinsically and unignorably relational: it emanates, propagates, communicates, vibrates and agitates; it leaves a body and enters others; it binds and unhinges, harmonizes and traumatizes; it sends the body moving, the mind dreaming, the air oscillating. It seemingly eludes definition, while having profound effect.” (ix).

Sound’s potential for inducing relational and visceral experiences was honed in multiple streams of art practices and movements. The prominence of sound as an art medium began in the 1950’s (LaBelle, “Background Noise” xii). Experimental music initiated the transition from orchestrated instrumental music towards found sound: “from the symbolic and representational (music) to the phenomenal and nonrepresentational (noise)” (LaBelle, “Background Noise” 9). Two artists have been critical figures in the experimental music movement and within my artistic practice; John Cage and Alvin Lucier.

John Cage, a crucial artist for the experimental music movement, and for my artistic practice, introduced the theory of chance and controlled randomness. Instead of producing controlled compositions from human-made instrumental sounds, Cage, in his book *Silence*, proposes noise as the performer and the artist as the organizer of captured sounds (Cage 3). The artist listens for their music, collecting the sounds that are

continuously performing around them. By employing an operation that implements chance, the artist is able to orchestrate the sounds indeterminately and randomly (Cage 10). Using the *I-Ching (Book of Changes)*, an ancient Chinese oracle book of a number chart with correlating meaning, Cage implemented an operation of chance that determined a composition by tossing coins while asking the I- Ching questions (Cage 57). With this method, Cage produced many compositions derived from chance and indeterminacy, including *Imaginary Landscape No. 5*, 1952 and *Variations II*, 1961 (LaBelle, “Background Noise” 8).

Emphasis was placed on the process over final content; the process itself was the artwork (LaBelle, “Background Noise” 9). The operation of chance removes self-projection from composition allowing the sound and the process to dominate the artwork, forcing the artist to trust the process that yields the power of sound.

Cage was most famous for his silent piece *4'33''*, 1952, where an instrumentalist performed silence with their instrument for an audience. Even though the instrumentalist does not produce music, the performance of silence encourages the space, the environment, and the audience to become the acoustic performers (Labelle, “Background Noise” 14). *4'33''* permitted the indeterminacy of an auditory autonomy to perform without the artist’s organization of sound. Cage only controlled the duration and the instrumentalist’s performance that set the parameters for sonic chance to exist. This piece defends Cage’s theory that silence does not exist. With purposeful moments of silence in musical compositions, the environment continues the sonic performance. Even when Cage visited an anechoic chamber, a silent room designed by engineers, he was able to hear his internal body perform, listening to his nervous system and circulating blood

(Cage 8). Cage was an advocate for the impossibility of pure silence. To me, silence is a purposeful quiet moment by a performer. Silence is the stillness of sound. I believe in silence, and therefore, it is a term used within my artistic practice.

Cage revolutionized music through experimenting with noise as musical sound. Cage's theory and practice continuously influences my artistic process, from identifying my sonic performer, to implementing operations of indeterminacy, and trusting the process.

An artist that has been the soul of my artistic foundation is Alvin Lucier. Lucier is an artist of experimental music and sound installations that explored the physical phenomenology of sound (Labelle "Background Noise" 124). James Tenney described Lucier's practice as two systems; one natural and one mechanical, interacting to excrete, expose and exemplify sound (*About Alvin Lucier* 14). Lucier designs for sound to reveal its physical phenomena, removing any possibility of self-expression (Labelle, "Background Noise", 124).

A piece that exemplified Lucier's commitment to eliminating artistic intervention of expression to magnify the acoustic phenomena was *Music On A Long Thin Wire*. In his book *Music 109*, Lucier explains how he extended an extremely long wire across a space and listened to its vibrations. In Germany, he installed a one hundred and twenty-foot long wire in a gallery. Extended between two wood tables, the wire from either end was given tension with notches in wooden bridges that sat on each table. Within these bridges were contact microphones that would sound when the wire vibrated and was amplified with speakers. The wire continuously vibrated with an electrical current from an audio

oscillator. With slack, the wire was in constant sonic flux, creating changing symphonies (Lucier 147).

In an interview with James Tenney, Lucier explained a moment of weakness he had while recording *Music On A Long Thin Wire*. After recording the wire once, Lucier debated if the sound was interesting enough. He decided to adjust the volume of the oscillator that instantly caused an evident change of “artistic intervention, and it spoiled it” (Tenney, “Crossings” 234). Lucier immediately deleted the recording as it contradicted his entire practice. Without any intervention, the wire began to change independently, exposing the phenomenon; that was the supernatural, magical essence of the work (Tenney, “Crossing” 234). In this piece, Lucier designed physical parameters for sound to perform that removed the artist from the composition. Through acoustic structures, Lucier was able to expose sound as a magical entity with autonomy.

Subconsciously, every design or artwork of mine always stems back to Lucier’s *I Am Sitting In A Room*. In this experimental sound piece, Lucier explored the transformation of sound within an acoustic room. Lucier outlined a repetitive operation of chance using two Nagra tape recorders, a Beyer microphone, a KLH loudspeaker, a Dynaco amplifier, a room in an apartment, and his speaking voice. To set the scene, a microphone was connected to the loudspeaker in the living room, another recorder was placed on the outskirts of the living room in the hallway, and a third recorder was connected to the loudspeaker. Lucier wrote a brief text that described his actions within this experiment to remove any significance or emotion to the words spoken for “The art was someplace else” (89). With the recorder in the hallway, Lucier recorded himself speaking the text. The recording, taken from the hallway, would then be played through

the loudspeaker in the living room while the recorder in the hallway records again. This became a repetitive process until the spoken words were unintelligible. The resonance of the room transformed the speech into music, being described as “magical” by Lucier (90). This experiment explores the acoustics of architecture as a performer capable of transforming sounds within its chambers. *I Am Sitting In The Room* taught me to trust the process as the core of the artwork, to remove any self-expressive content for the work to purely be about the sonic performer, and that architectural space has a transformative voice.

John Cage and Alvin Lucier have shaped my artistic practice. Indeterminacy has been a foundation in my practice, to highlight an organized process and to remove artistic intervention during an autonomous sonic performance. For this thesis, instead of searching for fragments of sounds that could be randomly configured to be a composition, I hunted for a sonic performer that was its own composer of sound, creating spontaneous, conscious compositions. It was an exploration of found sound. The soundscape of nature became my performer and collaborator, and I was its designer, responsible for providing a stage, a set, and an audience for my performer. By choosing this autonomous performer, I wanted to demonstrate the power of sound and listening as a relational act that could connect an audience to nature. I believe that through the power of sound, an audience can have an intimate experience through listening to nature, provoking a self-reflective moment that reveals humanity’s and their own relationship with nature.

The Autonomous Performer

Nature's autonomous soundscape was cast as the indeterminate, spontaneous performer capable of composing compositions independently. Listening to nature sonically perform was to listen to a rich, layered symphony by a mass orchestra of natural sonic entities. There was a connective power through listening to nature, as if the sounding environment was performing an intimate concert specifically composed for its listener. An unspoken dialogue begins with the surrounding environment as it embodies and enchants its listener with vibrating sound (LaBelle, "Background Noise" 296). Listening is an engaging, relational act of sonic sensations and perceptions. Listening to nature's soundscape as an autonomous performer acknowledges nature as a conscious living entity.

Exploring nature's soundscape, I was branching into acoustic ecology: the study of the relational effects of the natural sonic environment on surrounding living entities (Schafer, "The Tuning of the World" 271). Founded by Canadian composer R. Murray Schafer, acoustic ecology encourages humanity to listen and reflect on their relationship to their progressing environmental soundscape. With listening being a central element in acoustic ecology and a method of perceiving sound, the practice of influential American experimental composer Pauline Oliveros became critical in understanding listening as a relational act that connects attentive listeners to their sounding environment. In Oliveros's book *Sounding the Margins*, she explains her coined term Deep Listening as an act of intentional focused listening to surrounding sound within daily life, nature, music and thoughts (73).

Stephan Moore, in his article *Three Recent Moments With Pauline Oliveros*, discusses his realization that the two artists' practices have separate, opposing ideologies and theories but could both be adapted into developing artistic practices. Acoustic Ecology focused "outward" on civilization's relationship with their environment, while Deep Listening focused "inward" on individual aural perception of the world that impacts the ability to foster a relationship with the surrounding soundscape (Moore 17). Moore expresses his confliction between being inspired by Acoustic Ecology and Deep Listening, feeling that he must devote his practice to one but not both. Moore attended the Invisible Places Conference in San Miguel Island, where converging artists spoke with energetic, excited voices about their projects that raised awareness of the world's soundscape through enriched sonic experiences for their communities. Panels of highly regarded artists discussed Acoustic Ecology and Deep Listening within the same breath. This conference demonstrated artists' ability to be inspired by both Acoustic Ecology and Deep Listening, seeing "past their possible incompatibilities to a kind of synthesized practice"(Moore 17). By examining both artists' practices that revolve around the performing world's soundscape, I was able to develop a personal practice and perspective around designing for nature's soundscape.

In R. Murray Schafer's book *The Tuning of the World*, he provides an in-depth examination of the sounding world from his founding research group the World Soundscape Project. The book explores the historical, cultural and relational perspectives of the world's soundscape, demonstrating the transition from nature heavily dominating the soundscape to a noise polluted soundscape (Schafer, "The Tuning of the World", 181). Schafer was concerned with the progression of noise pollution and its effect on

civilization. A significant element of Schafer's theory and practice was attempting to tune the world's soundscape, eradicating noise pollution and preserving desirable sounds (*The Tuning of the World* 205). Schafer introduced acoustic design as the study of the soundscape to decipher methods of enhancing, improving, and balancing the soundscape by eliminating noise pollution, approving released future sounds into the environment, and preserving valuable sounds (*The Tuning of the World* 271). With his World Soundscape Project, the group examined anti-noise by-laws from hundreds of communities worldwide to identify constituted noise: the unwanted, unmusical, and extremely loud sounds (Schafer, "The Tuning of the World" 181, 182). Schafer uses his artistic practice to bring awareness to the increasing issues of noise pollution.

Noise pollution has become the soundscape of humanity that has birthed these technological sounds. Taking on nature's soundscape was to take on noise pollution simultaneously. I understood Schafer's desire to re-establish a natural soundscape by tuning the existing noise polluted environment; however, this opposed my artistic practice of relinquishing control over the sounds produced by my performer. The infiltration of noise pollution was inevitable. With loyalty to my artistic integrity, I did not silence or avoid the urban, unnatural soundscape of civilization. Instead, I embraced noise pollution as one of the multiple autonomous sonic entities within nature's soundscape. Schafer states, "the designer does not redesign a whole society: he merely shows society what it is missing by not redesigning itself" (*The Tuning of the World* 239). By not redesigning the soundscape, removing and adjusting the undesirable noise, I brought focus to the current soundscape of nature that, with this continuous progression, might be the future eradicated sound.

Designing for nature's soundscape was to accept the entire sounding environment, including noise pollution. I recognized the relational and impactful experience of listening to mechanical sounds infiltrate nature's soundscape. Pauline Oliveros explains in her book *Deep Listening: A Composers Sound Practice*, the power of accepting and listening to the entirety of the sounding environment, not just desirable sounds. Oliveros recognized that in urban living, there is continuous aural stimulation that causes humanity to filter their sonic surroundings, discarding unwanted noise and listening to their deemed valuable sounds. This action of filtering and tuning the soundscape disconnects humanity from their surrounding environment. Removing this barricade of filtering sound with attentive listening- a relational act- humanity could develop a compassionate and connective relationship to their environment (Oliveros, "Deep Listening" xxv). Oliveros understood the power of listening to the *entire* sounding environment, from nature's soundscape to noise pollution, thus developing the practice Deep Listening.

Deep Listening is an experiential and connective moment with the sounding world through heightened awareness of sound and silence (Oliveros, "Sounding the Margins" 231). Listening connects the ears and the mind to the sonic source. The spontaneous sound of the autonomous sounding environment, when attentively listened to, as a whole, becomes cohesively interconnected with purpose and meaning, "as if it were a composed piece of music" (Oliveros, "Sounding the Margins" 87). When consciously listening, "thought is included," the mind becomes active with responses and reactions to the vibrating sounds surrounding and entering the body (Oliveros, "Sounding the Margins" 78). Listening is relational for it elicits a psychophysical experience that bonds the listener to the performing sounding world. Oliveros developed a practice for Deep

Listening that trains the body and mind to expand its perception and attentiveness. Participants must commit themselves to consistently and continuously engaging in group-listening exercises to achieve a heightened awareness of conscious listening (*Deep Listening* xxiii). Oliveros introduced a practice that emphasized the soundscape of the world as an autonomous performer and attentive listeners as its audience. Through personal, intimate listening to the entire sounding environment, could a relationship with nature develop.

Oliveros treated the entire surrounding soundscape as an autonomous performer that could be connected with through listening. Schafer saw listening as a method of studying the environment. He developed the practice of ear cleansing: exercises that train the ears “to listen more discriminately to sounds, particularly those of the environment” (Schafer, “The Tuning of the World” 272). Ear cleansing prepares individuals, specifically acoustic designers, to study and collect sonic data from environments through listening (Schafer, “The Tuning of the World” 208). Instead of using listening to connect with the land, as Deep Listening preaches, ear cleansing is listening impartially and strategically for knowledge about the sonic environment. Both listening practices were valuable but for alternate purposes; Oliveros, concentrated on the personal perception of expanded listening, and Schafer focused on the directive, attentive listening to dissect sound.

Both Schafer and Oliveros began their careers as composers and continued their musical practice with their interests with the sounding environment. Schafer designed and composed musical theatre performances within wild, natural landscapes. In Schafer’s creative process, nature’s soundscape was secondary to his compositions, even though he

mentions the environmental soundscape as a “huge musical composition,” crediting it with auditory autonomy (*The Tuning of the World* 205). Ellen Waterman, in her article *Wolf Music: Style, Context, and Authenticity in R. Murray Schafer’s And Wolf Shall Inherit The Moon*, she deconstructed Schafer’s practice and compositions to reveal his meditative design of a sonic, performative experience in nature. Focusing on *Patria the Epilogue: And Wolf Shall Inherit the Moon*, she identifies Schafer’s pursuit for an integrative, ritualistic performance in the wilderness to evoke an emotional experience of nature (Waterman 72).

And Wolf Shall Inherit the Moon is an epilogue to the twelve cycle theatrical and musical compositions named *Patria*, dramatically performed yearly for a week in August in Halliburton Forest and Wild Life Reserve (Waterman 72). The performance required 64 adults; musicians, singers and actors, who were separated into clans and resided on different campsites that became their performing space (Waterman 73).

Schafer translated the sounds of the wilderness into musical compositions to be performed by an ensemble of instrumentalists. These compositions and dramatic performances were written for specific landscapes to incorporate visual elements of nature as a scenic backdrop, and its natural acoustics as a theatre structure (Schafer, “Patria” 111). He studied his environment to identify the areas that would enhance the composition. The visuals of the environment inspired the composition; the rise of the sun or the mist that hovers over a lake (Waterman 77). The music was composed to imitate the natural dramaturgy of these events. *The Princess of the Stars* was timed with the sunrise, to elicit imagery from the story into reality. An audience was brought to these wild landscapes, to have these human-made instrumental sounds overpower and silence

the sonic environment. Schafer exploited nature's beauty to enhance *his* compositions that were idealizations of the wilderness, choosing the sounds and visuals that he deemed worthy of being present in his performance.

In Schafer's book, *Patria and the Theatre of Confluence* he states that during the performances in the wild, "wind in particular is the enemy," because of its undesirable characteristics that can "destroy the music" by consuming and displacing the musical sound (110). Schafer labelled wind an enemy because it could disrupt the immaculate instrumental performance of the human orchestra that was imposing on to the landscape. Wind is a prominent performer of nature; a vibrating incorporeal body that stimulates many elements of the physical environment to be vocal. Leader of the sonic environment, wind ignites the aural and tactile senses, the two senses that, according to Schafer, are the most intimate (*Patria* 42). A powerful visceral performer such as wind would presumably be a desirable addition to the orchestra. Schafer did not accept nature as an equal sonic collaborator; encouraging quieter, pleasant sounds of nature to be secondary performers while the potent, overpowering sounds were deemed the enemy. The only sounds from nature that were encouraged were ones that did not overshadow or disrupt the music. The "living environment enters and shapes the success or failure" of a performance (Schafer, "Patria" 110). Nature's imperfections and undesirables harm the musicians' ability to perform and deem the performance a failure. Schafer took on a stage, an environment that was unpredictable and spontaneous, in hopes it would perform in a way that enhanced his compositions. Those windy, rainy moments that Schafer declared the enemy could have been embraced and incorporated into the performance.

Unlike Schafer, Oliveros embraced autonomous sound as an equal collaborator while she performed instrumentally. In 1988, Oliveros founded the Deep Listening Band, a group of instrumentalists that through listening and interaction with natural, virtual, and constructed spaces, generated improvised music that was transformed and influenced by the acoustical environments (*Sounding the Margins* 197). Oliveros chose spaces for their voice, to develop depth and indeterminacy to the sonic performance, rather than their natural physical attraction. The sound of the space would become a musician in the band for the duration of the performance. To collaborate, respectfully, with the sounding space, the band would listen to the sounding environment to guide the improvised performance with space and sound (Oliveros, “Sounding the Margins” 198). Improvising was a key attribute to Oliveros’s practice for it demonstrated her desire to collaborate with her sounding environment rather than performing a pre-composed piece of music.

With both composers there was an infiltration of the artists' musical composition, either overpowering the natural soundscape or improvising and collaborating with their autonomous performer. Within my practice I do not produce or organize sound, I merely capture moments and pieces of nature’s grand composition. Within these moments, the soundscape has complete autonomy.

Relinquishing control over my autonomous performer’s indeterminacy was to accept the inevitability of stillness- with sound comes silence. The presence of sound fluctuates with intensity and volume through transitory moments of being loud and audible to being quiet, and faint. Silence is a conscious choice made by the performer to seize its audience in anticipation. After every silence there is a rebirth of sound that settles the apprehensive, palpating heart of its listener till the next moment of stillness

(Schafer, “The Tuning of the World” 257). Calm moments of quietness can also be serene and meditative, providing a break for its attentive listener. Silence is the balance between tranquillity and anxiety. Silence reemphasizes sound as an autonomous, indeterminate performer capable of creating a stimulating experience.

Even though Schafer and Oliveros’s practices were divergent, both offered perspectives on the world’s soundscape that shaped my approach to designing for nature as an autonomous sonic performer. The soundscape of nature is filled with natural, mechanical and silent moments that together create an intentional, indeterminate symphony of collaborative sound. Nature’s soundscape became my actor, and as its designer, I was to provide a set and a stage where the actor could thrive and connect with its listening audience. The design needed to emphasize, highlight, and empower nature’s magnetic, euphoric soundscape for an attentive audience. The design process was discovering ways of enhancing the experience of listening to nature without compromising its soundscape. I reconfigured the definition of Schafer’s acoustic designer as an individual attempting to reconnect civilization to their sounding environment by offering the soundscape an enhancement and elevation through design. The design process became an exploration of architectural acoustic structures that enriched listening to a natural environment through the transcendental experience of sound autonomously transforming. Transformation was not an attempt in reconfiguring or adjusting the soundscape, but rather an emphasis on the autonomous behaviour of nature and architecture sonically collaborating with mystery and enchantment. Designing an acoustic space for nature exposed the visceral, relational and physical phenomenon of sound.

The Origin Story

Stemming from my fascination with autonomous, transformative sonic space, the conceptualization of the design for nature's soundscape was an exploration of sacred architecture that consciously implemented a vibrant, acoustic space to enhance and empower the religious experience of vocal prayer. The design of these religious spaces demonstrated the enriched spiritual experience of prayer as the architecture reverberated and amplified the sounds it encapsulated. The bond between a listener and the sacred divine was enriched by the collaborative performance of acoustic space and sound.

In her book *Hagia Sophia*, Bissera V. Pentcheva focuses on the architectural designs of the Byzantine Hagia Sophia. This religious space was purposefully designed to be reverberant because of its spiritual capabilities of “render[ing] the divine audible” (Pentcheva 119). When disciples sing and chant the architecture begins to perform, responding and reacting to the symphonies within its body. The reflective space reverberates, removing any semantic of speech into an orchestra of unrecognizable, transformed sound (Pentcheva 7). It is as if the divine is harmonizing with its disciples. The transformation of sound produces sonic energy that inspires worshipers with divine nearness. The sonic performance of architectural space can embody its listeners, the amplification keeps the ears aware and attentive, the reverberation vibrates the body into the present moment, and the resonance soothes the mind into a transcendental state — early architects designed with their eyes and their ears (Schafer, “The Tuning of the World” 220). When sounds reverberate and echo within a space, “they convert the sequential tones of melody into the simultaneously heard chords of harmony,” improving and emphasizing the sonic experience (Schafer, “The Tuning of the World” 219). The

psychophysical experience of architectural acoustics stimulates a sonic, spiritual, intimate moment.

The Church of the Transfiguration of the Savior in Thessaloniki, Greece, was another sacred Byzantine religious architecture that demonstrated the conscious application of acoustic structures. Adrienne Lafrance interviewed Sharon Gerstel, a Professor of Archaeology and Art History at the University of California, Los Angeles, who organized a team to sound map the acoustics of The Church of the Transfiguration of the Saviour. The team discovered that the church produced a slap echo that happens when walls are relatively close together, allowing the frequencies to bounce back and forth, creating a sound that resembles the fluttering of angel wings. Gerstel discovered that the architects were “actively trying to tune the space” (Lafrance, “Hearing The Lost Sounds of Antiquity”). The designed acoustic architecture produced a divine sonic entity that enhanced the spiritual experience of sacred space through sound.

Religious architecture exposed the phenomenology of sound with acoustic space that autonomously transformed all prayers as if orchestrated by divine intervention. A sonic performance could be enhanced and elevated into a realm of transcendental spirituality, and a connective, relational experience, through the implementation of acoustic space.

My first design for nature was heavily inspired by the implementation of architectural acoustic in religious spaces. Imagined as a reverb chamber, the original design manifested as a large, dominating structure that the audience sits within. In this version, wind was my sole performer for its incorporeal energy was reminiscent of divinity. The reverb chamber would have been an instrument for wind, the sonic energy

entering the enclosed space to amplify and reverberate around the body of the audience. Experiencing wind in a reverberant space could potentially inspire an audience to harness and further develop a relationship to nature. The chamber was designed to have a concrete domical form with cylindrical hollow pipes jutting from all sides. The pipes would activate and intensify the wind, producing amplified, resonating symphonies that would reverberate as it enters the reflective domical space. As the audience sits within the architecture, listening to space transform the wind's sonic energy, a spiritual and sacred experience could instigate a connection towards sound, wind, and ultimately nature.

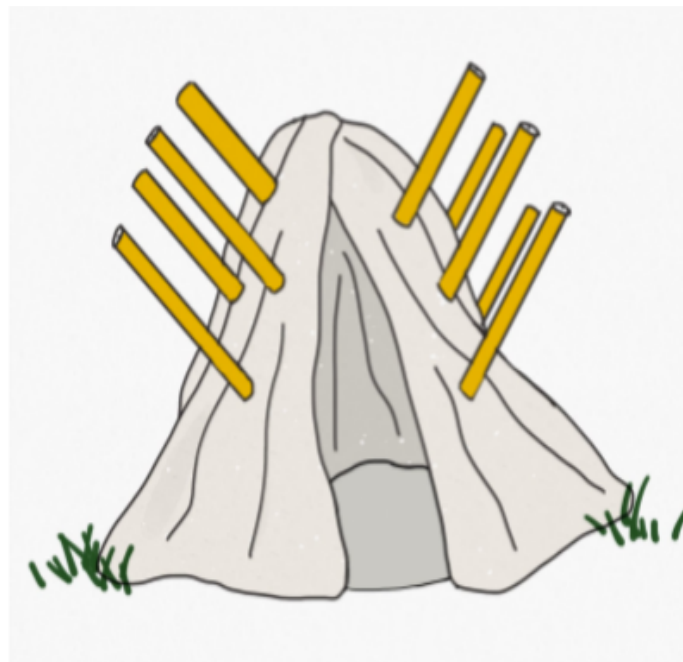


Figure 1: Preliminary design of reverb chamber, Sharon Reshef, 2018

The reverb chamber was an unattainable dream due to limited resources, forcing a recalibration of the design. Having to reimagine my original design made me re-evaluate the most valuable aspects of the project. The one thing I could not give up was the transcendental experience of listening to sound transform in a structured space. Letting

go of the preliminary idea of the audience experiencing sound *within* an acoustic structure, I began to think of architecture on a smaller scale whose interior could be experienced sonically. Architecture, to me, use to be large, interior structures, but with this need to rescale my design I redefined my interpretation of architecture to be a constructed, composed space of any size with functionality. Instead of creating a permanent, imposing structure that would have enclosed the audience in an interior, I downsized the design to be a portable, handheld configuration that can be an instrument for the sonic environment and a listening device. The handheld device could still encompass an acoustic structure that would enhance and elevate the experience of listening to nature. With this new idea, I decided to accept the entire soundscape as my performer, rather than limiting the experience to wind. Without the enclosure of the reverb chamber and its design to capture wind as its primary performer, the audience would be exposed to the entire soundscape of the natural environment. I, respectfully, did not want to develop Schafer's attitude of being displeased by the entire sounding environment because of its potential to disturb the main sonic star of his production. To stay true to my artistic practice, I embraced the entire soundscape of nature for my reconfigured design. Nature's soundscape became an orchestra, composing autonomous symphonies that were indeterminate to the audience but purposeful for the performer. The element of chance was further intensified and highlighted by incorporating all sounds within a natural landscape.

The revamp of the design still integrated an architectural acoustic interior, still capable of eliciting a sonic and visceral transformation while incorporating transportability. Portability allowed for an explorative pilgrimage through landscapes

where sound dictated the journey. Instead of being stationary, the handheld device relied on its accompanying listener to voyage through a landscape with aural attentiveness, scouting for minuscule or grand sounds, for a single leaf crinkling with the sway of the wind or waves crashing on the shore of a beach. The experience transformed from a limited, enclosed space to a vast, explorative expedition through time and place.

The next step was to design this handheld device through experimentation and exploration of found objects to test acoustic space as a compatible collaborator to nature's soundscape. While travelling to Orlando, Florida, I tested my theory of a transformative, transcendental collaboration between nature sounds and architectural acoustics with found objects. I proceeded to examine reflective, acoustic objects that replicated the conical shape of the ear's anatomy in hopes of amplification and reverberation. The first object I came across was a didgeridoo. Within a quiet room of an apartment, I placed the hollow, cylindrical opening against my ear and listened. The instrument emitted an endless hum; the interior of the object sang with resonance. Resonance, in a hollow acoustic object, is the sound of airwaves vibrating reflective material to emit the object's natural resonant frequency. The resonant frequency is based on the object's dimensions, constructed material, and the amplitude of entering air. As the resonant object is excited by air and sound, its frequency is amplified with intensity (Brown University Physics Department, "Resonant Frequencies in Acoustical Cavities", 1). The didgeridoo was an acoustic resonator, and as air passed through its hollow body it sang with a low hum. When further excited by rapid air and a sounding environment, the didgeridoo's hum amplified and resonated with the vibrating world. Resonance transformed its own voice and the extraneous sounds entering its body.

For sound to enter the didgeridoo, a brass bell, the flared end of a wind instrument, was attached to one opening, acting as a funnel for sound. The two objects assembled became an extension of the human ear, mimicking the conical shape that directs and amplifies sound. The sounds of nature entered through the bell and transformed with resonance in the belly of the didgeridoo, while a listener's ear was placed against the open end of the didgeridoo. This configured handheld device became an instrument for nature to perform with and a listening cavity for its audience.

On a windy day on a local beach, I laid with my creation on the shore listening to a duet between resonance and nature. I placed the didgeridoo on the sand with the bell facing the water so that the listening side extended away from the shore. The length of the didgeridoo permitted distance between the water and myself, but felt as though my ear was hovering over the water. A beautiful cycle began; the creation amplified its sonic environment while the sounds entering its body amplified the resonance- supporting, responding and reacting to each other. The resonating hum transported me to a grand basilica where nature performed a prayer of water and wind that inspirited and transformed the space between the divine and its worshipper. It was a spiritual and transcendental experience that sharpened the ear while grounding the body and mind in the present. It was at this moment that the assembled didgeridoo and bell became the first prototype of a vessel.

The vessel's resonating voice and nature's soundscape intertwined in a duet of transformation and indeterminacy encapsulating its listener in a transitory moment of euphoria. Resonance was introduced to enhance, elevate and strengthen the voice of nature and the listening experience. There was no intention for, nor did, resonance

overpower the soundscape. The presence of resonance autonomously transformed with the natural soundscape, presenting nature as a divine, sacred entity, inspiring its listener in a transcendental experience. After listening to the sonic environment preform through a resonant cavity I viewed nature's soundscape as divine.



Figure 2: Orlando performance with vessel prototype, Amnon Reshef, 2018

The Resonance

By pairing nature's soundscape with resonance, another sonic, independent entity, their collaborative performance remained autonomous and enhanced, morphing into a meditative experience of transformation. Listening to a resonant cavity perform a calm, consistent sonic symphony, as air travelled through its body and excited the material construction, was supernatural. The vessel continued to resonate long after its

performance with nature; as nature's soundscape becomes engulfed and muted by civilization, the vessel would endlessly resonate as if a sonic living entity resided within the confines of the architectural structure. An object that tends to be perceived as inanimate became an entity of sonic life. To me, resonance was alive, extending its capabilities from an autonomous performer to a preserver of nature's soundscape.

In her book *Vibrant Matter*, Jane Bennett uses philosophical concepts to demolish inherit modern ideas that matter is passive (vii). Bennett answers the question, "why advocate the vitality of matter?"(ix). By viewing non-human things as non-living, this "feeds human hubris and our earth-destroying fantasies of conquest and consumption. It does so by preventing us from detecting (seeing, hearing, smelling, tasting, feeling) a fuller range of the nonhuman powers circulating around"(Bennett ix). By viewing objects as living, we relinquish our arrogance and regain our full range of senses, allowing us to hear the call for attention from surrounding matter (Bennett ix). Bennett establishes life in objects by investigating theories of philosophers. Deleuze and Guattari, the French philosopher duo, believe activity is the essence for aliveness in matter. What type of activity defines life? Philosopher Thomas Hobbes understood life as "matter in motion," focusing on the formed body moving through space (Bennett 55). Deleuze and Guattari discuss "activity of intensities rather than things with extensions in space," not viewing the activity of the body but rather the activity of energy (Bennett 55). Energy enforces aliveness; resonance is sonic energy. The vessel was alive with resonance, a radiating spiritual vitality that embodies its listener. Resonance was continually listening and performing, responding and absorbing the sounds that pass through its corporal body. The vessel became a container of animated life, endlessly resonating with memories of its

sonic performance with nature. Listening to the resonating vessel, after its experience with nature, sets the mind to theorize the potential history and memories preserved within the vessel's sonic energy.

Seashells are resonant cavities that have been viewed with life capable of preserving the sounds of time and place. The seashell connects the ear and mind of its listener to nature through resonance. When pressed to the ear, the shell transports its listener to the beach by echoing the waves of the past (Helmreich 23). Stefan Helmreich explores in his article *Seashell Sound* the history of seashells as a mystic and spiritual sonic object. In the 1800s, William Wordsworth described the sounds as “*an unknown tongue*,” spoken by the seashell, whispering stories of the future (Helmreich 25). Other poets heard the voices of the past, the shell capable of preserving sonic memories of the landscapes it once resided on:

Shell of the bright sea-waves!

What is it, that we hear in thy sad moan?

Is this unceasing music all thine own?

Lute of the ocean-caves!

Or does some spirit dwell

In the deep windings of thy chambers dim,

Breathing forever, in its mournful hymn,

Of ocean's anthem swell? (Amelia Welby, “To a Sea-Shell,” 21)

The shells were seen as alive with a sonic energy telling stories of the fleeting sounds of the past. Resonance was associated with preservation. This theme continued among poets, enshrining seashells as collectors of dying sounds:

Though all things fade apace,

Do fade and fall, they pass not utterly;

Within your jasper vase

There lingers still a tone, a mystery

A something hides

Of glory fled, of love that cannot die:

All Life that ever was somewhere abides. (Benjamin Hathaway, "Sea-shells," 46)

Helmreich explained the scientific truth behind the sound by using the theory of vibrations. What was being heard was vibrating air that oscillates the shell creating resonance (Helmreich 25). Seashells "concentrate memory by gathering the history of the vibrating world around them," the sonic past resonating in the belly of the organic cavity (Helmreich 26). Seashells were seen as "active vessels," containers of resonance's sonic memories of a distant land's decaying sound (Helmreich 25). With this knowledge, the impact of holding a seashell to one's ear beckons its listener to imagine the history the shell has heard. Resonance became affiliated with memory as it hummed with the vibrations of the past, preserving the soundscape of nature's fleeting voice to later whisper its tales in the ears of a listener. Seashells exemplify the possibility of associating resonance with nature after a performance with a sonic landscape.

Thinking of resonance as an endless living entity capable of preserving sound, it transformed into a sonic artifact, or even, a relic. A relic is a physical representation of

holiness; either body parts of saints, or objects that have come into contact with a holy entity (Hahn 19). By projecting divinity onto nature's soundscape, the resonance within the vessel became a relic of divine interaction. The vessel, containing the relic, transforms into a reliquary, a protective container for a relic (Hahn 6). A religious reliquary encapsulating a relic is then placed as a sanctified object, in a sacred space, for visitors to experience its sanctified energy. Resonance became sacred, and nature's soundscape became divine.

Sacredness and divinity originated from religious connotations; however, it can secularly be adapted into artistic practices to explore the 'reliquary effect,' deeming objects sacred to bring agency and importance (Hahn 232). Veikko Anttonen, in his chapter *Sacred* in the book *Guide To The Study Of Religion*, states that sacredness is not restricted to religion (274). Objects could be transformed into sacred, secular objects if projected with value and importance.

The design process became an exploration of resonance transitioning through reconfigured stages of a relic. With traditional religious relics, an object comes into contact with a holy body and becomes a relic. Once a relic, there is a ritual that completes this transformation from a secular object to a sacred relic. The relic is placed within a reliquary for protection and containment. This reliquary is then theatrically displayed in a sacred space that is out of reach, but insight for devotees to revel in the relic's sanctified energy (Hahn 233). These stages were adapted into three design elements for resonance: creation, performance and preservation.

Creation was the configuration of the reliquary, for, without the vessel, there was no resonance. During this process, multiple vessels were constructed out of resonant

cavities to demonstrate versatile designs for nature's diverse soundscape. With their mobility reliant on their listener, the vessels were designed as extensions of the ear that conform to the human body.

Performance was witnessing the transformation of resonance into a relic through ritualistic listening. Anttonen explains a category of sacredness as behavioural that utilizes the cognitive and physical self, that, in religion, can be seen as fasting, celibacy, or pilgrimage, but can also be secular as a meditative act (272). Listening could be considered a sacred ritual, as it is a psychophysical act; as the body is engaged with vibrations and aural sensations, the mind begins to theorize. A ritual sanctifies a sonic event, deeming nature's soundscape divine and resonance sacred (Anttonen 275). This process was documented with photographs and audio recordings that captured the sonic, sacred moment of transformation that accompanied the relic when displayed.

Preservation was the curation of the vessels and its documentation in a gallery space. The Gales Gallery at York University became the home for the vessels for multiple days for an audience to engage with visually, aurally and viscerally. The vessels resonated with their sonic relics, preserving the memory of their sacred performance with nature's soundscape. The photographs of their moments narrated and explained the interaction between the two, now separated, longing sonic entities, and the recordings of their collaboration, transported the mind and ears of each audience member to that sacred moment. Experiencing the vessels within a curated sacred space, provoked an intimate moment of self-reflection as the audience was transformed with transcendence, exposed to the reality of nature's polluted soundscape, and confronted with the sanctity of nature and resonance.

By following Cynthia Hahn's examination of relics in her book *The Reliquary Effect*, from objects to sacred entities to the curation of reliquaries and their effects on an audience, I was able to explore resonance by restructuring the stages of a relic's life. Viewing resonance as a potentially sacred relic, the creative process became a reimagined dramaturgy of relics through creation; the reliquary, performance; the ritual, and preservation; the reliquary effect.

THE CREATION

The Reliquary

An object transitions into a relic once it “shares an authentic physical relationship with the holy thing”(Hahn 19). Only after this sacred event is the reliquary introduced: a constructed container to protect and emphasize the sacredness of the relic (Hahn 6). Reliquaries tend to completely encase their relics from the eyes of the devoted (Hahn 13). Enclosing these relics from view protects and enshrines the relic with treasury (Hahn 57). The reliquary encapsulated the holiness within, becoming the sacred skeleton, body, and flesh of the relic. (Hahn 37). Even though the relic is contained, its sacred energy overflows the barricades of the reliquary to inspire its devoted following (Hahn 58). The reliquaries physically bind the relics, but their power and energy are “intrinsically linked to the unbounded heavens,” incapable of being trapped by structural enclosures (Hahn 12).

Traditionally, the creation of reliquaries is from precious, valuable, and earthen materials. The most common and preferred materials have been gems, gold, and silver, for the more luxurious the reliquary, the more captivated its viewers will respond (Hahn 35). If not bedazzled with fine jewels, reliquaries tend to be earthen materials to demonstrate the intrinsic connection with the divine. The reliquaries can take on any shape, from boxes and body parts to miniaturized architecture to narrative sculptures.

In my design, resonance was the relic encapsulated by its vessel, the reliquary. However, resonance required a physical, cavity host to exist, taking Hahn’s comment, “The reliquary *makes* the relic” literally (11). For resonance to perform with its natural

sonic collaborator, it needed to live in its reliquary before transitioning into a relic. Thus the construction of the reliquaries, the vessels, began my design process.

The Structure

Understanding the auditory anatomy benefited the design, as the vessels were extensions of the ear. Peter W. Alberti, a Professor of Otolaryngology, explains the anatomy and functionality of the ear in *The Anatomy and Physiology of the Ear and Hearing*. Alberti describes the ear's functions as a "sound conducting mechanism and a sound transducing mechanism," absorbing sound vibrations and transforming them into neurological pulses (58). There are three sections to the ear: the outer, the middle, and the inner ear. The outer ear, known as the pinna, made of cartilage and skin, collects and funnels the sound into the middle ear, the ear canal. Instead of the pinna having a straight, flat surface, it is angled to collect sounds that are coming onwards rather than sounds coming from behind. This helps with localizing sound but diminishes the amplification of directional sounds. The ear canal brings the sound directly to the tympanic membrane, also known as the eardrum (Alberti 54). The shape of the tympanic membrane is of a loudspeaker cone, a similar shape to the bell part a wind instrument. According to Alberti, this form "is an ideal shape for transmitting sound between solids and air" (Alberti 55). Three bones connect the tympanic membrane to the inner ear cochlea: the malleus, which has a club-shaped form, the incus, which has a cone shape form, and the stapes, which resembles a small wishbone with a flat base. These three bones amplify and direct the sounds from the middle ear to the inner ear cochlea (Alberti 55). The cochlea resembles a snail shell that is home to the membranous labyrinth that is submerged in

perilymph fluid where the vibrating sound is transformed into nervous impulses by the hair cells and is transmitted to the brain by the nerve fibres (Alberti 56).



Figure 3: Diagram of ear anatomy: Hallowell and Silverman, *The Anatomy and Physiology of the Ear and Hearing*, 1970, https://www.who.int/occupational_health/publications/noise2.pdf

The ear amplifies and directs sound by repeatedly using the cone shape, where an enlarged opening funnels sound to a point. This form is often applied in instrumental design, like wind instruments to amplify and resonate sound. Wind instruments are designed with a small opening that extends into a conical body and ends with a large bell opening (Daubeney 71, 109). The frequency of the instrument is determined by the length and width of the tube; the narrower and shorter the tube, the higher the frequency, while the wider and longer the tube, the lower the frequency (Daubeney 8). All wind instruments contain a resonator body, which “are hollow metal bodies which, if held to the ear, can be heard to vibrate and give resonance to the note to which they are tuned” (Daubeney 5). The conical or cylindrical shape, when designed with hard, reflective surfaces, amplifies the sound entering its resonating body.

With the vessel prototype, the functionality of the wind instrument was reversed to become a listening device, the small opening transforming from a mouthpiece to an opening for an individual to listen. The sound that entered through the bell was amplified and resonated within the hollow cavity while being listened to. This reconfiguration of wind instruments as listening devices has been historically implemented. Martin Helfer, in his article *Sound Source Localisation with Acoustic Mirrors*, reviews the historical application of the conical shape in sound locators for military and medical purposes. Athanasius Kircher, an inventor, and philosopher exploring the phenomenology of sound during the 1600s was the first person to describe this acoustic application as a listening device in the form of a trumpet; a funnel with the smallest opening pressed against the ear (Helfer 1). Kircher implanted these large trumpets into walls between two rooms to listen to others conversing, as described in *The Marvellous Sound World in the 'Phonurgia Nova' of Athanasius Kircher* (Tronchin et al. 4187).

Figure removed due to copyright restrictions.

Refer to citation for image.

Figure 4: Eavesdropping listening device: Kircher, Athanasius, *The Marvellous Sound World in the 'Phonurgia Nova' of Athanasius Kircher, 1600,*

https://www.academia.edu/21868157/The_marvellous_sound_world_in_the_Phonurgia_Nova_of_Athanasius_Kircher

In the 18th and 19th centuries, the ear trumpet became an inconspicuous acoustic hearing aid (Helfer 2). The designs varied but maintained the conical shape; a large opening for sound to enter and be directed along a narrowing passage to a small, open nozzle that is placed against the ear. The Bernard Becker Medical Library archived the historical hearing devices in their online database *Deafness in Disguise*. The hearing devices, embedded in fashion and furniture objects, concealed the functionality for everyday use. A trend began for acoustic headbands called Aurolense Phones that hair or a hat camouflaged. Invented by F. C Rein in the early 1800s, the headphones ranged by shapes from coiled trumpets to fluted funnels that resemble a blooming flower. The headband supported the small acoustic cavities against the ears for consistent, hands-free hearing assistance (Becker Medical Library, “Concealed Hearing Devices”). These

headbands were functioning amplifiers with a flare of fashion for inconspicuous, mobile everyday use.



Figure 5: Aurolase Phones, 19th century, Becker Medical Library, Washington University School of Medicine

The use of the amplifying trumpet form as hearing aids appeared embedded into furniture for discreet hearing assistance; however, inventor William A. McKeown valued portability over camouflage. McKeown designed a compact acoustic chair with two large adjustable trumpets that were supported by stands to rest by the ears. The design was intended for transportability, adaptability, and comfort, allowing for the hard of hearing to attend meetings and events with ease (Becker Medical Library, “Concealed Hearing Devices”). Both McKeown’s and Rein’s inventions are refined industrial designs with an acoustic function and portability.

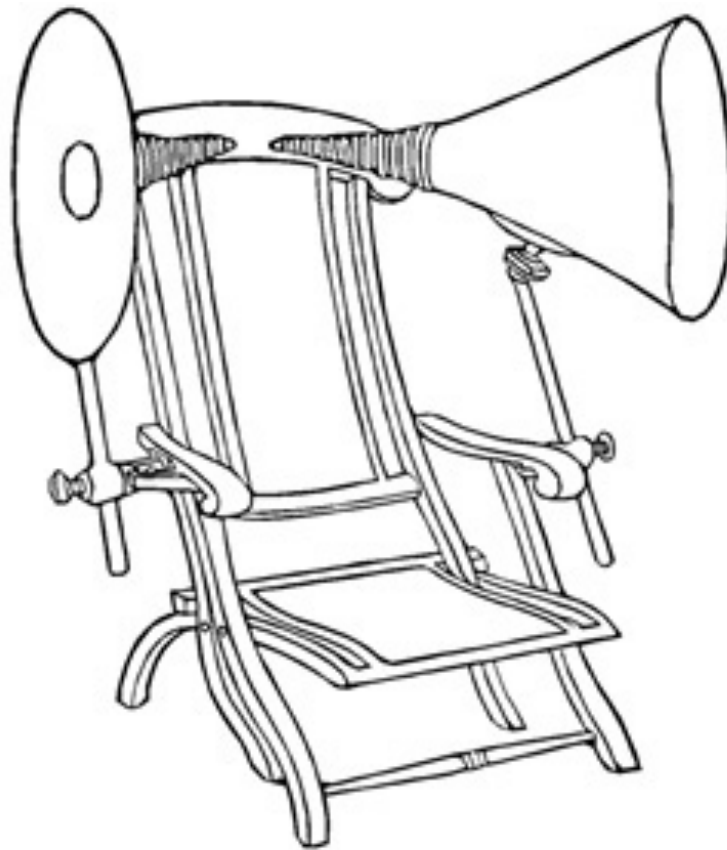


Figure 6: McKeown Chair, 1879, Becker Medical Library, Washington University School of Medicine

The trumpet design was adapted and elaborated into acoustic locators for military purposes to detect oncoming foreign enemy aircrafts during both World Wars. According to an article by David Goran, the devices consisted of large horns with earphones for soldiers to monitor the sounds of the sky, listening for mechanical engines that reverberated the winds above. The acoustic locators implemented the funnel shape in a variety of designs as required for mobility and functionality (Goran, “Acoustic Locator”). The design and mechanics of these acoustic locators and hearing aids extended the conical shape of the ear to strengthen listening (Fig. 8, 9, 10). Without concealing the

structural mechanics and materials, these apparatuses emit a found object sculpture aesthetic. These absurd devices amplified quirkiness and humour, a strong characteristic of the readymade movement, while functioning for a sonic purpose. Instead of building resonant cavities from natural materials to prove my craftsmanship, I decided to embrace the aesthetics and the history of found, readymades as part of my art form.

Figure removed due to copyright restrictions.

Refer to citation for image.

Figure 7: Sound locator from USA, 1921, <https://www.thevintagenews.com/2016/01/27/vintage-sound-locators/>



Figure 8: Sound locator from The Netherlands, 1930,
<https://www.thevintagenews.com/2016/01/27/vintage-sound-locators/>



Figure 9: Portable sound locator, 1917,
<https://www.thevintagenews.com/2016/01/27/vintage-sound-locators/>

The Readymade

The conventional materials that construct religious reliquaries are earthen substances; clay, glass, and wood, but if possible, fine jewels and riches decorate the container (Hahn 35). It is the responsibility of the reliquary to prove the worth of the relic- the more decadent and striking, the more sacred and valuable. I wanted to challenge this convention by bringing sanctity and power to ordinary, mundane, found objects to reveal their potential to be protectors and nurturers of relics. Found objects were my material of choice; assembled to become the reliquary. William C. Seltz describes the readymade as “ordinary objects that anyone could have purchased at a hardware store”

(46). These manufactured objects are placed on a pedestal in a gallery and considered art. Founder of the readymade movement, Marcel Duchamp, began this revolution of anti-art in 1913, with *Bicycle Wheel*, a found bicycle wheel fixed to a stool (Seltz 46). The objects form a new configuration when joined together, which is an act of assemblage, a methodological process of fastening any material together to create a unified artwork (Seltz 1).



Figure 11: Duchamp, Marcel, *Fountain*, 1917,
<https://www.moma.org/collection/works/81631>



Figure 10: Duchamp, Marcel, *Bicycle Wheel*, 1913,
<https://www.tate.org.uk/art/artworks/duchamp-fountain-t07573>

Duchamp's intent, as Diane Waldman expresses in her book *Collage, Assemblage and the Found Object*, was to create anti-art, pushing the vulgarity of a readymade to question the beauty standards of art. Duchamp's most iconic readymade was *Fountain*, an ordinary urinal with 'R. Mutt 1917' signed on the rim. The urinal's connotation with bodily waste was meant to shock and humour its spectators, while it was "stripped of its real meaning when placed in a new context," on a pedestal in a gallery (Waldman 139).

In *Fountain* and other works, Duchamp imprinted himself into the work with a signature or marking to identify the readymade as art. Viewing readymades as art, I saw Duchamp's signatures and markings as a manipulation of the object that tarnished its personal history. During the process, found objects were assembled but were not disguised or concealed with other materials. A single brushstroke, by the artist, damages the value, integrity, and history of the readymade.

An artist who works with organic readymade substances to conjure spiritual transformation was Joseph Beuys. Beuys approached objects based on their energy and ability to be manipulated by stimulants. Cynthia Hahn discusses Beuys's work for his secular adaptation of relics. She speaks of Beuys as a "sensual vicar" that meditated the interaction of two objects to elicit an autonomous transformation (Hahn 234). One of his primary materials was fat; an organic substance that reacted to temperature changes independently (Waldman 287). In *Fat Chair*, Beuys used a chair to represent the human anatomy and placed fat on the seat as the chair's digestive system. The fat was in a constant state of metamorphosis as it interacted with the temperature of the room over an extensive period. The fat was reshaped by temperature becoming residual evidence of a performative event (Waldman 284). The residue of the fat captured "traces of the past" within its transformed body (Waldman 287).

**Figure removed due to
copyright restrictions.**

Refer to citation for image.

Figure 12: Beuys, Joseph, *Fat Chair*, 1964, <https://www.nationalgalleries.org/art-and-artists/87183/fettstuhl-fat-chair>

Beuys's practice reflected my approach to materials and performers. I chose resonance as one of my performers for its transformative and responsive sonic capabilities. Resonance enhanced the sonic experience of nature, their collaborative duet exuberating divinity, holy energy and looming transience. The moment became euphoric and transcendental because the performers' complete autonomy, revealing resonance and nature as living, sonic entities. Using found objects as my resonant cavities, I was able to further demonstrate the voice and life that lives within mundane found objects. The objects were repurposed and re-birthing into performers and preservers of sacred sound.

The Vessels

The vessels were designed for nature's soundscape and for a listener to guide the sonic experience. Designed as extensions of the ear and constructed to be lightweight and mobile, the vessels were created to accommodate the required listener's body to sonically

voyage through the landscape. The configuration of each vessel determined the performance of the body; how the body melds into positions within the landscape to engage with nature's soundscape. Therefore each vessel was configured differently to encourage alternate listening engagements with the soundscape. The vessels were assembled out of found resonant objects and found bell formed objects to replicate the conical structure of the ear. My products of choice were constructed out of strong, indestructible materials, ensuring the voice of resonance was long lasting. I became drawn to mechanical, durable objects, recognizable by the everyday industrial worker. Items manufactured for plumbing, construction, and home renovations had deep, powerful voices, beckoning to be used for their vocal properties rather than their contrived functionality.

I chose objects based on the strength of their resonating body; each item listened to before being collected. The collection process was regulated to ensure the integrity of the object was preserved as a readymade. Any object chosen had to be a resonant cavity with two openings, one for sound to enter and the other for the ear of the listener, or a bell form as an amplifying extension. Objects were allowed to be attached to create a resonant cavity, however, under no circumstances was an object's natural configuration punctured or manipulated to manufacture an opening. The only puncturing allowed was to reinforce two objects together. Each interaction with a collected item inspired an assemblage design based on the object's physical construction and requirements for extensions to complete the conical shape.

Knowing that these vessels were to be curated in an exhibition, all my decisions continuously referred back to the gallery space. The vessels and the documentation of the

performances were ultimately going to be displayed in an experiential, controlled, exhibition in The Gales Gallery at York University; a rectangular, white-walled room. Wanting to devote a wall for each vessel, I capped the creations at five vessels, as two vessels performed as one and were curated as one. The vessels are identified below with numerals based on the order of completion.

Vessels no. 1 + 3 were designed to be inseparable yet separate; each containing a resonating voice unique to their shape and materiality. Both vessels shared a similar form, a long narrow, coiled body with a protruding cone head. Vessel no. 1 began as a mechanical remake of the vessel prototype configured in Orlando. The horn came first; a black phonogram, manufactured for a record player, was repurposed to amplify and collect the sounds of nature. While on a trip to Home Depot, a blue Broan-Nuton 2ft Flexible Tube caught my eye, the length and plasticity intrigued my auditory senses, and to my ear's delight, the tube sang with strength and perseverance. This resonating cavity transitioned into the body of the vessel. The tube fit the neck of the horn as though they were created to be joined together. A black handle fused the head and the body, adding swift control and stability. For safety, a black headphone pad was sewn onto the blue coil's sharp opening for the ear. The two disjointed found objects became unified as Vessel no. 1.

Imagining the absurdity of having two vessels, of the same shape, being used simultaneously, I began hunting for a fraternal twin for Vessel no. 1 that manifested as Vessel no. 3. The idea of these two vessels being identical was unpleasantly uniform and inconsistent with the other diverse vessels. For Vessel no. 3 the body came first. While walking up and down the aisles of Canadian Tire, looking for a long hollow body, a white

Mole 5ft Downspout Extension Tube caught my eye and ear. The plastic tube's resonating properties transformed as the tube contracts and extends, making it a versatile body for Vessel no. 3. The tube formed with the curves of the body while extending the ear away from the head, offering multiple methods of engagement. As homage to the original prototype, the brass bell that once lay with the didgeridoo was used to complete Vessel no. 3. The bell and accordion body were joined together with nuts and bolts while a black handle was added just below the neck. For consistency, a black Moen ½" Sponge Floor Gasket, with the same diameter as the opening for the ear, was attached.

These two vessels are designed for extendibility and flexibility to encourage distance from the ear and the sound source. One ear listens to the crinkling of a leaf stuck in the sand, while the other ear lies on the shore listening to the rhythmic waves. The mind and ears were transported directly to the sound while the body remained at a close distance. The two extending horns performed alternate sonic symphonies for each ear, transforming different elements of the environment simultaneously. Vessels no. 1 + 3 performed separately but simultaneously, each generated alternate memories of the same moment in time.



Figure 13: Vessel no. 1, Sharon Reshef, 2019



Figure 14: Vessel no. 3, Sharon Reshef, 2019

Vessel no. 2 was imagined in an Orlando antique store while holding two glass lampshades with flared ends together. The two fragile lampshades seamlessly fit together, transforming their manufactured function into a spherical resonating cavity with two openings. The fragility and shape of the lampshades dictated my physical engagement.

My immediate reaction was to hold them against my torso for extra support. The lampshades became an extension of my abdomen, resembling a pregnant belly. These inanimate objects transformed into living substances beckoning to be cared and supported for. I began to cradle the lampshades together with tenderness as if an infant. This simple motion instantaneously reconfigured my physicality and emotional relationship towards the constructed resonant cavity. I was holding resonance against my body and cared for it as if it were my child. Within seconds I generated a relationship with lampshades.

Unfortunately, the two fragile glass lampshades were unable to travel back with me, but remained an inspiration for Vessel no. 2. However, the design integrated two lampshades forming the hollow, resonating body that rested against the belly while being cradled and listened to. The design required a bell, for amplification, and a rigid, hollow, arm that connected the resonating body to the listening ear. The designed form of Vessel no. 2 was completed on paper but required found objects to take on the predetermined form. On a trip to a local Value Village thrift store, while rummaging through their lamp section, I found three identical metal lampshades, two becoming the hollow body and the third acting as a flared bell. The metallic colour was unearthly and mechanical, resembling a fallen part of a spaceship. They were manufactured and mass-produced, made out of imperishable metal material. Each was permanently tattooed with red marker “3X”, indicating to customers that these three lampshades are inseparable. They were not fragile or delicate, but when assembled into Vessel no. 2, they were cradled and held as if they were.

Carrying around one of the lampshades, I walked around Home Depot looking for an elbow, a curved hollow object that could lead an extension towards the ear. To my

delight, a wall filled with Bow Plastic Ltd PVC pipes and elbows offered a magnitude of possibilities to build an arm. A 3” PVC elbow fit perfectly around the small opening of the lampshade and curved at a 90-degree angle. The extension continued with three PVC pipes that ended with a 35 degree PVC elbow that provided the height to reach the ear with comfort. For the ear to reach this opening, there was a required tilt of the head. This motion placed the listener in a physical stance that prepares them to listen. With metal epoxy, these pipes, as well as the lampshades, were seamlessly sealed together, ensuring no sound leaks.

This vessel was limited in flexibility, unlike its predecessors, but it offered an intimate, tender experience with sound. A listener was able to cradle nature’s soundscape as it performed with resonance. Sound was being held for a fleeting moment, resonating against the metal walls that confined its space. The bulbous resonant cavity extended the listener’s belly into a swollen manifestation of sound, resonance growing and strengthening as an infant maturing in its mother’s womb. Vessel no. 2 lay in the arms of its listener, supporter, and parent. The body of the vessel and the body of the listener joined in a moment of sonic transcendence.



Figure 15: Vessel no. 2, Sharon Reshef, 2019

Vessel no. 4 was the smallest of all the vessels, yet demanded as much attention as its lengthy, vivacious brothers and sisters. The other vessels had large statures that distanced the ear from the sound source, skewing the listener's aural perception of space

as their ear extended away from their grounded body. In juxtaposition, Vessel no. 4 forced the listener into positions that require a physical engagement with the sound source. Vessel no. 4 was found in the aisle for fuel funnels at Canadian Tire. I wandered around, placing several funnels against my ear until a small bright yellow funnel shouted for my attention. Placing the smaller opening against my ear, it teased the auditory canal with its soft hum, demanding attentive listening to be heard. The funnel had a proper shape for amplification, a small opening for the ear to a larger flared entrance for sound. For class and ease, there was a circular handle to place the funnel up to the ear, mimicking the posh and elegant design of lorgnettes- eyeglasses with an attached handle used by the sophisticated and poised opera attendee. It was lightweight and compactable, making it ideal for the travelling listener; fitting with ease in a backpack, in a pant pocket or a holster, always at the ready for a listening moment. All of the physical features of this funnel made it an ideal companion for outings to landscapes where haste was a virtue in spaces where sound was continuously fleeting.

This funnel was the only found object that did not require any extensions or additional pieces to function, making it the most pop art, readymade vessel with its vibrant solid colour, recognizable shape, and featured inscription ‘USE FUNNEL FOR FUELING ON-ROAD VEHICLES’. This readymade was born to be a vessel. The funnel was perfectly designed for fueling vehicles, but the moment it touched the ear it was repurposed into a listening instrument, resonating and amplifying its sonic companion.



Figure 16: Vessel no. 4, Sharon Reshef, 2019

Each vessel contained a distinctive resonating frequency within a constructed body that differed from the others; Vessels no. 1 + 3 were long and tubular, Vessel no. 2 was bulbous, and Vessel no. 4 was small. It became a challenge finding a resonant cavity that took on a new form. During the design process, I collected a few resonant objects and amplification objects. There were two narrow, hollow Carlon PVC 2" elbow pipes with a curve that joined my collection because of their incredibly energetic voice that vibrated voraciously. These Home Depot pipes' vocals were rich and hypnotic, but repeated the long tubular shape found in Vessels no. 1 + 3. It was justifiable to repeat a similar formation to include cavities that deserved an audience to perform for; sound came first.

The pipes' strong potential for sonic marvel trumped the possibility of mimicking other vessels' design.

I returned to the PVC pipes attempting to reimagine how to repurpose these resonating objects that had a different functionality than Vessels no. 1 + 3. The PVC pipes were solid and sturdy while the coils used for Vessels no. 1 + 3 were flexible. Their elasticity required the vessels to be grounded because a listener could not simultaneously support the vessel and hold them against their ears. Height was not achievable, just distance. With the PVC pipes, the unreachable became attainable. Connecting the two pipes created an "S" shape that extends the ear upwards. To reach further, I added another pipe with an epoxied red metal lampshade as the bell. The curvy, snake-like form became Vessel no. 5, a tubular body that demanded height, listening to sounds that required a ladder. The listener's ear travelled into the clouds, listening to the divine above.



Figure 17: Vessel no. 5, Sharon Reshef, 2019

Each vessel was designed for a certain listening functionality, offering its listener an intimate, unique experience with resonance and nature's soundscape; their mind and body intertwined in space, place, and time. Creating their bodies from mechanical found objects obscured and challenged the traditional, elegant reliquary covered in craftsmanship and riches, demonstrating the ability to sanctify and value found, assembled resonant objects. The vessels were designed and ready for the next step in the process, the performance.

THE PERFORMANCE

The Ritual

Observing the natural soundscape as a holy deity, the moment resonance interacted and performed with its collaborator it instantaneously became a sacred entity (Hahn 7). Traditionally, after an object has come into contact with a holy deity, there is a ritual, a “*relic-ing*, the making of the relics” (Hahn 9). Relic-ing is a ritualistic performance by a devoted disciple who completes the transformation from object to relic. After the death of Francoise d’Amboise, a leader in the French Carmelites during the 15th century, nuns performed a relic-ing of Francoise’s body. The procedure included, “a careful delimitation of symbolic space within which the change occurred, the implementation of tools used in ritually specified ways, the performance of prayers and meditation, and the use of certain customary words and gestures” (Hahn 8). The ritualistic performance of the nuns completed the transformation of the fragmented holy body into a sacred relic. Relic-ing is a human ritualistic intervention that sanctifies the relic for an audience to project worth and sacredness onto.

The ritual for relic-ing the resonance within the vessels was through performative listening. For resonance to become a relic, it required interaction with divinity *and* a ritualistic performance by a devotee. Through the act of listening, resonance transformed into a sacred relic. Each vessel was designed as an extension of the human ear to enhance the intimate experience of a natural soundscape for a listener to witness these moments as sacred. An object is un-valuable until deemed sacred; by witnessing the transpiring sonic event the performative listener projected value, importance and sanctity on resonance as a relic. The amount of witnesses does not determine the sanctity of resonance as a relic

during the sacred interaction; but rather by one devoted person, the Listener. I, a devoted disciple to sound, performed as the Listener, the sole witness to a collaboration of autonomous, sonic entities.

The removal of the audience from the ritualistic performance was a difficult decision but one that was required to preserve the integrity of the process. The intention was to have the audience be the Listeners; listening to resonance and nature sounds perform live, encapsulating the body and the mind in a transcendental state. I wanted to offer an audience an acoustic experience enriched by the living presence of nature vibrating the vessels with a sonic symphony. However, this would require an immense amount of trust in my audience to accept the soundscape as is; I became obsessed with the audience's conceivable impression of the sonic experience of nature and resonance. There was a high possibility that the audience would not respond and perform, as ideally anticipated.

I re-evaluated this decision, to cast the audience as a performer, while separately testing my first two creations, Vessel no. 1 and Vessel no. 2. I brought the vessels to a landscape within the Greater Toronto Area, the Finch Hydro Corridor Recreational Trail that spans 8km across North York, Ontario. Settling in a section near York University, it was a day of silence- not a single whisper from nature. All I heard, as I placed the vessels to my ear, was the low hum of resonance; my anticipation became disappointment and agitation towards the absent soundscape. My frustration was uncharacteristic as I encouraged and welcomed silence as a conscious choice made by the sonic environment. I was not listening as myself, but as I expected my future audience to respond to an uncontrolled environment performing silence. This paralyzed my creative process

because I became too focused on developing an experience for an audience in an uncontrollable circumstance. By releasing the audience from active participation during the performance, I was able to listen as myself without fear of silence. I captured the autonomous transformation of sound through my performance of listening, and had the audience relive these auditory moments in a designed exhibition setting. The audience's experience of the work transitioned from acoustic to recorded, from present to past. Both would offer an audience a personal, relational experience, however, listening to the past emphasizes the transitory nature of sound and the fleetingness of nature's soundscape. This thesis was more than just experiential; it had to evoke thought and reflection on humanity's relationship with nature through its soundscape. Presenting the performance of resonance and nature's soundscape through my own listening experience, in an exhibition, offered an audience a controlled area to listen, experience, and reflect. As an audience engaged and listened to the recorded sounds of the transformative performance, and to the resonating vessels, they were participating in the sacred ritual act of listening.

I, the Listener, performed listening, stillness and silence to witness the transformative, sanctified duet between resonance and nature's soundscape. The sonic collaboration between nature's soundscape and the resonating vessels was documented with photography, binaural microphones and a field recorder for the exhibition, in order to transport the audience to the sacred moments captured experientially and intimately. Photography captured the Listener's engagement with the vessels and provided a visualization of the sonic event's origin. To offer myself freedom of experimentation during the curation of the exhibition, I recorded the sounds moving through the vessel with Roland CS- 10EM binaural microphones and then I recorded the sonic environment

without the vessels, with a Zoom H5 field recorder. Binaural microphones capture sound as heard by the person recording the sound. The binaural microphones consist of two microphones; one placed in each ear, to capture 360, spatial sound. To record, these microphones were connected to the Zoom H5 field recorder. The Listener wore the binaural microphones and had the vessel placed to one ear. The binaural microphones captured the transformative, collaborative performance through the vessel as heard and witnessed by the Listener. Recording with a binaural device emphasized the split between a vessel resonating the sonic environment, and the rest of the sounding world. This was a deliberate decision to continuously remind the audience of space, place, and time. The resonating vessels could easily overtake the mind and body into a transcendental, meditative state of imagination as the sounds become obscured and transformed from their recognizable form. It is an intimate and euphoric experience, enhancing and elevating nature's soundscape, *but* without the continuous aural reminder of place, the romanticized soundscape transports the audience into a utopian world, discouraging any self-reflection. The audience experienced an intimate, self-reflective moment with nature through the balance of sonic worlds; the utopian, imaginative world of spiritual resonance and the recognizable dystopian reality of a noise polluted natural environment.

With the audience experiencing the transpired sonic events through stationed vessels and documentation in a gallery space, the Listener became an instructor demonstrating the act of ritualistic listening. The power of having a listening instructor was emphasized in John Cage's piece *4'33''*. The most recognizable performer of this piece was David Tudor, who performed as a pianist with a grand piano. Tudor sat at the piano, with the score, and indicated the beginning and the end of the piece by opening

and closing the piano's lid (Lucier 66). There are no instrumental sounds produced, and rather, the sonic environment became the performer. The instrumentalist performed stillness, silence and listening to demonstrate to the audience that there was a sonic performance. The audience was compelled to attentively listen to the circulating sounds of their surrounding environment as demonstrated by the instrumentalist. It was crucial to have a Listener perform a ritual of listening to demonstrate that a sonic event had transpired, emulating the instrumentalist in 4'33''. Since the audience did not experience the sonic event live, the documentation had to narrate and instruct the audience in attentive listening. The photographs of the Listener engaging aurally with the vessel elicited to an audience to attentively listen while interacting with the binaural recordings and the vessels that captured and preserved the acoustic collaboration. The documentation became a fragmented, deconstructed rendition of 4'33''.

The ritualistic performance of listening transformed resonance into a relic that captured a sacred event with nature's soundscape. A solo Listener witnessed the acoustic composition, as it was, and became a silent advisor to the listening audience. Working with chance and indeterminacy required a controlled operation that ensured consistent, compositional sonic autonomy. Three components required parameters: the locations, the visits and the ritual listening.

The Locations

When deciding on a landscape(s), I reflected on Schafer's decisive choice of wilderness as his landscape and soundscape for the *Patria* chronicles. Schafer describes the performances of his compositions as hierophanies: the exposing of sanctified

mysteries that can only be discovered when the audience and performers are removed from traditional theatrical spaces and relocated into the wilderness (Waterman 74). These mystical, sacred spaces, to Schafer, are nature's luxurious, scenic landscapes, "forests, mountains and caves" (*Patria* 87). It is only in these wild environments, which are completely removed from the soundscape and mechanical infrastructure of urban civilization, that there can be a reconnection to nature and Canadian identity (Waterman 88). Schafer placed an audience in an environment where they immediately had an emotional connection to nature because of its phenomenal beauty. He composed magnificent sonic experiences of human performances on the stages of wilderness.

To simultaneously connect an audience to a natural environment and to expose the current sonic polluted soundscape, the locations chosen for the Listener's, nature's, and resonance's performance were places in the remaining natural areas within civilization. Doing so, the audience experienced this intimacy and connection to a soundscape in nature that was being infiltrated by urban sonic pollution. This could trigger an existential response that provokes self-reflection. Therefore, the choice of landscapes had been a cumulative search for the mundane; natural landscapes in urban spaces with minimal euphoric beauty that performed epic compositions. By highlighting the soundscape of these mundane, local natural environments the audience recognized the sonic euphoria and vocalized strength of these ordinary, neighboring landscapes.

Deciding on the amount of locations was an internal debate over quantity vs. quality. Demonstrating the vessels' capability repeatedly in multiple locations would provide an overflowing amount of data that diminishes the value of one moment. I did not want to limit the vessels to one location and one visit, nor did I want to reduce these

creations to impersonal devices that store memory from a multitude of soundscapes. The process was not a routine to collect a significant amount of data proving workmanship, but rather about treasuring a moment of euphoric sonic energy, of partnership, and memorable temporality. To find a balance, I chose three landscapes that I had continuously returned to for their intriguingly ordinary urban scenery infused with aural energy.

The three locations chosen for the performances were local landscapes in Toronto: the Finch Hydro Corridor Recreational Trail, G. Ross Lord Park, and Woodbine Beach. Each landscape featured elements that manifested a symphony of sound and silence. The Finch Hydro Corridor Recreational Trail was a location I continuously returned to because of its balance between nature and urban civilization; endless stretch of grass with a single winding concrete path and monumental hydro towers that protrude from the ground as if they ruptured through the earth. This landscape demonstrated how mechanical, inorganic structures could contrast a natural environment while simultaneously appearing to be produced by the earth they stand on. The hydro towers were mechanical, human-made objects intended to permanently inhabit nature while the vessels were found assemblages intended to inhabit nature for a singular moment. This landscape was embedded with mechanical sound, a prime example of a polluted soundscape.

G. Ross Lord Park offered multiple landscapes in one location, from fields of grass and rocky hills, to ponds and woodlands that were surrounded by urban civilization. The surrounding urban area was a strong composer that was capable of drowning any sounds emitted from nature, demonstrating its power over the natural environment. However,

when humanity took a breath of silence, the euphoric sounds of nature emerged stronger, bringing sensations of delight and appreciation. I accepted the sonic pollution from human-made mechanics that had become part of this land's soundscape. Exposing the audience to a sonic composition that intertwined the sounds of nature with the soundscape of urban humanity revealed the human condition. This landscape was dense with rich local sounds that were waiting to be discovered by auditory voyagers taking a moment to surrender themselves to a serenading performance of time and place.

As homage to the Orlando beach, where I experienced for the first time the power and wonder of the collaborative performance of resonance and nature's soundscape, Woodbine Beach became the final location. The beach had conventional beauty and performed compositions that were established in the human sonic archive as comforting sounds. However, the vessels offered unconventional ways of listening to a landscape that can morph admired natural sounds into enigmatic spiritual sonic entities. I did not use this landscape to exploit its beauty to enhance the sonic experience, but, rather, to transform the listening experience of a comforting, appreciated soundscape.

At each location, there was a level of exposure to urban civilization. Their soundscapes were hybrids of natural sounds and mechanical, urban noises because of their placement in the city. The metropolitan echoes were embedded within the land reverberating within nature's soundscape. The awareness of sound pollution within the city was eminent and haunting while adding depth and an undertone to the composition. Humans, a species that is part of nature, produce these unnatural, mechanical sounds that have become the soundscape of humanity. This realization was crushing and eye opening, for it revealed humanity's evolving distancing behaviour from nature. There was no

intention to scare my audience into abandoning civilization to live in the wilderness, but rather, to have a moment of compassion for nature through realizing the amount of sonic pollution infiltrating the natural environment.

The Visits

With the landscapes chosen, parameters around the visits to each location were established. One criterion that was set immediately was that each location was visited the same amount of times to keep the parameters consistent and equal. Each vessel deserved an opportunity to perform in every location to showcase its unique configuration. I was unable to justify assigning one landscape to every vessel without giving the collective a chance to shine at each location. It was through the process where I was able to evaluate the vessels' relationships and compatibility with each landscape. They were a collective- a traveling family- where one went they all went. The parameters for the visits were then a question of quantity vs. quality or durational vs. moments. Visiting the locations multiple times would indicate one of two things; a durational excursion to these landscapes over a long period, or unfaithfulness and fear in the process of chance.

If I were to visit these locations multiple times, it would be to collect a vast amount of data over an extensive time frame. This would become durational documentation of my perseverance and commitment to archiving the soundscape's behavioural fluctuations during seasons, the location becoming a specimen being deconstructed for its sonic data. Displaying this overwhelming archive of documentation could be impersonal but fascinating for an audience. I wanted my exhibition to be intimate rather than informational, and experiential rather than observant. Quantity and duration would

produce performances that were calculative, artist focused, and endless, while a singular moment would be potent with passion, patience, and power.

During a visit to G. Ross Park, before the construction of the vessels, I experienced a sonic moment that will forever be embedded in my memory because of its fleetingness. It was mid-January; the ground was covered in snow, with branches and trees standing bare except for one leaf, on one bush. I listened to this leaf brush against its neighboring branches, taking moments of stillness to permit anticipation of sound, forcing patience and attentiveness. Excited for the next soft wind flow, it dawned on me that this day might be this leaf's last performance. A strong gust of wind, a snowfall, or heavy rain could silence this leaf forever, removing it from the branches that birthed it. I felt privileged to be present and share a memory with a performer that may never be vocal again. A transitory moment was more overwhelmingly powerful because it stimulates appreciation and compassion to a sound singing its last melody.

If the performances were not durational to extensively archive nature's soundscape, then I could not justify visiting the landscapes more than once or only a handful of times. Going to the landscape a handful of times would be a weak attempt at collecting diverse compositions from each location through each vessel. If collecting a diverse compilation of soundscapes from each location were important to me, I would span the performances over months. To me, going a handful of times to each location would be a 'safety net' incase there were other days that could be more sonically interesting and exciting. I was more interested in chance and indeterminacy of a singular moment. I revolve my practice around 'it is what it is', that the product of each performance is not premeditated and is the result of an auditory autonomy. I accepted the consequence of choices made by my

sonic composers that reflected that day, at that time. Revisiting a location, to me, demonstrated insecurity, distrust, and fear of the process. I would only visit the landscapes once to abide by my practice and process, permitting my performer freedom and control over their soundscape. This parameter gave significance and worth to a singular moment that was personal, intimate and fleeting.

The Listening Ritual

The ritualistic performance of the Listener also required parameters that protected the soundscape's autonomy and limited artistic intervention. The Listener was responsible for matching the vessels to a particularly intriguing sound and listening, in a performative position, to the sonic interaction. Each landscape had a vast compositional soundscape that could not be completely captured by the vessels or be documented. Areas within the landscape that were performing a section of the entire soundscape were chosen when they elicited curiosity and captivation. The found soundscape and the duration of the performances were ultimately the Listener's- the artist's- personal choice. Impulse was necessary to experiment and explore the vessels' designs within landscapes. Each vessel was created with distinct and diverse features that when matched with a compatible sound source elevated and strengthened the collaboration. Matching the vessels to sounds could not be left to chance, and probability for it could hinder the audience's emotive experience of the captured moments.

When enthralled and captivated by a soundscape, a vessel was chosen based on its design, capability of enhancing that specific sonic scenario, and the Listener's instinctive reaction. The process was reversed after the majority of the vessels had performed,

searching for a soundscape that matched the vessel's collaborative capabilities. Once a sound and vessel were chosen and the performance had begun, that was the moment. The Listener was not permitted to change sound sources to redo and alter that vessel's moment. Each vessel experienced one sound, one moment in each landscape. The chosen sounds were not to be listened to twice to ensure each vessel was capturing a different sonic memory. It was either all vessels listened to different sound sources, or all vessels listened to the same sound source. The performance was not about one sound source transforming within each vessel, but rather an exploration of the vessels' versatile designs that thrive with different sonic environments. This parameter ensured the Listener explored a greater amount of the landscape rather than settling in one area, limiting the vessels', the audience's, and their own experience of nature's soundscape.

The integrity of the work was to ensure that the indeterminacy of the auditory autonomy was captured as is. The sounds produced by nature were not manufactured or organized, but rather chosen by the Listener, and given a duration to perform a piece of its vast, continuous composition. The Listener framed the beginning and the end of the performance, but nature's soundscape determined and controlled the sonic element of the composition. Even though I was present as a performer, I chose the soundscapes, and I decided the duration of the compositions, the sounds produced during each moment were products of an auditory autonomy. These parameters were set for consistency and chance while offering explorative space for the Listener to venture on a sonic journey.

With the Listener's body being captured with photography, there had to be a conscious choice of costume that maintained a consistency throughout each performance. The body of the Listener was to be present in the photograph to demonstrate the vessels'

functionality and be a human host for an audience to project themselves into. The performance was not about my personal, spiritual experience, but rather a body performing a ritual, and the costume had to reflect that by being designed for functionality rather than an expression of character. With the performance being an auditory voyage through landscapes, the Listener required a garment that was warm, flexible and protective. The costume had to ensure the visibility of the Listener's position and form, as their body aligned itself with the design of the vessel. For the body to be visible without contrasting the colours of all the vessels, black was used as the primary colour for the costume. The costume was an assemblage of a found cotton turtleneck sweater and matching sweatpants. These two garments offered full coverage, elasticity and functionality, while accenting the form and silhouette of the Listener's body with starkness.

The parameters allowed the Listener to explore and perform with the vessels while protecting nature's autonomous composition within each moment. The performances captured diverse moments of sonic transformation that were deemed sanctified through ritualistic listening. Listening to nature was amplified and enhanced, each moment captured a divine soundscape, but not all had the power to encapsulate an audience, within a gallery, in an immersive, self-reflective experience.

The Moments

The performances at each location were fascinating and drastically diverse. Each vessel demonstrated its strength when partnered with certain soundscapes. There was an element of chemistry required for both resonance and the sonic environment to generate a

magical, transcendental moment. It was as if nature was prepared for this moment, where it connectively performed a sonic duet with resonance. Each of the vessels experienced this sacred moment at least once, each chosen by the Listener to perform at the right time in the right place. In other moments, resonance and the sonic environment lacked this overwhelming energy of complete encapsulation. There was an absence of purpose, emotion, and spirit; the two were disjointed, simultaneously performing separate compositions together.

This process was intended to be experimental; to discover how resonance reacts to the sounds that the landscapes produced. The performances demonstrated the environments that each vessel thrived in. They were not consciously designed for a certain landscape but their configurations allowed them to flourish in specific terrain. Wanting the exhibition to be immersive and provoking, I choose moments that I thought had the evocative power to truly encapsulate and transport an audience to the sonic past. I limited myself to one moment per vessel that collectively echoed the voices of the three landscapes, dedicating each wall in the gallery to a singular moment. Not all documented moments were granted a spot within the gallery, for the exhibition was not intended to be a documentation of the entire artistic process, but rather an immersive, emotive and relational experience of four moments. A chosen moment had to be purposeful and capable of captivating an audience in wonder, curiosity and self-reflection. Curators exemplify strength when making cuts of artworks that were immensely captivating but did not fit within a collective or within the gallery space. This difficult responsibility became my burden, eliminating moments that I deeply connected with but do not cohesively fit within the exhibition. The chosen moments exhibited the capabilities of the

vessels as performers capturing the sonic environment for an enhanced, eye-opening experience.

Vessels no. 1 + 3 were presented together because they contained an attribute that the other vessels did not; they shared different memories of the same moment. The moment that had truly demonstrated this was from March 26, 2019 at 7:27 a.m. on Woodbine Beach. Lying on my back, on a rocky peninsula jutting from the shore, each ear was privileged to listen to two separate compositions. Vessel no. 1 extended from the right ear to the coastline to perform with the soft, morning waves rolling onto the shore and retracting into the body of the lake. To my delightful surprise, the waves collected pebbles as it crashed into the phonograph of the vessel. The landscape physically interacted with the vessel to produce a sound that was part of the soundscape for that singular moment. Resonance vibrated with pleasure, amplifying and reverberating all sounds entering its body. It was rhythmical and meditative, the waves of the ocean, recognizable as the songs of water, an adored sound. Simultaneously, Vessel no. 3 submerged the left ear into the lake, offering its body to the water to be used in a tactile, obscure performance. The water became a trained accordionist, compressing and expanding the body of the vessel; the plastic crinkled with every pulsating wave and the bell rang as it was dragged through the rocky depths. The two vessels simultaneously captured juxtaposing composition from the same performer (Appendix A, Fig. 21, 22).

The moment chosen for Vessel no. 2 was from its visit to G. Ross Lord Park on April 7, 2019 at 11:30 a.m. Standing at the bottom of this sloping terrain of rocks and broken trees, I had this instinctive desire to lay with this natural formation to listen to their soundscape. Vessel no. 2 was chosen because of its gentle, deep resonance that

matched the calm, transient sounds circulating around the landscape. I slowly and safely climbed the uneven, jagged hill, till I found a flat top rock where I took position, forming my body over the formations. I held the resonating body of my listening aid as a mother caring for its infant, delighted as it whispered melodies of oscillation into my aural senses. Cradling the vessel in my arms with the resonant cavity resting on my belly, I directed the horn away from the rocks to capture the encircling soundscape. A duck began to perform; it splashed into the pond, singing for its attentive Listener. The animalistic call elicited a pinging response from the vessel; the duck and the vessel began to converse in symphony. As the creature completed its performance I experienced the moment I've been anticipating and yearning for, the stillness of sound. The soundscape transformed into a medley of singing birds, silence, and resonance. Completely encapsulated in the performance of stillness and tranquility, I sank deeper into the meditative hum of the resonating vessel (Appendix A, Fig. 23, 24).

On April 7, 2019 at 2:20 p.m, I came across a hill of grass with bright yellow rods puncturing the earth bellow that called out for Vessel no. 4. The smallest vessel of the collective, designed for physically intimate moments was ideal for listening to the grass. However, my instinct was to listen to the vast open space, to give Vessel no. 4 an opportunity to capture a large soundscape. I lay, stretched out on the ground, one ear listening to the crinkling of the grass and the other against the vessel towards the sky that was performing with its musical orchestra of birds, cars and pedestrians. I became aware that my hand lying on the ground began to touch the grass; listening to and feeling one of my sound sources. I felt close to the ground, sinking deeper into the grass and soil that curved around my imposing body. The other half of my body was projected into the air,

being lifted by the sounds that caressed the inner lining of the vessel. The soft hum of resonance let the soundscape dominate the composition. My ear stretched to distant areas, capturing the landscape in its entirety (Appendix A, Fig. 25, 26).

Vessel no. 5's chosen moment was from the Finch Hydro Corridor Recreational Trail on March 31, 2019 at 12:29 p.m. I was immediately drawn to the electrical lines buzzing overhead, causing me to reach for Vessel no. 5 to stretch my ear upward to capture the sounds above. The intertwined composition of mechanical and natural sounds came rushing through the vessel with an excitement and eagerness to be heard. The electricity and snow melded together into a melody of hums, the wind's powerful pressure caused the resonant frequency to amplify and peak, and mechanical engines of vehicles purred and vibrated within the vessel; together collaborating in a fleeting, autonomous, and transforming composition. As a plane passed overhead, its engine reverberated in the wind causing the resonating vessel to respond with a fluctuating high ringing. This daunting and mysterious accumulation of sound escalated with intensity and power, replicating the rhythms of an underscore in a film where the audience was moments away from the reveal. Completely transforming with the soundscape, Vessel no. 5 responded to every sound with intensity and amplification. It was a composed composition; each sound performed with purpose and intention, reacting and responding to its fellow performers to collectively transform in an acoustic space. This moment was heavily mechanical because of the presence of humanity's soundscape. This specific moment embodied noise pollution as an equal performer within the composition. The mechanical soundscape of humanity transformed into a purposeful performer interweaving with the divine sounds of nature through the resonating body of the vessel.

The mechanical and natural sounds composed a mesmerizing performance of transcendence and power with an underlined sense of anxiety and distress, from the daunting realization of noise pollution overtaking natural environments (Appendix A, Fig. 27).

I consciously chose these locations for their placement within civilization, knowing noise pollution could infiltrate the composition, becoming a performer. An audience who was prone to muting their sounding surroundings, was forced to listen to noise pollution; their discomfort and anxiety transformed into reconciliation. Even with noise pollution infiltrating the composition, these moments were still sacred for nature's soundscape was present. In that moment noise pollution became sacred, just like resonance, for both interacted with nature's soundscape. Anttonen defined sacred as *numen*: "a dynamic force that manifests itself in feelings of religious awe, in inexplicable sentiments of horror and dread, on the one hand, of overwhelming ecstasy and fascination, on the other" (272). Noise pollution was the 'horror and dread' captured within nature's divine soundscape and part of the sonic, sacred journey. Just like the cross is a sacred object that symbolizes the crucifixion and death of Christ's holy body, resonance became a sonic symbol of noise pollution gradually overpowering and slaughtering the divine soundscape of nature. The noise pollution added a depth to the composition that was eccentric and captivating. Its presence was powerful and purposeful, inflicting anxiety when recognized as humanity's technological and mechanical soundscape.

Each vessel captured a personal diverse moment with nature's divine soundscape. There were moments of meditative calmness, rhythmic wonder and curiosity from unidentifiable sounds, and anxiety and discomfort from recognizable sounds. Resonance

autonomously transformed with nature's soundscape, capturing and preserving the transitory, transcendental moment within the vessel. The moments became a cohesive collective capable of seizing an audience on a sonic journey through place, space, and time.

THE PRESERVATION

The Reliquary Effect

Once a relic is preserved and guarded by a reliquary, it is staged in a sacred setting where believers and non-believers can visit with respect. To view the relic and the reliquary as sanctified, the reliquary effect, a coined term by Hahn, establishes meaning, sacredness and worth through “value, presentation and context,” (Hahn 6). The relic obtains a sacred status when deemed so by its beholder. Hahn stated that, “Without the script supplied by labels and inscriptions, without the set design and lighting of brilliant substances, without the supporting cast of other relics and sacred things in a surrounding treasury and the ritual actions of the devout, the relic remains mute- a silent and speechless thing” (Hahn 10). Reliquaries in sacred spaces are displayed in concealed glass cabinets, on ledges and altars, always out of reach but in sight (Hahn 172, 174). The reliquaries are staged as shrines with theatrical lighting for worshiping devotees to feel connected and spiritually close to the distant relic (Hahn 185). The design and staging of the reliquary in a space with a strong, experiential narrative can convey the relic as a spiritual entity encapsulated by its reliquary. Through this theatrical curation of reliquaries can an “audience’s imagination be propelled on a trajectory that leads to distant destinations, from here and now to *there* and *then*”(Hahn 6). The reliquary effect is a product of curated reliquaries. Being readymade secular reliquaries, the vessels were curated in a gallery where individuals were able to experience the resonant relic preserving a sonic memory of nature’s divine soundscape. Therefore I examined how religious and secular objects are curated in secular museums that transform into sacred spaces.

In Crispin Paine's book *Religious Objects in Museums*, he discusses the responsibilities of curators who control and dictate the effects of sacred objects in secular spaces. The curator compiles a cohesive, communicable collection of chosen sacred content that is displayed within a museum. The designed placement of these objects within a space will assist visitors in understanding and responding to objects (Paine 13). When displaying sacred objects within a museum, the spaces become secular temples. Haines explained how the curator is designing sets for the collected objects and related content *for* visitors. Alters are foundations to prominent holy entities, lifting the radiating object into a fortress of invisible barricades. In museums, plinths are common for displaying religious objects for their correlating form of altars. The plinth places objects at a height that the objects are intended to be viewed (Paine 108). The sacred objects, on their designed plinths, are isolated and heightened with value as light shrines the object with sanctity. The audience moves through the routed space silently to observe the content, becoming nourished with enlightenment and spirituality (Paine 72). The sacred objects are curated to be experienced by visitors.

There were two elements to curating for sacred objects that I challenged: prohibiting physical interaction, and extensive written narration. Reliquaries, even as containers of relics, are not to be handled carelessly or even touched. Only on rare occasions can visitors or devotees touch sacred objects in museums or religious spaces. This reinforcement is to protect the objects but also to heighten their treasured value of sacredness. Even though the sanctity of the vessels was integral, I could not restrict my audience from experiencing the relational power of listening to resonance. I wanted to give my vessels the same respect and dignity as religious reliquaries, while permitting

and encouraging gentle ear engagement from an audience. The exhibition required a balance between staging the reliquaries with sanctity and encouraging interactive engagement for the minds and ears of an audience to be transported through memories of the sacred, acoustic past.

Museum curation relies heavily on the use of words to explain the interpretation of the objects, through labels and guided tours. Paine states that words “immediately favours a credal, intellectual understanding of religion, rather than a sensual, emotional experiential one” (109). Words explain to the visitors exactly how to respond to the objects, valuing an educational experience over a relational event. I made the conscious choice of not including labels throughout the gallery. The only texts included were two short descriptions, the exhibition statement and the artist statement. These two statements were hung near the entrance of the door, providing the audience brief words of the thesis project, before they began the interactive exhibition. The location, date or time the events took place, or instructions on how to engage with the vessel would spoil curiosity, removing focus from the interactive moments. Labels became tokens that pulled the audience out of the immersive exhibition. Not including labels assisted the audience in their sonic transportation to these sacred sonic moments. Without any signs that bluntly tell the audience that they could interact with the vessels, there was still a high chance that individuals would not engage. I took the risk knowing that I would be in the space during the duration of the exhibition. I would be able to be the voice of guidance for any audience members having hesitations or difficulties comprehending the engagement portion of the exhibition.

The exhibition needed to be immersive through interaction, narrative through communication between the vessels and their correlating documentation, and theatrically sacred through the implementation of light, placement and space. The curation of the vessels determined the audience's ability to develop a relation towards nature's soundscape through sacred, secular assembled objects that preserved the resonating memories of an intimate, spiritual moment with nature's soundscape.

The Conception

I controlled the audience's experience through the design and curation of the vessels in the gallery space. The exhibition needed to provoke the audience into projecting themselves into the documentation of the performance, transporting the ears and the mind to a sacred moment between sonic phenomena. The space required simplicity and sharpness to remove any obscurities that could deteriorate the audience's engagement. Preciseness was key for creating a simple narrative with an impactful message.

With the curation of the vessels and their correlating documentation, I wanted to focus on light, placement and space. These are design elements that have accompanied sacred objects and relics to bring a theatrical essence of value, importance and power. There were two artists that guided me through the curation and conceptual process for their use of light, placement and space to sanctify and narrate readymade, found objects. I wanted to maintain the theatrical nature of curating sacred reliquaries, but for readymades.

The artist Lee Ufan designs installations that deeply connect his found objects to

one another. In Okyang Chae-Duporge's book *Lee Ufan: Untouched Space*, she discusses Ufan's art practice as a search for relationships between existing natural and mechanical materials with their surrounding space (196). In Ufan's *Relatum* series, he experiments within three parameters, "oppositional, reciprocal, and open-space style" (Chae-Duporge 197). Oppositional style employs contrasting objects that develop a relationship through purposeful, connective placement (Chae-Duporge 198). Reciprocal style explores the communicative dialogue between the contrasting objects that bring awareness to their surrounding environment (Chae-Duporge 204). Open-space style concentrated on activating the space surrounding the objects (Chae-Duporge 210). Centre de Creation Contemporaine Oliver Debre, describes Ufan's *Relatum-Silence* piece through his use of purposeful space and placement of the objects. Ufan opposes a found stone from the natural world with a rectangular sheet of human-made, industrial material. Ufan's practice is a devotion of displaying simple existing forms with limited intervention to allow the objects to speak to each other and to the audience silently. The placement of the forms in a space is a meditative decision on void (Centre de Creation Contemporaine Oliver Debre, "Lee Ufan"). Ufan maintains a connection between materials through implementing distance, "it is precisely distance that begets their relationship" (Chae-Duporge 210). Objects from separate worlds bond through distance, void, and space. With these sculptures of readymades, Ufan incorporates a theatrical use of the spotlight that creates a somber connection between the objects. His design of space through the placement of objects and lighting generates a sacred and tranquil conversation between two different materials. Encapsulated within an intimate, unbreakable gaze, the two worlds collide in stillness, space and silence.

**Figure removed due to copyright
restrictions.**

Refer to citation for image.

Figure 18: Ufan, Lee, *Relatum-Silence*, 2010, <https://bayareaartgrind.com/sublime-transcendent-lee-ufan/>

Ufan's work demonstrates the ability to sanctify and evoke emotive responses through the use of space and light when opposing two objects. There is strength to minimalism that provides depth in narrative relation between objects and audience, and purposeful, powerful emptiness. With the vessels, they oppose their correlating photograph, a mechanical representation of nature, the past, and the moment. Implementing Ufan's use of placement, space and distance, the vessels and their photographs were connected in an unbreakable bond. Accompanied by a dramatic spotlight, the vessels' and the natural environment's relationship was illuminated with

affection and sanctity. The spotlight imitates the curation of sacred objects, giving the vessels a heightened sense of importance and sacredness. Within the somber light, the vessel's sorrow and longing to be reunited with its sonic companion would be emulated. The vessel's resonating voice would yearn for its collaborator.

With the vessels being narrated through three components, I continually returned to the image of Joseph Kosuth's *One and Three Chairs*, 1965. In Charles Green's book *Third Hand Collaboration*, he discusses Joseph Kosuth's conceptual practice with text, language and archives. Kosuth assembles and organizes information as archival installations (Green 3). In the late 1960s, Kosuth collected text or works by other artists and exhibited them as archives of information (4). Peter Goldie and Elisabeth Schellekens, in *Philosophy and Conceptual Art* describe the artwork *One and Three Chairs* as an assembled installation of three components that portray one item, a chair. In the work, a wooden chair was placed with its back against the wall. To the left was a hung, photographic portrait of the chair at a similar scale to the physical chair. To the right was a dictionary definition of the word chair hung in landscape (Goldie and Schellekens 124). Kosuth composed the components as a collective to narrate and define one object, each clearly in communication with one another because of placement and content correlation.

Figure removed due to copyright restrictions.

Refer to citation for image.

Figure 19: Kosuth, Joseph, *One and Three Chairs*, 1965, <https://www.moma.org/collection/works/81435>

Art as archive elicits its audience to view the work as “composed of records and memories that can be read,” or in my case, listened to (Green 5). Instead of text, my work integrated sound as an element of archiving and narrating each vessel’s memory of a sonic event. The vessels, photographs and recordings were situated and positioned similarly to Kosuth’s composition of objects and documentation to demonstrate the components as an archive narrating the journey of the one item, the vessel. *One and Three Chairs* demonstrated to me the need for each vessel and their correlating documentation to have their own area while staying in communication with one another to provide a complete narrative of a moment.

Incorporating these two artists’ use of light, placement, and space in my curation generated an evocative, sacred and immersive experience. The vessels, photographs and recordings were in need of supplementary elements that best supported and enhanced

each component within the curatorial conception. These supplementary elements had to emphasize sacredness, narration and the readymade aesthetic.

The Components

The curation of the exhibition revolved around the vessels, photographs, and recordings that captured sacred sonic moments. Each component was a significant fragment that collectively formed an immersive and interactive narrative. The vessels were the physical manifestation of resonant relics preserving the memories of a sacred event. The photographs were compositions of the Listener's performance that demonstrated the distinct design of each vessel and its functionality. The recordings presented the sonic journeys of sacred transformation and collaboration between sonic entities. Together, these components were assembled moments; each component required a definitive design that supported its presentation within the curated exhibition. The design for the entire exhibition had to have a sanctified atmosphere while providing mechanical elements to support the readymade, secular vessels and their technological documentation. Throughout the design process, I revelled in the aesthetic of found objects and continued to incorporate their functionality into the conception and components of the exhibition. Instead of covering or hiding any added element, I showcased their mechanical, industrial nature that complimented and supported the three integral components of the exhibition: the vessels, the photographs, and the recordings.

The secular readymade vessels had to be presented with high-sanctified stature while being accessible for aural interactivity. Even though engagement was permitted, it was a privilege; therefore the placement of the vessels had to clearly indicate to the

audience that handling the vessels was prohibited but listening with respectful gentleness was encouraged. For the vessels to be accessible by the audience's ears, while maintaining a level of value and worth, the vessels were displayed on stands. Just like altars are adjusted to eye level, these stands were adjusted to ear level.

The vessels were designed to be supported by a listening body and required equivalent support from their stands. Instead of pedestals, plinths or alters with flat top surfaces, I turned to the design of instrumental stands for inspiration. Instrument stands support valuable objects of musical importance: their black, sleek stems that grip the necks and bodies of their residing musical instrument with elegance, rigidity and support. Implementing a similar structure as instrument stands, the vessels were held and supported as reliquaries of sanctity in positions that were accessible to the ears. The stands supported the vessels as if an invisible body was holding the vessels to their ear.

The stands were designed with a heavy base that supported an elevated, slim pipe structure that had an attached fixture to grasp the vessel in place. After conceiving unreliable structures that required unattractive weight-bearing bases and intensive labour, I turned to find objects that could fulfill the required parts for the stands. This venture brought me to the inexpensive solution of Ikea lampstands that came with a black heavy round base, four attachable pipes, and a light fixture. As an Ikea product, assembly was required; an ideal situation for building stands for varying vessels. Each stand had a found object epoxied to an attachable pipe to grasp and support the vessel.

Vessel no. 1 had two stands with a U bicycle hook that perfectly grasped the coiled pipe of the body, and a third stand with a three-pronged basketball holder, with one prong, cut down to support the phonograph horn. The lightweight structure of Vessel no.

3 only required two stands with attached bottle clamps from bicycle bottle holders. The clamps had slight flexibility that firmly held the accordion body and the neck of the vessel. Each stand stood at the same height, lengthening the long body of both vessels. Vessel no. 3, with two stands, was able to demonstrate its firm, plastic, coiled body that can be moulded into curvaceous poses.

The stands for Vessel no. 2 aligned the vessel's body and extending arm to my stomach and ear. For Vessel no. 2, the stands had to support the vessel by grasping the area between the connected lampshades and where the PVC pipe arm was attached to the lampshade. Since these two areas were slightly different heights from the floor, to level the body of the vessel, two of the attachable pipes were cut; one had 2 inches cut off, and the other had 2 ½ inches cut off to support the configuration of the vessel. Both stands had an epoxied attachment to hold the vessel securely; one had a black U utility hook to grip the neck space between the horn and the bulbous cavity and the other had the cage part of the bicycle bottle holder to firmly grasp the elbow PVC pipe attached to the bulbous cavity.

Vessel no. 4 only required one stand to support its small readymade body. The single stand had a black clamp from a bicycle bell epoxied to the pipe to support the vessel.

Vessel no. 5, with its curvy body, needed two stands to support its shape and provide it with height. Both stands had epoxied attached black clamps, from bicycle bottle holders, securely grasping the body of the vessel.

Since the stands were constructed with attachable pipes, there was freedom to experiment with varying heights during the installation process. Each stand was

constructed to hold the vessels at an elevation that reached my ear, an average height that could be reached by most with a slouch or on their toes. The positions of the vessels on their stands invited the audience to engage with the designed vessels as intended.

To strengthen the stands and the industrial, readymade concept, I placed sandbags on the base of each stand. Initially, the sandbags were going to be covered with natural substances from the locations; sand, rocks, and wood, as if the vessels were emerging from the earth. However, covering the sandbags would hide an industrial, human-made object that would compliment the readymade aesthetic of the vessels. I reconfigured the curation of reliquaries for secular, found sacred objects to cater to mechanical, industrial materials. To hide the sandbags with organic matter was not consistent with curating for readymades. The vessels did not need organic matter from nature to demonstrate their connection to the landscape. Their bond was exhibited through the vessels, photographs and recordings. The base of each stand was covered with one or two sandbags, purely for aesthetic and stability purposes. The sandbags were to be visible as their traditional function, not as an assembled sculptured mountain to replicate the terrain of nature. The sandbags were used as sandbags.

The stands reconfigured the design of altars and plinths used for sacred objects, to remind the audience that these were treasured reliquaries. Dressing the stands with sandbags reinforced the readymade aesthetic. The vessels on their stands sat as delicate readymade reliquaries and as valuable objects preserving sacred memory.

The photographs captured the performance of the Listener with the vessels in the landscape. The photographs were responsible for being the visual indicator of time and place, to assist the audience in situating and projecting themselves in the moment.

Providing a visual representation of the ritualistic performance, the audience was able to immerse themselves into the photograph, travelling to the place where resonance and an acoustic environment performed in an intimate, passionate duet of transformation for its Listener.

Instead of filling each wall of the gallery with photographs, each moment had one correlating photograph that captured the Listener's performance and highlighted the functionality of the designed vessels in a landscape. By limiting each moment to a singular photograph, it reinforced the communicative relationship between object, photograph, and sound. Multiple photographs for each moment would provide extensive content on place, while one photograph would provide visual context for experiential sound. The single photograph enhanced the listening experience of the recorded sound and resonance while demonstrating to the audience how to correctly interact and listen to the vessel. For the photographs to be immersive the prints were large format, each measuring 4ft x 6ft, and were hung with earth magnets, used for their strength and mechanical, protruding aesthetic. While small formatted photographs are intimate, an important element in curating the exhibition, large format photographs are capable of encapsulating and transporting the audience to a moment of sonic intimacy.

The final component to complete the narrative was the experience of the recorded sound for each moment. Capturing the collaboration between nature and resonance with binaural recordings and the sonic environment with field recordings, I had the freedom to experiment with the presentation of the audio in the gallery. One option was to have the recording play through the vessels; resonance and the digital audio performing live together for the audience. This would be an attempt in manufacturing and replicating the

moment so an audience could experience the transformation of resonance and sound acoustically live. This option could only be done with the field recordings of the soundscape. Playing the binaural recordings, which had already captured the acoustic environment performing within the resonant space, would add a second layer of resonant manipulation. In doing so, it would be setting up an opportunity to replicate Alvin Lucier's *I Am Sitting In A Room*; rerecording sound that has been transformed by architectural space until the resonating space becomes the sole performer. As much as this idea brightened my eyes, it was not the intent of the exhibition.

The sound that would be produced through the vessels with the field recordings would be a different experience than listening to an acoustic environment transform with resonance. Wind being recorded then played through the vessel would be completely different from wind increasing the air pressure within the vessel, causing resonance to amplify and peak. The binaural recordings captured the sounds within the vessels that manifested from aural and physical engagement. I could not artificially recreate the acoustic sonic experience, but I was able to create a portal that transported the audience to that moment through noise-cancelling headphones.

The binaural recordings captured the sonic performance through the perspective of the Listener; one ear listening to the natural soundscape resonating in the vessel, and the other ear listening to the environment as is. With the binaural recordings, the audience was transported through time to a memory of a sonic moment. According to Schafer, the “ultimate private acoustic space is produced with headphones” (*The Tuning of the World* 118). As the audience stood in intimacy with the recorded sound, the rest of the room disappeared. I was not trying to recreate the landscape, bringing nature into the confines

of the gallery, but rather transport the ears and the minds outwards into the soundscapes of the past. By not playing any sound through the vessels, the audience was permitted to listen to the vessels, experiencing the persistence, preservation and power of resonance as a sonic relic. The audience listened to resonance and reflected on the sonic memory absorbed within the vessels. This was an intimate moment of discovery and sanctity through listening to the vessels' natural acoustics.

For the headphones to loop the recordings for a long duration, the device playing the sound had to be charged and hidden. For security and sleekness, a black wooden box containing the charging device was placed over an outlet. The headphones, which are connected to the device, hung off of two-pronged metal hooks that were drilled to the wall 3ft away from the photograph, and 4ft up from the ground. The placement of the headphones depended on the closest outlet to the photograph. The headphones and the devices within their constructed boxes were placed in relation to the photographs and vessels. The box and its placement visually demonstrated the source of the sound and its correlating moment.

The Gales Gallery was heavily reverberant, amplifying any sound, especially the ventilation system. I consciously did not mask the sound of the room for it too had a transformative, performative voice, just like the vessels. Without overpowering the space, I played through a speaker a field recording from G. Ross Lord Park filled with the symphonic melodies of birds. Having this soft, natural sound that encapsulated the space completely altered the sonic atmosphere into a collaborative soundscape between nature's soundscape and the architectural acoustics of the gallery. As the audience listened

through the vessel, they would be treated with an unexpected call of a bird, believing for a moment that they were truly transported through place, space, and time.

Each component was prepared to flourish in the exhibition as communicative, interactive elements that narrated a sacred, sonic event. The vessels, photographs and recordings were curated in the Gales Gallery with attention to placement, space, and light. The installation of the exhibition came with its own decisions and experimentation with each component.

The Exhibition

The installation of the *Vessels* exhibition was an exploration of placement, space, and light, with the vessels, the photographs, and the recordings (Appendix B). All three components had to be in communication with one another to express and narrate their collective journey. The vessels, on their stands, inhabited the space in connection to their correlating photograph and audio recording, establishing a shrine to their moment. By focusing on placement, space, and light, I was able to install an exhibition of these transcendental, preserved moments for an audience to reflect on their personal relationship with nature's divine soundscape through listening.

Placement of the moments and their three experiential narrative components determined how the audience ventured through the space, comprehended the work, and were captivated through an emotive sonic journey. Assigning the walls for each vessel and their correlating documentation was dictated by: their ability to nonverbally indicate to an audience that engagement was encouraged, their enthrallment and captivation to drag onlookers into the exhibition, and their parallel and connection with other moments.

The south and west walls, residing near the entrance, had to visually indicate that listening to the vessels was permitted. The north wall, being opposite the entrance, had to inhabit a moment that elicited curiosity and fascination. Each wall had a paralleling neighbour that contrasted or reflected the other in communication and curation. Every moment had to function purposefully in the exhibition to narrate to the audience independently and collectively.

Each vessel needed a circumference of empty space for the audience to experience the moments through each component with comfort. Curated emptiness exhibited the resonating vessels as valuable sacred objects spilling with sonic, sacred energy. The amount of space correlated to each vessel's ability to occupy and overpower the allocated emptiness. The further a vessel stood from their photograph and recordings, the deeper their connection to the landscape, the Listener, and nature's sonic presence. That distance of empty space became a void of sorrow, energy of deep connective longing, and a continuous reminder of the unattainable. Space sanctified the vessels as holy reliquaries containing acoustic relics yearning to be reconnected with their sonic divine partner.

Lighting elicited an atmosphere of sacredness and sorrow. The vessels and photographs were lit as shrines preserving a moment of divine interaction. Light was a theatrical element that connected vessel, landscape, and audience. With the lighting grid, the space was lit from above, providing spotlights of theatrical holiness as if the sun from each moment was present. The lighting grid that hung within the gallery allowed for easy maneuvering and quick reconfigurations. The light created an atmosphere of tranquility, sacredness and immersion.

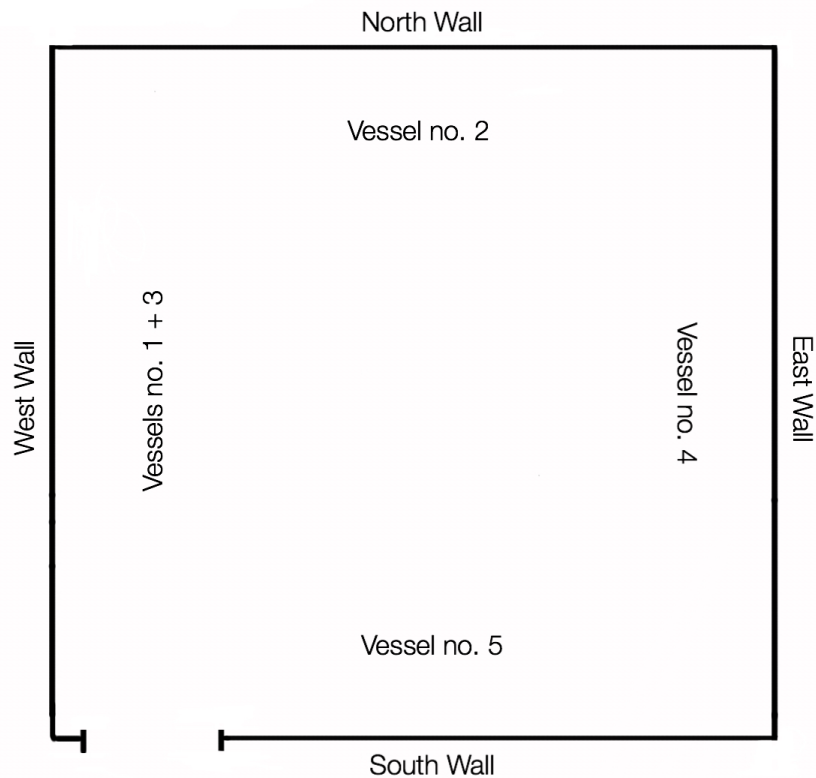


Figure 20: York University Gales Gallery Floor Plan, Sharon Reshef, 2019

The intention was to have the audience begin with the west wall; the first impression of the exhibition that dictated the audience's capability of comprehending the content and interactivity of the exhibition. Vessels no. 1 + 3's moment was chosen to reside in this area because of its large, eye-catching form and overpowering stance that beckoned to be listened to. The moment inhabiting this wall had to demonstrate to the audience that aural engagement with the vessels was encouraged. Placing a chair between Vessel no. 1 and Vessel no. 3 was a simple indication this vessel was to be listened to. Placing a chair in a gallery was risky because it could be perceived as part of the artwork, refraining individuals from sitting. However, placing the vessels on either side of the chair, at ear height, paralleling how the Listener listened to these vessels, compelled the

audience to question if sitting was allowed. As the audience continued through the space, gazing at the photographs and standing by ear height objects, the aural interactive element became more apparent. The first vessel that the audience was intended to start with set the tone for their entire interactive experience.

The first chair tested for Vessels no. 1 + 3, was a lounge lawn chair that extended horizontally and would allow the audience to lie back, mirroring the performative position of the Listener. With big hopes, this idea fumbled; the width of the chair was too large, and leaning back between two tubes was challenging. Rummaging through the York Theatre department's furniture storage, I stumbled across a simple, generic chair that had been repeatedly painted with layers of beiges and whites. My premeditative intention was to paint the found chair black, but refrained because the found chair was layered with history.

Wanting to capture that sensation of lying down, I realized the simple motion of leaning the head back replicated the posture of the Listener in the photograph. Placing the vessels by the sides of the chair, slightly behind the ears of the seated, the audience had to sink their body and lean their head backwards. Having to position the head and body prepared the ears and the mind to focus and attentively listen.

The incorporated chair was reminiscent of Joseph Kosuth's *One and Three Chairs*. The placement of each element was directly connected to this inspiring artwork. Each component of the moment had its own 'station,' a space to listen to the recording, gaze into the photograph and listen to resonance. The photograph was placed on the west wall off-center towards the right. Vessels no. 1 + 3 were placed to the right of the photograph, away from the entrance to minimize congestion and a few feet away from

the wall. Placed on a slight angle, the chair and the vessels were clearly visible to the audience entering the space while maintaining a conversation with all components of the moment. The seated audience member was able to gaze into the photograph, recognizing the correlation between the vessels and photograph, before lying back to indulge in the sound of resonance. The first component the audience interacted with was the headphones and their connected black box that settled to the left of the photograph. Beginning their sonic journey with the recordings would evoke curiosity, for the sounds emitting from the headphones were enigmatic and simultaneously recognizable. As the audience moved to the next component, they began to unveil the mystery and narrative.

During the captured performance of Vessels no. 1 + 3, the sun was rising in the distance, shining warmth on the head of the Listener. In the gallery, I shined a warm light towards the top of the chair, where the audience's head was as they laid back, eliciting the rise of the sun. The spotlight added an atmospheric element that sanctified the vessels, but also transported each individual audience member back to the early morning on Woodbine Beach, where the vessels were heated with the rising sun as part of their bodies sunk into the depths of the water (Appendix C, Fig. 34. 35).

From outside the gallery, the eyes gravitated to the north wall as it stands opposite the door. This wall hosted the photograph that was capable of dragging an onlooker by the eyes into the gallery in order to be aurally stimulated. The photograph of Vessel no. 2's intimate moment with nature and the Listener had an aura that was indescribably captivating and powerful. It was visually mesmerizing with a hint of mystery that released an urge in its gazer to discover, to explore and to unveil. This photograph captured the vessel's obscure profile; the only visible part was the inside of the bell. What

makes this photograph so magnificent was that it hid elements of the vessel. To understand what was being seen in the photograph, the audience had to look at the vessel within the space to complete the image and narrative.

This vessel was delicate yet durable, unearthly yet infant-like, strong yet supported; there was an intimacy that ran deep when listening to the resonant cavity emit a hum of longing and sorrow for its creator and its collaborator. Vessel no. 2 was designed to resemble a pregnant belly carrying a fetus, cradled against the body of the Listener, its creator and mother. This vessel was an infant, separated from its caregiver and sonic friend. All vessels had a connection to their landscape, however with Vessel no. 2's there was stronger yearning to be reunited with and cared for by nature and the Listener.

Vessel no. 2 stood on a stand that allowed the audience to stand and listen through the ear opening while their stomach aligned with the body of the vessel. Vessels no. 1 + 3 demonstrated the correlation between vessel, photograph and recording, allowing experimentation with placement of the other vessels' three components. Vessel no. 2's photograph was centered on the wall, with the headphones to the right, and the vessel was placed directly across from the photograph but at a distance to provide space for void and silence. Within this dark emptiness, energy of longing connected the vessel to a photograph of a moment it so desperately wanted to relive. Distance was interpreted as a separation of partners; a valuable emptiness of tension, sorrow and affection. Listening to this vessel's resonating voice could be construed as weeping and cries for the past. With an intense intimacy between the photograph and vessel, through their unbreakable gaze, the space separating the two components was sanctified. With the vessel's placement and lighting, it exuberated Ufan's installation of *Relatum Silence*.

With warm light, their deep connection was intensified. A symmetrical circumference of light encapsulated the vessel; reminiscent of the sun from the day Vessel no. 2's resonance met, performed with, and left nature. The theatrical spotlight evoked longing and sorrow within the vessel. Light illuminated the vessel's life as a sacred object; forced to spend eternity as a sacred object, ripped away from its beloveds, preserved for its sonic memory to remind humanity of nature's decaying voice. The curation of this vessel was less archival and more emotive through an exploration of void (Appendix C, Fig. 36).

Vessel no. 2 had a strong connection with Vessel no. 4 because they paralleled each other in the landscape. G. Ross Lord Park had a walkway on top of a hill with two alternate landscapes on either side. On one was a rocky slope that extended toward a pond and the other was a slope of grass with bright yellow safety rods puncturing the ground. There was a railing from the walkway present in both photographs, indicating a correlation between the two landscapes. For their geographical connection, Vessel no. 4's moment was assigned to the south wall to parallel its opposing neighbour.

Residing on a wall that the audience could have potentially begun with since it was close to the door, an element had to be added to ensure the audience was nonverbally informed that these vessels were to be listened to. Since the Listener in the photograph was lying down, the audience was brought closer to the floor to replicate the physical intimacy between the vessel, the Listener and the landscape. With the positioning of the vessel so close to the floor, a cushion was added beside the 2ft stand as an indicator to the audience to sit. Just like the chair, the cushion was a visual marker calling the audience to sit beside the relic and revel in a moment together as performer and listener.

Interested in the power of purposeful empty space, the smallest vessel resided in a large area, at a distance from the other vessels, while still maintaining a conversation. The more space, the more sacred an object is, regardless of size. I had no desire to fill the gallery's unoccupied space, but rather to consciously curate emptiness. Doing so, Vessel no. 4 demonstrated the ability for a small object to encapsulate, fill and demand space with its immense overflowing energy and presence. Vessel no. 4 was the smallest from the collection but was the most powerful in occupying space

Vessel no. 4 was placed across but off-center from the photograph, with the headphones to the left, still suggestive of Lee Ufan's installations, but without the direct alignment of photograph and vessel. This intense placement was reserved for Vessel no. 2 to magnify its powerful connection. Vessel no. 4 was placed at a distance to connect the vessel to the photograph but also to increase the amount of emptiness. Even though the vessel was small, it stood independently with a powerful appearance stimulating attention.

Vessel no. 4's moment was reminiscent of childhood days lying on the grass, listening to the world pass by; it was comforting even as civilization performed throughout. The warm spotlight, above the vessel, illuminated the sensation and atmosphere of lying in a field as the sun brought warmth and a meditative calmness. The light added a serene and tranquil atmosphere that elevated the resonant listening experience within the exhibition (Appendix C, Fig. 37).

Finally, Vessel no. 5's moment was assigned the east wall. Within the gallery, Vessel no. 5's intense and climatic noise polluted soundscape paralleled Vessels no. 1 +3's evocative and enigmatic water soundscape. This moment has a vibrant and exciting

recording with a strong, daunting, and cold undertone, unlike its fellow collective. Listening to this moment was extremely emotive, but its presence within the gallery was reminiscent of a sacred archive, similarly to its paralleling neighbour.

Inhabiting the only wall connecting to the south wall, Vessel no. 5 was placed closer to the north wall to provide additional space for Vessel no. 4 to occupy. To reflect the stance of the Listener and position of the vessel in the photograph, the stand extended Vessel no. 5 upwards to reach excessive heights while still being accessible by the audience's ear. Vessel no. 5 was placed on an angle, with the bell stretching upwards, on a 6ft stand and the opening for ear rested on a 5ft stand, between the north and east wall. The only portrait photograph was hung to the right of the vessel, and the headphones to the right of the photograph. The audience was able to stand beside the vessel, listen, and gaze into the landscape it once performed with. Vessel no. 5's moment captured the progression of noise pollution overtaking the natural soundscape. The components of this moment were presented more as documentation to emphasize the truth and importance of the information presented.

Vessel no. 5 was lit with a cooler light to reinforce the snowy, colder weather during the moment captured in the landscape. Even though the clouds concealed the sunbeams, the cooler light generated an atmosphere of a snow-ridden day. The choice of light emulated sacredness, as it encircled the vessel with importance and value (Appendix C, Fig. 38).

The exhibition was a process of reconfiguring, reevaluating, and reworking. Every decision was dissected and reexamined to ensure the overall exhibition would be cohesive and convey narration. Curation was an exploration of content as a collection in

conversation, harmoniously filling the space with purpose, sacredness, and engagement. Each vessel narrated a singular, personal moment, but, when curated as a collective, they became segments of a larger narrative of nature's soundscape. The photographs, recordings, and vessels, transported the audience to moments where resonance and nature's soundscape performed in duets of sanctified, transcendental transformation. The audience performed the sacred act of listening, as the vessel's resonating memory and life filled their ears, mind and soul. As the audience continued through the space, there was an intensification of noise pollution, exposing the state of nature's soundscape as civilization slowly engulfs it. The exhibition evoked intimate moments for an audience to reflect on their own relationship with nature, and humanity's stance in the progressing environmental crisis (Appendix D).

THE REFLECTION

The Response to the Moments

Using the dramaturgy of relics and reliquaries assisted in the creation, performance and preservation aspects of the thesis that brought an inherent sacredness to found objects and sound. The exhibition was curated to present the vessels as sanctified reliquaries with resonant relics that preserve the memory of a sacred event with nature to elicit internal, self-reflective moments. The audience was able to sympathetically and meditatively experience the natural soundscape through the resonant vessels, photographs and recordings.

Many audience members explained their experience as transformative, meditative, and anxiety inducing. Several audience members experienced strong, visceral reactions towards Vessels no. 1 + 3, and Vessel no. 5 sonic moments that juxtaposed each other in space and in sensation. Many gravitated towards Vessels no. 1 + 3, declaring this moment and recording their favourite, for it stimulated relaxation and blissfulness. This was not surprising, for the meditative waves were a recognizable and adored natural sound. Vessel no. 1 had the comforting sound of rocks softly thrashing the inside of the phonograph. This pleasant sound was accompanied by the strong jaggy sound of Vessel no. 3's plastic body being struck and moved, completely contrasting the sounds emitted from Vessel no. 1. It seemed, as though, the sounds produced by Vessel no. 3 were tuned out and filtered as unpleasant sound. Personally, listening to this recording elicited a physical discomfort as the unpredictable sounds of plastic being struck beat against my ear, tensing my neck and my back. From all the vessels, this moment between Vessels no. 1 + 3 had minimal sonic interference from civilization. I believe, for this reason, many

were peacefully engulfed with euphoria while listening to the natural melodies of the waves.

Unlike Vessels no. 1 + 3's sonic recording, Vessel no. 5 exposed the presence of urban sounds in natural environments that stimulated anxiety with some audience members. The audience was forced to listen to the intensity of inorganic sounds infiltrating a natural soundscape, intertwining in an unsettling composition, exposing the audience to the reality of noise pollution. The two sonic worlds morph into one electric and powerful soundscape with a daunting undertone, reminding its audience that these are the sounds of humanity overtaking nature. Vessel no. 5's recording does not induce anxiety for me since I was present during the moment and am aware of the presence of noise pollution, accepting it as a performer within nature's soundscape. I pondered if the audience were present in the landscape, able to perform as I did, would anxiety still be an instinctive reaction? If the audience was taken to the landscape and they did not have the same physical response to the sounds of humanity as it seeps into the natural composition, then a self-reflective moment would be lost. Vessel no. 5's recorded moment was powerful in exposing the human condition; the audience was confronted with humanity's consuming behaviour towards the natural world. It was unsettling to listen to the pollution of mechanics when nature's soundscape is idealized as an evocative, meditative and calming voice. It became evident that Vessel no. 5 pushed the audience to question humanity's relationship with the natural environment.

An audience member, after listening to one of the recorded moments, expressed her realization of how much we filter sounds in our daily lives. We have become accustomed to blocking noise pollution to avoid the reality of our environmental crisis. Choosing

landscapes that were surrounded by civilization allowed humanity's soundscape to be present, rather than landscapes in the wilderness. The audience was exposed to humanity's relationship with nature and faced with the realization that a technological empire is slowly overtaking the natural environment. It became one of the most important elements to the work that made the audience reflect on their personal relationship with nature and, ultimately, humanity's hand in the environmental crisis.

By providing multiple vessels, each capturing a moment with nature's soundscape, eliciting varying responses, the audience was able to experience a tidal wave of emotions. Gallery spaces allow for this quick movement between experiential content that provokes resonating reactions in the audience. Instead of only experiencing one landscape, or multiple landscapes stretched over time, the audience was able to travel to each landscape within seconds. The experience was more pungent and impactful because the diversity of the moments was extremely evident.

Moving from a moment of meditation to a moment of anxiety was emotionally jarring, shocking individuals with contrasting soundscapes that were both depictions of nature's soundscape. This impact could have been explored more intensively if only Vessels no. 1 +3 and Vessel 5 were in the space. The audience would be confronted with two moments of emotional juxtaposition. Imagining larger alternate spaces, the arrangement of the vessels and documentation could be explored further as a collective with more explicit paralleling moments that, when experienced back to back, could be viscerally intensified. The relationships and placement of the moments are impactful for an audience's emotive experience and could be explored further through curation.

I would also be interested in completely contrasting this idea and only presenting one moment, pushing the extremities of sacredness with light and space. I would be interested in exploring this theorized idea with Vessel no. 2 for its deep connection with its landscape. Curating this vessel, in the exhibition, to stand directly across from its correlating photograph emphasized its strong communicative bond with the landscape and Listener it performed with. I would want to offer Vessel no. 2 its own large space, emphasizing its ability to fill and demand space with its resonant energy like a religious relic in its reliquary.

With these four moments captured, there is immense room for exploration and experimentation with curation. This exhibition was a foundation that the audience and myself needed. After exhibiting all moments together as a collective, I would be able to release and push myself in exploring the possibilities of displaying the moments separately and in different curated spaces.

The Hesitation vs. Impulse

Making the choice not to include labels or signs, to instruct the audience in interactivity, resulted in a split reaction from the audience: either individuals hesitated for approval or impulsively interacted. It is inherent not to touch art. Even myself, being in a museum where certain interactive pieces have the ‘touching is allowed’ hand symbol, I hesitate and require approval from staff members from fear of being scolded. I believe, even if I had put up these elegant, discreet hand symbols or ear symbols to indicate listening was allowed, some audience members would still hesitate; however fewer individuals would.

I witnessed an individual who moved through the space slowly and with care, giving each moment her devoted attention; however she did not engage with the vessels. After she completed her journey, I told her that interaction was permitted, which she responded to with delight for she was unsure if it were allowed. She walked through the gallery again, to experience the vessels with her ears. Once she was done, I asked her if it was not clear that interacting with the vessels was permitted? She explained to me that after looking at the photograph and listening to the recordings that she thought listening to the vessels might be the next step. However, with no signs or labels, her hesitation took over and dictated her experience of the exhibition. She continued to say that she had a desire to listen to the vessels and was distraught when she believed interacting with the vessels was prohibited. This individual's curiosity developed into a desire to listen. If there were labels at each moment that explained to the audience how to interact and what the experience was, it would tarnish their own self-exploration. I wanted my audience to *want* to listen, not be told to listen.

There were individuals who began to interact, looking over to me for last-minute approval, and with my slight nod, their ecstatic curiosity was fulfilled. While others were told they were permitted to listen to the vessels they proceeded to walk around the space impatiently and left without a single sonic experience. An audience cannot be expected to behave in unison. Every individual explores gallery spaces differently based on preferences, personal history, and patience.

I had to imagine an audience that has never stepped foot into a museum, no matter how clear I think I had made the self-guided, interactive exhibition. This became evident when I had to inform an individual that the headphones are interactive, an element that I

believed was extremely self-explanatory. However, this was the *only* individual that struggled with this interactive component. Labeling the headphones to state their function for this one individual could tarnish the immersive experience of the exhibition for *all* individuals. The audience was aware they were in a gallery, but details like labels could take them out of a moment of engagement. I did not want to take the risk of this possibility and made the choice not to include labels. The exhibition was a balance between curating objects for museums and interactive art installations. It was impossible to curate an exhibition for everyone, and I should not diminish my conception and artistic integrity for that *one* individual.

I did not want to spoon-feed the information, removing any thought-provoking curiosity that could only be fulfilled with exploration. I did not want my audience to be mindless drones moving through the exhibition as they are instructed to. It was so important that the audience understood what they were doing, rather than being told what to do. That is the difference between interactive artwork that allows the audience to reflect, explore and experience their own perception of the work, rather than museum installations that are detailed with information to provide the public with knowledge. I wanted to provide documentation in an interactive way, allowing my audience to explore and reflect on their relationship with nature. By investigating they could find all the answers and develop a profound desire to listen. Removing blatant descriptions and labels that quickly eradicate the potential for the mind to theorize, encouraged freedom of curiosity. Individuals are accustomed to museum etiquette that builds an invisible barrier between the art and the audience. Providing my audience with the freedom to investigate

with their senses demonstrated the ability to learn from explorative listening. Breaking down this barricade enriched the audience's experience and connection to nature.

The Experience of Resonance

I made the conscious choice not to play sound through the vessels to allow the audience to experience the solo sound of the resonating cavities. Speaking to an audience member, she asked if there was a continuous train passing in Vessel no. 2's recording? I explained to her that it is the sound that the vessel produces as a resonant cavity. Stunned, the woman proceeded to place her ear against the vessel and smiled as she listened to the voice singing within. This became a recurring encounter, many were delightfully surprised to hear an inanimate object come to life with a resonant voice. Some looked within the body to see if a hidden speaker were tricking their auditory senses into thinking the vessel was truly vocal. Just by listening to the vessels, the audience experienced the phenomenon that was resonance. It sparked an interest and fascination in some, exploring the vessel with their ears. One individual felt a deep connection towards Vessel no. 2 for it emitted sound differently depending on where he placed his ear; from one end it sounded like an airplane engine, and the other sounded like a train. It was interesting to hear resonance be described very mechanically. For myself, resonance sounds like murmurs and low hums reverberating within a grand architectural structure. For those consciously experiencing resonance for the first time, it is easy to associate the sound to the mechanical structure that contains it. Others were quick in connecting the vessels to seashells resonating with the sounds of the ocean.

I was privileged to have groups of middle school children experience the exhibition. Being in an exhibition where touching and listening was allowed was an overwhelming joyous experience for them. Their faces lit up when listening to the deep voice of resonance emerge out of the darkness of their cavities. Children have immense curiosity and were able to learn through explorative listening. Some moved quickly through the space as if speed were the task at hand, while others gently sat and released themselves from their hyperactive behaviour to indulge in the captivating transformative sounds (D, Fig. 46, 47).

Many individuals do not think of holding objects to their ears, and when given the opportunity were fascinated by the phenomenology of resonance. Watching the audience react to hearing resonance validated the purpose of not playing sound through the vessels. Being able to listen to the vessels allowed the audience to identify the continuously present sound of resonance within the recordings. This clarified that what was being heard in the recording was a sonic transformation of a sonic duet between two separate sonic entities that compose and collaborate in a singular moment. There was an excitement of experiencing what was being explained. I realized that individuals wanted to explore, and this exhibition allowed them to do so with their auditory senses. There was a feeling of accomplishment through discovery that allowed the audience to dictate their own rewarding experience.

The Artist's Presence

The exhibition clarified that a controlled, engaged setting was a necessary introduction to listening to nature's soundscape. The audience had control over the level

of participation and performance they were comfortable with. Being taken to the locations and being asked to perform in very uncomfortable weather conditions could have hindered the audience's response. I could not ask an audience to perform at the same level as a performing artist.

My performance was an integral element of the process, increasing the exhibition's level of engagement and the audience's visceral experience. Without the performance of the Listener, the vessels would be photographed lying in the terrain of the landscapes as if left as remnants of an event. By being present within the visual component, the audience was able to project themselves into the photographs as they listen to the recordings. It was fundamental in my practice that my performance was not self-expressive; the performance was not about Sharon Reshef's emotional, experiential performance and personal relationship with nature. I was present within the art as a neutral, unexpressive human form that demonstrated the functionality and design of the vessels. The documentation within the exhibition focused more on the sonic collaboration of resonance and nature's soundscape rather than the artist's experience. The performance of the Listener transported the audience into the sonic moment, grounding them in time and place.

Interestingly, no one asked me about my experience performing. The audience was not interested in the artist as a feeling body, but rather as a host for self-projection and a visual narrator of transpired sonic events. The focus remained on sound as performer. I questioned if the reasoning behind the lack of fascination with the Listener's performance was a result of not being interested in physically venturing to these landscapes to acoustically experience the duet of nature's soundscape transforming with resonance.

Another part of me thought the audience did not even ponder the possibility of being able to be a performer. Listening to a recorded sonic event vs. a live acoustic performance is different; the audience and I had different experiences. I listened to the present in a landscape, and the audience listened to the past in an enclosed space distant from nature. Now that the audience had received an experiential foundation of the project, I would be more inclined to provide an opportunity for interested individuals to experience resonance in nature. It was fundamental for the audience to connect to the project in a controlled space and understand the performative purposes before receiving complete freedom over their own experience with nature.

THE CONCLUSION

I design for sound to offer audiences a moment to manifest their own resonant and psychophysical experiences of sound. My work is about amplification and elevation—of sound and soul—as a route to recontextualizing how one listens and responds to their sonic environment. The artistic process was an exploration of designing, performing, and curating to capture the indeterminacy and sonic compositional control of an auditory autonomy, for an audience to experience an intimate, self-reflective moment with nature. Being influenced by Cage's operation of chance, and Alvin Lucier's removal of artistic expression to expose sonic phenomenon, I incorporated these theories into the process in a way that allowed exploration and experimentation. It was a balance of adapting and altering other artists' practices to form a process that would capture nature's and resonance's autonomous performance within a controlled system. Every decision and parameter protected the indeterminate sounds produced during nature's independent collaboration with resonance. There was a level of artistic intervention required to find and frame the soundscape to permit an experimental environment to discover and expose the vessels' strengths. My audience and auditory autonomy directly influenced every decision; my presence and limited intervention were necessary to capture a transformative, indeterminate sonic collaboration for an attentive audience to viscerally experience sound. The process was a space to explore my creations, be present as a performer for my audience, and curate a space that elicited transformative self-reflective moments. Exploring the phenomenology of resonance through creation, performance and preservation, I was capable of designing for autonomous sound.

Designing an acoustic space for nature, the sonic entities collaborated in a sonic symphony of transcendental sacredness. Implementing resonance as a performer and architectural sonic manifestation, nature's soundscape thrived, transformed and enticed an attentive listening audience. The vessels connected an audience to nature's soundscape in a moment of euphoric temporality.

Through ritualistic performances, resonance transformed into a relic of important value enshrined as preserver of divine sound. Sacredness of sound was a by-product of sonic transformation. Each element of the process dictated a transformative experiential event. Through the transformation of sound, resonance and nature's soundscape were deemed sacred. Transformation had a heavy hand in sanctity.

By curating the vessels as sacred objects in the exhibition, all components are in conversation, bringing a narrative of the sonic experience to life. Handling and caring for the vessels as sacred objects affected the audience's experience. The audience was able to self-reflect, for worth and value was projected onto nature through curating the vessels as sacred reliquaries. The interactive listening experience evoked the audience to internally analyze their relationship with nature.

Sound is a potent and powerful medium capable of inducing thought-provoking, self-reflective moments. By echoing the environment it passes through, sound mirrors civilizations condition for its inhabitants to listen. Through the process of transformative sanctity, an audience was able to connect and reflect on their experience with the captured moments of nature's soundscape performing with resonance.

BIBLIOGRAPHY

- Alberti, Peter W. "The Anatomy and Physiology of the Ear and Hearing." *Occupational Exposure to Noise: Evaluation, Prevention and Control*, by Gustav A Sehrndt et al., Dortmund, Verlag Nicht Ermittlbar, 2001, pp. 53–62.
- Bennett, Jane. *Vibrant Matter : A Political Ecology of Things*. Durham, Duke University Press, 2010.
- Brown University Physics Department. *Resonant Frequencies in Acoustical Cavities*. Brown Physics.
- Cage, John. *Silence : Lectures and Writing*. Middletown, Wesleyan University Press, 1973.
- "Concealed Hearing Devices of the 19th Century." *Wustl.Edu*, Bernard Becker Medical Library, 2009, beckerexhibits.wustl.edu/did/19thcent/part2.htm. Accessed 2019.
- Crispin Paine. *Religious Objects in Museums : Private Lives and Public Duties*. London ; New York, Bloomsbury, 2013.
- Goldie, Peter, and Elisabeth Schellekens. *Philosophy and Conceptual Art*. Oxford Clarendon, 2009.
- Goran, David. "Acoustic Locator - Detecting Enemy Aircraft before the Invention of Radar." *The Vintage News*, 27 Jan. 2016, www.thevintagenews.com/2016/01/27/vintage-sound-locators/. Accessed 2019.
- Green, Charles. *The Third Hand : Collaboration in Art from Conceptualism to Postmodernism*. Minneapolis, University Of Minnesota Press, 2001.
- Hahn, Cynthia J. *The Reliquary Effect : Enshrining the Sacred Object*. London, Reaktion Books, 2017.
- Hathaway, Benjamin. *Art-Life, and Other Poems*. Chicago, S.C Griggs & Company, 1878.
- Helfer, Martin. *Sound Source Localisation with Acoustic Mirrors*. Mar. 2009.

- Helmreich, Stefan. "Seashell Sound." *Cabinet*, 2013, pp. 23–29.
- Labelle, Brandon. *ACOUSTIC TERRITORIES : Sound, Culture, and Everyday Life*. S.L., Bloomsbury, 2019.
- . *Background Noise : Perspectives on Sound Art*. New York, Bloomsbury, 2015.
- Lafrance, Adrienne. "Hearing the Lost Sounds of Antiquity." *The Atlantic*, 19 Feb. 2016.
- "Lee Ufan." *Ccc Od*, 2016, www.cccod.fr/artiste/lee-ufan/?lang=en. Accessed 19 July 2019.
- Lucier, Alvin. *Music 109 : Notes on Experimental Music*. Middletown, Ct, Wesleyan University Press Press, 2014.
- Moore, Stephan. "Three Recent Moments With Pauline Oliveros." *The Journal of Acoustic Ecology*, vol. 16.
- Okyang Chae-Duporge. *Lee Ufan : Untouched Space*. Paris, Éditions Cercle D'art, 2017.
- Oliveros, Pauline. *Sounding the Margins : Collected Writings, 1992-2009*. Kingston, NY, Deep Listening Publications, 2010.
- Pentcheva, Bissera V. *Hagia Sophia : Sound, Space, and Spirit in Byzantium*. Pennsylvania State University Press, 2018.
- R Murray Schafer. *Patria and the Theatre of Confluence*. Toronto, Descant Arts And Letters Foundation, 1991.
- R. Murray Schafer. *The Soundscape : Our Sonic Environment and the Tuning of the World*. Rochester, Vt, Destiny Books, 1993.
- "Sacred." *Guide To The Study Of Religion*, by Veikko Anttonen, edited by Willi Braun and Russell T. McCutcheon, London and New York, Cassell, 2000.
- Seitz, William C, and Art. *The Art of Assemblage : The Museum of Modern Art, New York*. New York, Ny Museum Of Modern Art, 1961.
- Tenney, James. "About Alvin Lucier." *Alvin Lucier*, Middletown, Ezra and Cecile Zilkha Gallery, 1988.
- . "Crossings." *Musicworks 41*, Summer, 1988.

- Tronchin, Lamberto, et al. "The Marvellous Sound World in the 'Phonurgia Nova' of Athanasius Kircher." *The Journal of the Acoustical Society of America*, vol. 123, no. 5, May 2008, pp. 3606–3606, 10.1121/1.2934785. Accessed 19 July 2019.
- Ulric Daubeney. *Orchestral Wind Instruments, Ancient and Modern : Being an Account of the Origin and Evolution Of...* Place Of Publication Not Identified, Nabu Press, 2010.
- Waldman, Diane. *Collage, Assemblage, and the Found Object*. London, Phaidon, 1992.
- Waterman, Ellen. "Wolf Music: Style, Context, and Authenticity in R. Murray Schafer's And Wolf Shall Inherit the Moon." *Canadian University Music Review*, vol. 18, no. 2, 1998, pp. 72–88, 10.7202/1014655ar.
- Welby, Amelia B. *Poems, by Amelia*. Boston, A. Tompkins, Cornhill, 1845.

APPENDICES

Appendix A: The Moments



Figure 21: Vessel no. 1 + 3 moment, Alec Hussey, 2019



Figure 22: Vessels no. 1 + 3 close up, Alec Hussey, 2019



Figure 23: Vessel no. 2 moment, Alec Hussey, 2019



Figure 24: Vessel no. 2 close up, Alec Hussey, 2019



Figure 25: Vessel no. 4 moment, Alec Hussey, 2019



Figure 26: Vessel no. 4 close up, Alec Hussey, 2019



Figure 27: Vessel no. 5 moment, Alec Hussey, 2019

Appendix B: The Installation



Figure 28: Installation process 1, Sharon Reshef, 2019



Figure 29: Installation process 2, Sharon Reshef, 2019



Figure 30: Installation process 3, Sharon Reshef, 2019

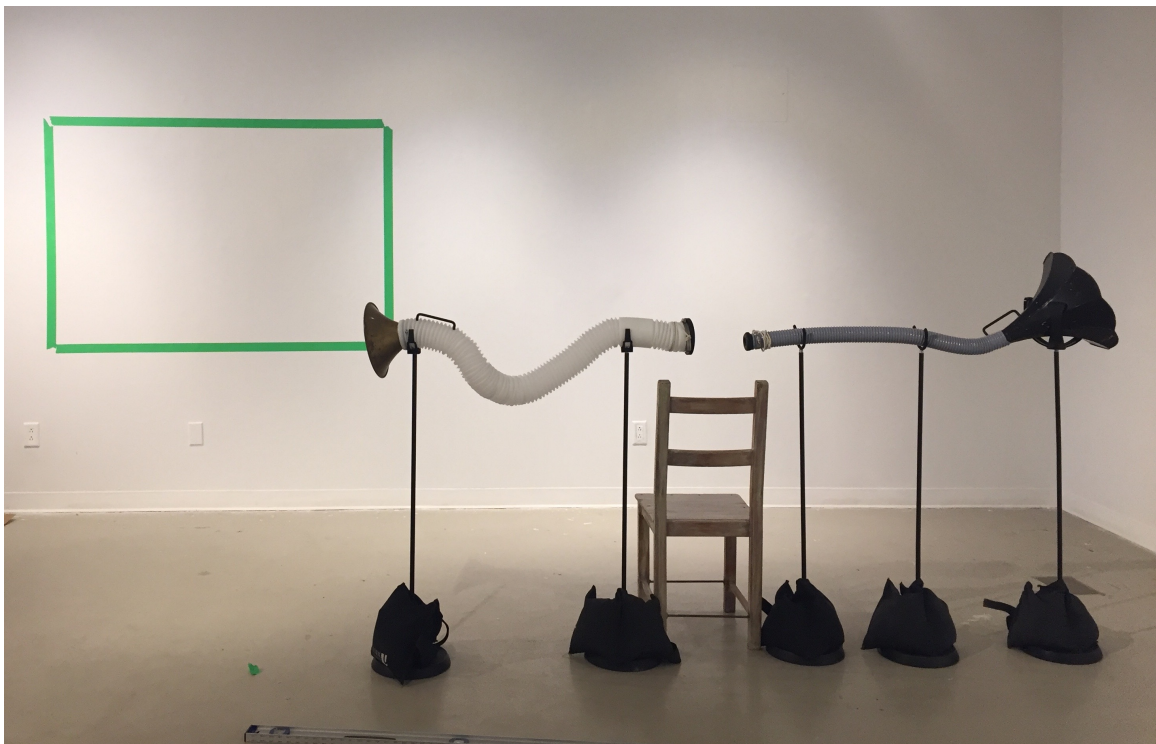


Figure 31: Installation process 4, Sharon Reshef, 20



Figure 32: Installation process 5, Sharon Reshef, 2019



Figure 33: Installation process 6, Sharon Reshef, 2019

Appendix C: The Curated Moments



Figure 34: Vessels no. 1 + 3 curation, Sharon Reshef, 2019



Figure 35: Vessels no. 1 + 3 curation 2, Sharon Reshef, 2019



Figure 36: Vessels no. 2 curation, Sharon Reshef, 2019



Figure 37: Vessels no. 4 curation, Sharon Reshef, 2019



Figure 38: Vessels no. 5 curation, Sharon Reshef, 2019

Appendix D: The Exhibition



Figure 39: Exhibition curation, Sharon Reshef, 2019



Figure 40: Audience in exhibition, Sharon Reshef, 2019



Figure 41: Exhibition curation 2, Sharon Reshef, 2019

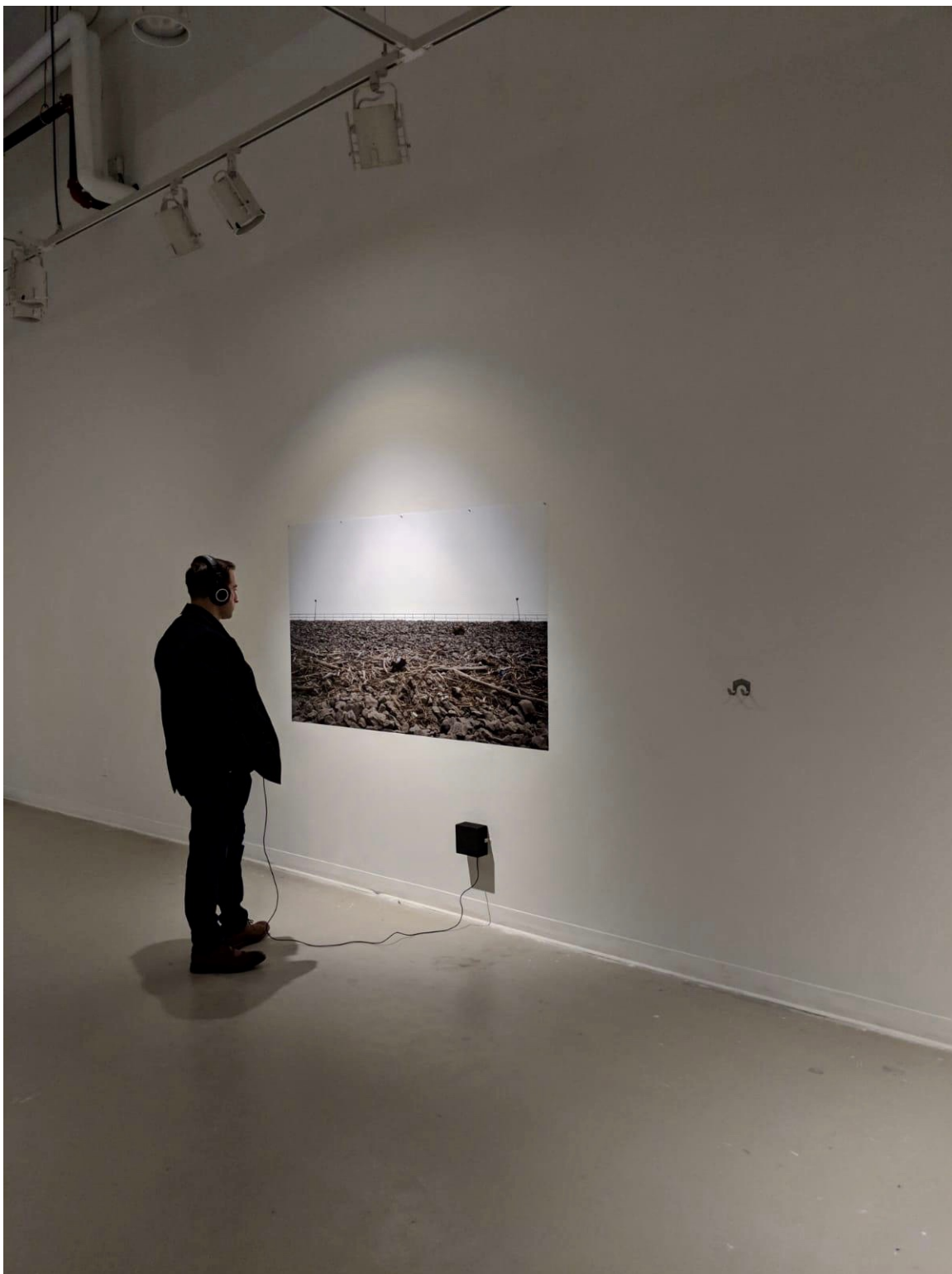


Figure 42: Audience in exhibition 2, Sharon Reshef, 2019



Figure 43: Audience in exhibition 3, Sharon Reshef, 2019



Figure 44: Audience in exhibition 4, Sharon Reshef, 2019



Figure 45: Audience in exhibition 5, Sharon Reshef, 2019



Figure 46: Children in exhibition, Sharon Reshef, 2019



Figure 47: Children in exhibition 2, Sharon Reshef, 2019



Figure 48: Audience in exhibition 6, Sharon Reshef, 2019



Figure 49: Audience in exhibition 7, Sharon Reshef, 2019



Figure 50: Audience in exhibition 8, Sharon Reshef, 201



Figure 51: Audience in exhibition 9, Sharon Reshef, 2019



Figure 52: Audience in exhibition 10, Sharon Reshef, 2019



Figure 53: Audience in exhibition 11, Sharon Reshef, 2019



Figure 54: Exhibition curation 3, Sharon Reshef, 2019