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UNIVERSITY OF CALIFORNIA SAN DIEGO

Listening in Place

A thesis submitted in partial satisfaction of the requirements for the degree Master of Fine Arts

in

Visual Arts

by

John Dombroski

Committee in charge:

Lisa Cartwright, Co-chair Michael Trigilio, Co-chair Charles Curtis Alena Williams

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University of California San Diego 2020

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Acknowledgements

To my committee—Lisa Cartwright, Charles Curtis, Michael Trigilio, and Alena Williams—thank you for your expert guidance, consideration, and understanding.

To my friends, who are also my teachers—Derrick Adams, Trevor Amery,
Thomas Blank, Charlie Blevins, Charli Brissey, Lucas Coffin, J. Michael Comfort, Kat
Crabill, Kelly Donahey, Mariam Eqbal, Guillermo Estrada, Allison Evans, Dusty Marin
Fenton, Matt Flowers, Kate Fowler, Kevin Gallagher, Mat Guzzo, Ryne Heslin, Bob
Kaputof, Yasmine Kasem, Isik Kaya, Robbie Kinter, Jason H. Lim, Justin Lincoln, Tad
Linfesty, Asa Mendelsohn, Ander Mikalson, Karen Mullins, David Nelson, Phil Nesmith,
Bob Paris, Brian Patterson, Vince Pham, LJ Roberts, Robert Scott, Jack and Maureen
Soule, Justin Tuerk, Pam Turner, Anthony Vine, Stephen Vitiello, Richard Walters, Owen
Weeks, Sarah Workneh, and those near and far, too many to name—you have listened
to me, encouraged me, and influenced me far more than any institution could.

To my partner, Lisa Korpos, who has so patiently and generously supported me in countless ways throughout my entire thesis process—I cannot express how grateful I am for all of your insights, care, and for each sunset we are able spend together.

To my loving parents, who have always supported my artistic practice with open ears, without whom I would be literally nothing—thank you for everything.

I sincerely look forward to when we can all be together again.

ABSTRACT OF THE THESIS

Listening in Place

by

John Dombroski

Master of Fine Arts in Visual Arts

University of California San Diego, 2020

Lisa Cartwright, Co-Chair Michael Trigilio, Co-Chair

The artwork described in this thesis suggests that we consider every sensory experience an active tuning of our senses and ourselves in relation to each other and the world. Through a series of interactive sound and light installations composed of microphones, audio cables, a piano, contact speakers, wind chimes, a camera obscura, a sound score, and the body of the artist's car, this work emphasizes the interrelated nature of human existence and experience within the many contexts of a

given site. Each work suggests reflection on the many systems in which our perceptions are embedded socially, physiologically, and phenomenologically. Each work is tuned to human presence in relation to context, specifically the UCSD MFA Main Gallery and the convention of the thesis itself.

As installation of this exhibition was made impossible by the COVID-19 pandemic, this document outlines the aforementioned exhibition as a score to be realized and also describes an ongoing photo series, live binaural performance, and site-specific music performance made in the artist's home and broadcast online during the "shelter in place" mandate. These works parallel core conceptual trajectories from the thesis: reorienting perspectives on the overlooked aspects of home and everyday space, and toward the significance of listening and sincere experience *in relation* to site, place, and others. This work strives to sensitize every aspect of embodied experience, through looking and listening, to the poetics of the familiar.

Preface

Experiential Site-Specific Sound Installation in a Time of Pandemic

The work for this exhibition was nearly complete when the COVID-19 pandemic was officially pronounced. This was followed by a state mandate to practice social distancing. Each person's movement was restricted to the space of their home. By March 20th, 2020 these mandates were implemented globally in an attempt to limit transmission of the virus: people should maintain a distance of at least six feet between one another, wear face masks and disposable gloves, wash their hands often, and remain at home unless it is absolutely necessary to go out. Social gatherings, including classes and art exhibitions, were either cancelled or moved to online platforms.

I have found it difficult to continue finalizing the following thoughts and writing toward my thesis, which had been focused on the physical context of the art institution and the traditions of academia, in a world that is undergoing immense changes the likes of which may drastically and inconceivably alter our society and the art world as we have known it. In the midst of a global pandemic and crisis that has taken the lives of over 203,600 people to date and continues to unfold, the academic timeline has continued without pause online, while we shelter at home—and while many others are less fortunate and unable to do so. Under these circumstances, I have composed the following document to mark my thinking at the end of my graduate education at UC San Diego, a time during which I find myself sheltering in place and attempting to create work for my distant community. While my initial thesis was centered on the significance of experiences outside of institutional space, I have chosen to embrace

this societal shift to the home and improvise with the changing conditions, viewing this as an opportunity to re-emphasize the significance of the connections we have with one another and to sincerely reorient my own perspectives on what otherwise might be considered the mundane aspects of home and everyday space, which are now the center of all aspects of life. I have begun three supplemental works focusing on the themes of everyday space, the home as site, and the bridging of social distance. These themes parallel core trajectories followed in my initial thesis plan. Writing about these newly situated works will be interspersed throughout this document, which primarily addresses site-specific works designed for the MFA Main Gallery—works that become "non-site" pieces insofar as they may never be installed in their intended location or context. I denote the newer, provisional projects by the series title "(Home)" preceded by the title of each piece.

Given this late detour to new work, the following account may seem slightly disjointed, as if there are two bodies of work being discussed. I see this as an opportunity to speak in more depth about the breadth of my research from the past three years, which has continually engaged with sound and light in specific places and the relationship of inside to outside in a given site. I am determined to fully realize all of the works mentioned in this document when it becomes possible to install the completed works, at some point in the future. This document, however, remains true to the conditions of space in which I found myself in Spring 2020.

As I have stated, my MFA thesis is centered on a series of site-specific sound and light installations that are tuned to human presence and interaction. They are focused on human interconnection and the ways in which these relationships are

affected by the specific context of the institution, and in the particular case of these works, the space of the MFA Main Gallery at UCSD. Much of the work also emphasizes the significance of human experiences, articulated through sound, unfolding outside of the space of the installation. It is ironic then that my thesis was initially brought to a full stop by the very thing at the center of my interest—our interconnected nature—and in this moment, society at large has been forced to reflect on the crucial role that physical human connection in space and distinctions between inside and outside play in every aspect of life. I hope that others may find in the pages that follow an opportunity to reorient perspectives on the familiar and to think more deeply about the significance of listening *in relation* to any site, any place, or anyone.

Introduction

Sound Exists Between Us

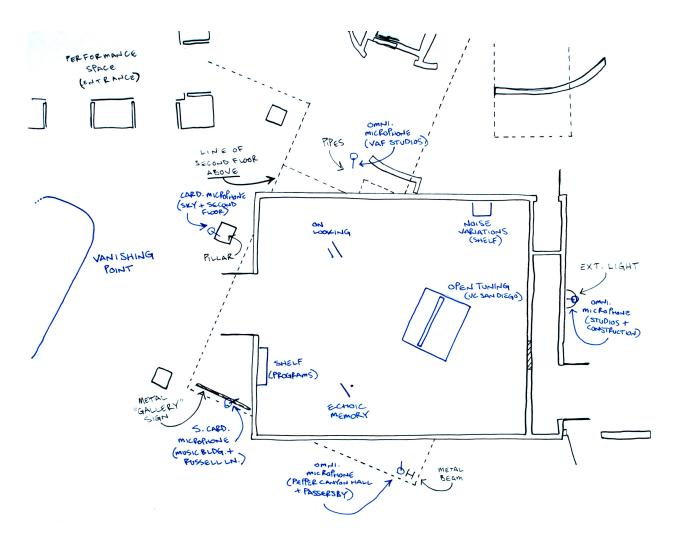


Figure 1. *Plan for a Thesis: Listening in Place*, archival black ink and non-archival blue ink on paper, 2020.

Sound exists between us, in every experience we have, in and of every space. Even in the guietest of rooms we hear our own rhythms—hearts beating, our own tones -nerves firing. Silence, like nothing, is an ideal. By matter of physical fact, the sonic world is made up of waves, resonant currents in and of the space between—between you, me, anyone and anything at every moment. As Pauline Oliveros states, "the act of 'listening' affects the field and thus the form [of sound]. The form affects the listener in a dance of reflections in the space between" (15). Sound is always made by the material qualities and physical orientation of objects, bodies, surfaces, and atmospheric conditions within and throughout any space. In this way, listening in any place directly interconnects us with site, history, present, self, and others. Sound is a physical form of context, a resonant aura that changes and forms around us, with us, constructed in part by us. Alva Noë writes: "Depending on what you know, and depending on the context, one and the same acoustic phenomenon will lead to very different experiences in you. How you experience my utterance depends not on what you do, but on what knowledge you bring to bear in "making sense" of the stimulus" (32; ch.1). How our sensory knowledge has formed throughout each of our lives actively affects how we perceive the world, and is in turn affected by where we are, who we're with, and how we choose to respond to the external others in and of our environments. We are always enveloped, emanating from, responding to and resonating upon the sonic world—within and throughout our bodies. Even we who cannot hear in the normative sense still listen in our own ways, through an embodied

¹ During his first visit to an anechoic chamber at Harvard in 1961, John Cage famously notes hearing two distinct tones, a high and a low frequency. He is told by a technician that these are the sounds of his nervous system. I would like to add to Cage's observation that our somatic tones are also rhythmic, in time with our heartbeats, which are always pulsing in relation to the outside world.

² See John Cage's *Lecture on Nothing*.

hearing, with sensory knowledge more attuned to a haptic understanding of sound.³ We can feel that which connects us in our bones. Sound is an inescapable medium within which our experience and existence is always immersed, through which we are connected with one another in every place. That which is between us and of us has a recognizable and undeniable presence in the invisible form of waves and echoes, resonance and reflections. All the world is sound, if only we knew how to listen.

In our visually fixated culture where attention is seen as a commodity, the work I make stands in defense of listening and sincere slow experience. What I am striving for is a methodology that sensitizes every aspect of one's attention to the overlooked in everyday experiences and environments, through listening, to the poetics of the familiar. As we move through ever-shifting contexts in our day-to-day lives, our senses become, shift and transform with us, within us and between us.4 Our senses frame each of our perspectives on the world in which we exist. Cognitive Scientists Varela, Thompson, and Rosch proposed this process as enactive, "cognition is not the representation of a pregiven world by a pregiven mind but is rather the enactment of a world and a mind on the basis of a history of the variety of actions that a being in the world performs" (9). Regardless of where we are and completely dependent on where we are, regardless of who we are and completely dependent on our identities and life choices, our experience of the moment is a cognitive interplay between our senses and the world.

³ See the work of Christine Sun Kim and the music of Evelyn Glennie.

⁴ See also Deleuze and Guattari on the concept of 'becoming' in *A Thousand Plateaus*.

Jacob von Uexkull's concept of the Umwelt can be applied to our respective understandings of sound and music.⁵ Musicologist Mark Reybrouck writes: "Each listener has listening competence that is the result of previous interactions with the sound, and the way [they] construct [their] musical Umwelt is dependent upon the way [they] give meaning to the sounds" (2).⁶ As our understanding of sound, sight, and the context of the moment is always in process, we are simultaneously experiencing, affecting and creating our perceived world. In this way, we might consider every sensory experience as a process of actively tuning our senses and ourselves in relation to the world.

Each work planned for this exhibition is a suggestion to look outside of the gallery, it is about bringing the exterior in and bringing our interior processes to conscious attention. Each work acts as a frame through which context becomes content; this body of work is focused on the many enmeshed infrastructures, institutions, and bodies—in which it exists, and through which it is experienced. Now that society exists entirely outside of all institutional spaces due to the pandemic, and social distancing prevents us from any physical closeness with others, the world of meaningful experience outside of traditional art spaces is closer and more relevant than ever before. By first focusing on the infra-personal or unconscious processes of experience itself—aural and visual sensation and perception—the work in this exhibition concurrently focuses on the person experiencing it, and the means through

⁵ The Umwelt (or *life-world* of an organism) is a biological concept that any organism's perceptions of the world are dictated by their sensory capacities in relation to their environment.

⁶ I have substituted gender neutral pronouns for the original he/him/his in this quote.

⁷ Merleau-Ponty, in *The Phenomenology of Perception* writes about the many institutions of society being carried within himself (515).

which one experiences. In its interaction with site and architecture, the work draws attention to the physical location in which it exists, along with the temporal and social context of that location. Each work references and reiterates the physical or social reality of its setting. In this way, the exhibition re-frames one's presence in space and place and continually focuses attention toward awareness of the moment.

I believe that the experiences we have in art spaces, much like the experiences we have within any institution, should ideally challenge, inform, or reframe our experience and understanding of the world. The work in my intended exhibition, and the work I have created in the context of my home, is concerned with reframing understanding as it relates to our experience and our ways of perceiving through our sensory faculties. In turn, the convention of the thesis may also be thought of as a sort of sensing or perceptual processing by the literal faculty of the institutional body. Current-day institutions may be seen as having progressed to such a point that they have become nearly automated self-perpetuating bodies of their own, through which individuals move and are processed. It is important to regard this exhibition in relation to the academic and art-institutional contexts, but also to the everyday in which we are each existing together, processed and tuned by our respective sensory and cognitive understandings of the world.

The conventions of art, academia, and the gallery can all-too-often become problematic: if social and intellectual specialization begets circles of exclusivity and inaccessibility; if economic values are mistaken for social and cultural significance; and if the world is delineated as a collection of isolated entities rather than an interdependent strata of relationships. Just as science often samples the world in

hermetic measurable moments—observed out of context—the gallery objectifies and commodifies experience, removed from the everyday. This is unrealistic, and needs to be addressed on every level, at every turn, especially in light of recent global political shifts toward nationalism and neoliberalism. No experience exists without relation to a constellation of others. The interconnections that we have with our communities and our world are all too easily forgotten, yet of utmost significance to each of us.

To place such focus on what's happening outside the institutions runs in opposition to the traditions of the commercial art world and its markets. Although the following works are made up of objects that each have very real costs associated with them, they do not function as traditional art objects. These objects are not constructed by the artist, they are each part of a compositional system that enables an experience of what is outside the installation space. The content is not really in these objects, nor even in these systems, but in what is going on out in the world and how our own perceptual systems frame our experience of that world. Each system I have devised serves to highlight, emphasize, and place significance on our own experience here, around us, between us, while I'm writing this now and while you're reading these words. We can easily find meaning in an isolated arrangement of commodities, objects or experiences presented on a screen, pedestal or under a spotlight, but what might the world be like if we focused on adjusting our senses to the beautiful or profound in the overlooked or familiar? Would our daily rhythms remain mundane if we actively sensitized ourselves in such a way that entertains any and every experience with intent toward fascination or wonder—a tuning to the poetics of the everyday?

Open Tuning (UC San Diego) Conceptual Score for a Site-Specific Work

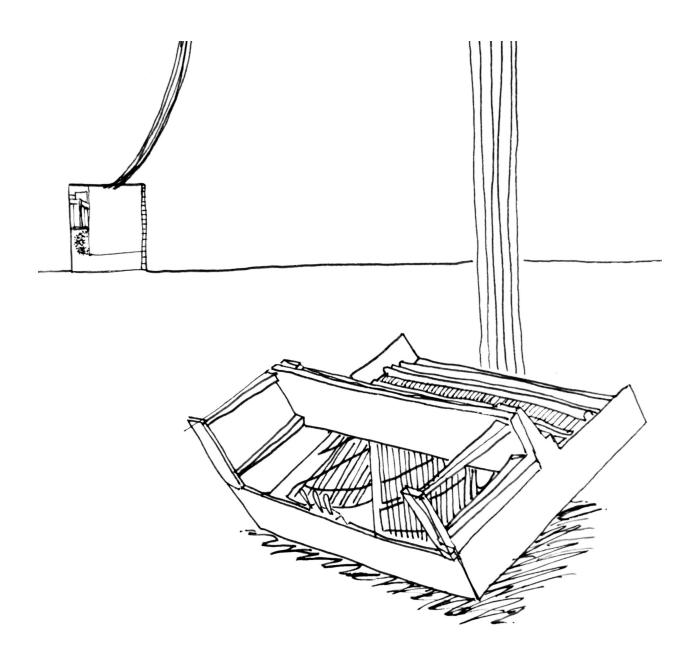


Figure 2. Drawing for Open Tuning (UC San Diego), ink on paper, 2020.

The following description and explanation delineates my plans for a work that has not yet been fully actualized. Its form is largely dependent on the physical process of its installation and its tuning in relation to the specific space in which it is installed. The following text on *Open Tuning (UC San Diego)* may be thought of as a score to be carried out.

Live sound from outside the gallery is heard through the strings and body of a piano in the gallery space. As sounds occur outside, the piano body and strings resonate sympathetically, creating a relational music in response to the surrounding world. Microphones situated on the gallery's exterior transmit sound along cables drawn through the doorway and along the ceiling of the space—visibly tracing electrical conduits, ventilation ducts, and plumbing—connecting to transducers on the soundboard of a piano (strings and wooden resonator, with panels removed from the instrument).8 Both the piano and microphones are to be tuned and positioned so that they respond optimally and specifically to the sounds of human activity outside—all aspects should be tuned to a unison that corresponds to the most prominent frequencies (and their harmonic partials) that make up the sounds of the surrounding world. The piano is to be modified to amplify and intensify the instrument's response to the outside, and the tuning process should be achieved aurally as the strings are adjusted outside of the piano's traditional equal temperament. Transducers are to be placed in particular locations on the piano plate and soundboard such that each activates a particular harmonic range of open strings.

⁸ As in my previous work *Drawing (The Anderson)*, The Anderson Gallery, Richmond, Virginia, 2016 (figure 3).



Figure 3. Drawing (The Anderson), installation detail, 2016.

Each microphone should be selected and oriented with consideration to the specific areas of human activity and congregation which occur respective to each wall outside the gallery: the intersection of Russell Lane and Rupertus Lane, the ongoing construction site for the coming trolley line and amphitheater, the busy atrium of Pepper Canyon Hall, the military fighter jet flight path in the sky above with the Visual Arts Facility graduate studios below. Depending on where it is situated, each microphone should have either a unidirectional supercardioid polar pattern, directed like a focused aural spotlight to listen to a particular area, or an omnidirectional polar pattern, sensitive to sound encompassing its location. If it were materially feasible, I might also submerge a microphone in the earth beneath the gallery to listen to the

intermittent fault line quakes that reverberate beneath the San Diego region.⁹ The signal from each mic will be directed through a pre-amplifier, a multi-band equalizer with certain frequencies lowered, and a speaker amplifier, to each transducer resting on the piano body, which should be placed in the most responsive/resonant location in the gallery space.¹⁰

The entire system (piano strings, microphones, gain levels, and frequency settings) should be adjusted in relation to the outside world: the audio signal from each microphone should be adjusted slightly in relation to the resonance of the piano, panels on the body of the piano are to be removed and the instrument tuned so that its strings are more responsive to sympathetic vibrations with one another, and the entire system will become more active and responsive to the sounds outside. The orientation of each element in the system suggests a number of potentially poetic or conceptual shifts in perspective: the supercardioid (directional) and omnidirectional microphones denote particularly focused and spatial ways of listening to the passing traffic outside the gallery; the second-hand upright piano, as opposed to a concert grand, denotes my own economy of means and a relationship to music-making that is not necessarily classical; and the transducers, usually installed in the walls of home theaters for

⁹ Rose Canyon Fault runs through San Diego, less than two miles away from the gallery, and slips an average 1-5mm per year (U.S. Geological Survey Website)

¹⁰ Instead of tuning to the resonant frequencies in space, as in my past work *Voicing Space*, *Open Tuning* is adjusted to the space outside the gallery's architecture. *Voicing Space* (2018), a collaboration with Jonathan Nussman for the Conrad Prebys Experimental Theater, was the first work in which I employed the resonant frequencies of an architectural space as a formal component. I played the resonant frequencies of the theater back into itself, creating physically present pillars and walls of sound in the space as Nussman moved around the space voicing a phonetically deconstructed excerpt of Pauline Oliveros' text, *Acoustic and Virtual Space as a Dynamic Element of Music*. To experience *Voicing Space*, the audience was encouraged to physically move through the experimental theater and through each resonant sonic pressure zone—drawings of each resonant frequency were oriented respectively within the physical space of each depicted tone. The piece was composed for that specific space and the musical experience of each audience member was determined by their own active engagement with the space.

cinematic surround-sound experiences, are affixed to the piano to resonate with mundane familiar street noise. To highlight and emphasize the connections between the elements that make up the larger composition, a different color for each of the cables between each operating element should be used (blue, orange, green, red, violet, and yellow). Visitors might understand these colored cables as a sort of line-drawing which draws attention to the space between objects as an area of focus, therein also to the vertical space of the gallery. As a drawing in space, the cables suggest that visitors look up and view, not just the work in the gallery, but the gallery itself as an object of attention.

While the material composition of the work connects outside space to inside space through a series of literal connections between audio equipment meant for live performance, the entire composition is performed by the environment in and around the space along with the participants who choose to interact with it—without any sounds outside, the sound inside ceases to exist. The musical content changes in relational dialogue with the context of the site and the physicality of its sound in space is phenomenological—it must be experienced with physical knowledge of the immediate environment and through listening and moving in and around that particular space. As the sounds around the gallery shift, the piece itself will take on a similar rhythm and timbre that reflects the rhythms and timbre of that place. By channeling the surrounding soundscape into the space, I have connected the gallery with its placeness; it no longer functions as a 'non-space' or blank slate for the objects and experiences within it. While the piano is a gallery art object in the art space, its active

¹¹ See Merleau-Ponty's *Phenomenology of Perception*: "The Theory of the Body is Already a Theory of Perception" pp. 235 and ff.

connection to the outside world suggests that it is not separate from the outside world, and that art experience is not unique to the gallery but also outside—immediately outside, and always in relation to that interior space.

The piano represents a particularly limited view of the musical potential of sound, distilled into eighty-eight pitches and eighty-eight keys, as opposed to the entire spectrum of sound audible to human ears. I have subverted this system in a number of ways to suggest a more embodied and relational approach to musical listening. Most musical instruments, much like our sensory capacities, are able to be tuned such that they respond more actively in relation to the external world. In this way, but also in physical form, every musical instrument exists in relation to the human body. I chose the piano for this work rather than a guitar, cello, trumpet, or synthesizer because the physical form of the piano itself is determined by the institutionally-defined equally tempered twelve-tone system of tuning, the tonal extent and limitations of popular music in relation to the human form. The system of the piano requires a specific full-body interaction with its interface: we must sit in front of it, it's keys afford touching but not all at once, and its pedals assume a particular positioning of one's feet. But to lay the piano on its back, is to, in a way also lay ourselves atop or with the piano. Or maybe we embody the piano or imagine lying beside it. We may understand the piano as a musical system, an institutional body, but a body nonetheless, on the floor—is it resting, is it sleeping, is it dreaming, or is it dead?

Conceptual Trajectory — Open Tuning (UC San Diego)



Figure 4. Drawing (After 1920), installation views, 2019.

Open Tuning functions at the center of my thesis exhibition, expanding conceptually and technically from other work I've made while attending UCSD, particularly Open Air Guitar and Drawing (After 1920). In each of those works, sounds from outside are channeled into an interior space. Drawing (After 1920) was installed in the art and residency space After 1920, in a South Park neighborhood in San Diego. In the work, three disparate sound spaces around the After 1920 house are drawn together and heard through speakers in the master bedroom; one microphone is

suspended near wind chimes that have become part of the tree on which they were hung, one microphone hangs near the street on the eaves of the house through a gutter spout, and one (contact) microphone is affixed to a hanging cast iron in the kitchen. Audio cables, each a different color, trace the architectural and spatial environment; across tree limbs, fan blades, and table legs; above garden plants, sofas, and kitchen islands; through window frames, gutter spouts, and doorways. The work is second in a series of architectural drawing pieces in which colored audio cables are used as a tool for line drawing in space, literally drawing attention to certain aspects of the architectural space, and drawing-together disparate acoustic spaces.



Figure 5. Open Air Guitar, installation view, Ship In The Woods, 2019.

Open Air Guitar, installed in the stairway and master bedroom of Ship In The Woods, Escondido, California, involved the transposition of sound from one space through a microphone and audio cable into another, heard through the harmonics of an open–tuned guitar. The instrument was outfitted with a surface transducer and tuned intuitively, relative to the sound–space in which it was installed, and the microphone was oriented so as to encourage play and interaction with the work, between spaces. All objects are suspended from above to encourage movement through the space and to direct visitors' attention upward, in reflection on the sky through the bedroom's clerestory and on the verticality of the architecture. In each of these works, all materials were oriented in relation to the spaces in which they were installed and situated according to the ways in which people move through each particular space.

Existing environmental sound, in these works as well as in *Open Tuning*, is channeled in from the outside as a way of sonically dissolving barriers both physical and psychological. I first employed this method with *Window* (2018), a work that opens a permanently closed gallery window to sounds of the outside, first installed as part of my first year review exhibition in the UCSD Structural Materials Engineering Building Gallery. *Window* enabled sounds from nearby construction—machinery and the voices of workers building the currently in-progress trolley line to UCSD—to be heard through a permanently closed floor-to-ceiling gallery window in the Structural Materials Engineering Building. The work was installed entirely outside of the space: a surface transducer on exterior glass connected to an amplifier and unidirectional microphone. In *Window*, the otherwise hermetic and isolated space of the gallery was occupied by the non-presence of the workers, who would likely never set foot in the Structural

Materials Engineering Building, or its gallery. This action brought the otherwise distant and ignored presence of the workers into focus. Those who were enacting the labor and carrying out the plans devised by structural and materials engineers now had an immediate relation to the space and everyone in it.

Any closed window becomes a wall and any wall functions to divide or enclose space. While walls and windows may serve a very immediate architectural purpose, these physical separations are often also institutional attempts at obstructing and delineating psychological and social space. As a major aspect of human sociability is aural communication, sonic space is always social space. While physical spaces may be enclosed or divided, the social and psychological spaces on either side of a wall are indelibly connected. *Open Tuning* works to emphasize these relationships and diffuse the physical barriers that separate everyday space from the institutional, intellectual, and introspective space of the university MFA gallery.



Figure 6. Window, installation view (interior), 2018.



Figure 7. Window, installation view (exterior), 2018.

On Tuning — Open Tuning (UC San Diego)

The tuning process for *Open Tuning (UC San Diego)* had only just begun then my work on the piece had to be stopped—the following paragraph is an attempt to elucidate what my process would have been, to the best of my knowledge, with the tuning of this work. The sonic aspects of each of my live-sound works requires an adjustment and tuning process that is always entirely aural, physical, and intuitive, without relying on electronic tuners or tuning forks. Of course, this process results in the overall sound and character of the work. This stated, the following remains true to my method with prior works and to my process on *Open Tuning* thus far.

As stated, the system should be adjusted to resonate most actively to the most prominent sounds outside of the gallery the space. The tuning of the work must be achieved through an intuitive process of listening, moving, and responding to the resonance of the system. In this way both the system and the space become the medium through which experience occurs, and both the tuning and the experience of the work involve a durational and performative interaction with sound and space. I liken this relational process to the active tuning of the cello in Éliane Radigue and Charles Curtis' *Naldjorlak*, in which Curtis tunes the instrument to its *wolf tone*, or resonant selfnoise, which is constantly changing as the material components of the instrument change in relation to external conditions.

The tuning process should begin with careful listening to the surrounding environment as often as possible, ideally over an entire week, but at least over a span of three days, during the open hours of the gallery. Microphones should be selected and directed appropriately for each respective sound space and placed as allowed by

the exterior architecture, temporarily affixed via a minimal combination of adjustable C-stand arms and Cardellini clamps (weatherproof coverings may be involved but should not be necessary). Once microphones and piano are in place, the various elements in the system should be connected: transducers should be affixed to the most resonant areas of the piano plate/soundboard, microphones should be plugged into equalizers and amplifiers, and so on. Once familiar with how the sounds of the space are filtered through the system, the process of adjusting or tuning microphone gain levels, signal frequency equalization, and amplifier gain should begin first, while the system is active, adjusting as necessary over the next few days.

The entire piano with outside sounds resonating through it, all dampers held open, should be listened to at different times over at least three days while noting and documenting different moments of interest and their sonic qualities throughout the system. Gain stages on microphone preamplifiers and transducer amplifiers may be adjusted as necessary. With equalizers, no frequencies should be added, only lowered slightly to accentuate what is already most present in the environment. The piano itself should be tuned with a piano tuning lever and mutes, beginning by adjusting toward the most present frequencies in the system—this determination must be made with extreme care, as it will fundamentally affect the sound of the work. All tuning must occur while actively listening to the instrument respond to exterior sounds. The tuning process should continue from this point, adding harmonic partials according to the capabilities of each string, adjusting the entire piano away from its equal temperament into a site-specific relational tuning. This process should be

¹² If the sounds outside are too quiet to acoustically activate the piano strings at maximum gain levels, then electromagnetic pickups may be added to the piano body and amplified through more transducers affixed to the walls of the space, so that the response of the piano is clearly audible.

achieved while constantly observing the sound of the system from different locations in the space, and from outside, adjusting each necessary part of the system until a maximally resonant and reactive system is revealed.

This tuning is "open" in that, ideally, the entire instrument is left with open strings to resonate freely, tuned to the sounds outside. The system of microphones and transducers remains open also, actively responding to the exterior soundscape, throughout the entirety of the exhibition. While its tuning exists musically outside of the twelve-tone equal temperament system on which the piano's form is based, *Open Tuning (UC San Diego)* is literally in harmony with the physical environment in which it is placed. The work requires in its installation the same careful listening at the center of my thesis—in order to tune the system, one must become carefully attuned to the place in which it exists. This tuning is also a process toward intimately and thoroughly understanding the systems around and within which I am working—to know the timbral qualities and intensities and rhythms of place.

Listening to Here (Home)

This work is an intimate live-streaming binaural sound performance with video, broadcast from my home during sunset. In *Listening to Here (Home)* I move slowly and deliberately through my home, wearing binaural microphones on my ears and methodically focusing on each acoustic space and otherwise unnoticed or overlooked sonic element in and of the space. High-fidelity binaural sound is transmitted from the microphones wirelessly in stereo and broadcast publicly, live on YouTube, with a single wide-angle static-camera video of the performance as it occurs. The camera is set to a focal distance equal to my own near-sightedness without glasses, about seven inches or seventeen centimeters.



Figure 8. Screenshot of equipment test for Listening to Here (Home), 2020.

This work is a variation and continuation on concepts and research from my embodied sound performances where the intimate binaural perspective of a performer carrying out otherwise mundane or everyday tasks is channeled from two microphones on the performer's ears to the ears of the audience in the same space. In my *Performance of Listening* (2019), the binaural perspective from the ears of a single performer preparing refreshments and snacks for the audience is broadcast wirelessly across a room via radio transmitter to radio receivers and headphones worn by the audience. The effect of this experience is such that one perceives the acoustic perspective of the performer in space so accurately that every orange sliced on a table, every drink poured, every head-turn and movement made by the performer is heard up-close and in detail, as if it were being enacted by the listener in spite of their static location, sitting across the room from the performer.

While this work will function as a performance of actively listening to *here*, the often forgotten and familiar sounds of the home space, it will also be a personal meditation on listening with intent to *hear*—to gain a deeper understanding of the ways in which I personally resonate with the many mundane and familiar elements, objects, and sounds that make up the space I have been fortunate to come to know as 'home'.¹³ While Pauline Oliveros delineates hearing as a passive sensorial process versus the active attentional process of listening, my use of both words in this context acts recursively to emphasize the auditory world in general.

In our present moment, we as a global society have collectively retreated into our homes, and we may be reminded of the many roles our house or home-space

¹³ My friend and mentor Stephen Vitiello first introduced me to the idea of listening with intent, and to sound as an artistic medium while I was his student at Virginia Commonwealth University. I am greatly indebted to his early influence on my thinking, his perpetual openness, and continuing generosity.

takes through times of adversity and change. In *The Poetics of Space*, Bachelard reflects on the house in Bosco's *Malicroix*, encapsulating our collective moment:

"And so, faced with the bestial hostility of the storm and the hurricane, the house's virtues of protection and resistance are transposed into human virtues. The house acquires the physical and moral energy of a human body. It braces itself to receive the downpour, it girds its loins. When forced to do so, it bends with the blast, confident that it will right itself again in time, while continuing to deny any temporary defeats. Such a house as this invites mankind to heroism of cosmic proportions. It is an instrument with which to confront the cosmos. And the metaphysical systems according to which man is "cast into the world" might meditate concretely upon the house that is cast into the hurricane, defying the anger of heaven itself. Come what may the house helps us to say: I will be an inhabitant of the world, in spite of the world...

In this dynamic rivalry between house and universe, we are far removed from any reference to simple geometrical forms. A house that has been experienced is not an inert box. Inhabited space transcends geometrical space...

Phenomenology of the imagination cannot be content with a reduction which would make the image a subordinate means of expression: it demands, on the contrary, that images be lived directly, that they be taken as sudden events in life. When the image is new, the world is new" (46-47).

Listening to Here (Home) is my way of understanding the familiar home as new, appreciating this *instrument* through which I now confront the *cosmos*. I hope this work will be a way of sharing my home with those whom I wish could be closer, bridging this distance through aural closeness—and also sharing this intimate proximity with those socially distanced who have not had any experience of closeness in the past weeks or months. This work is also an effort toward actively healing amidst crisis, and is deeply inspired by the influence of Pauline Oliveros and Deep Listening.

As the work will be performed on YouTube through binaural microphones, and will deal with guiet sounds, I must comment on it's relation to ASMR videos.¹⁴ Although I do not classify this work as ASMR, I feel that sincere listening, regardless of what one calls it, involves a form of intimate closeness. As society is now more isolated and socially distant, we may need this type of experience more than ever. 15 In my solitary travels while working on *The Broadcast Project*, and while working in residency programs and other places that I am not 'of' or immediately familiar with, I have found that my perspective as an outsider has often served to remind others of the meaningful aspects of their own environments which they often overlook. In sharing a tour of my own home or studio with others during their first visit, or during a video chat across distance, I gain a new perspective on my space and find that I appreciate and understand it differently than I had. Through my performance of Listening to Here (Home), I hope to reorient my own perspective by sharing my literal perspective, in order to become sensitized to that which I am already deeply familiarized. In doing so, the work may also inspire others to listen more closely, with intent to hear the poetic resonance of meaning throughout all aspects of their own familiar spaces.

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¹⁴ Autonomous Sensory Meridian Response (ASMR) is a flow-like state involving 'tingles' induced by quiet sounds and whispering. The center of a large online community based mostly on YouTube, ASMR is often recorded in stereo and increasingly employs binaural techniques. While I am deeply excited by the fact that so many people are coming together online to listen intently to quiet and intimate sounds, I am disheartened by the armchair scientific, often sexualized, and at times misogynistic tones found in certain circles of this online community.

¹⁵ See Taylor, "Now Might Be the Time People Need ASMR Most" and Zoladz "Learning to Listen to, and Beyond, The Siren's Call."

Re/generative Space (Home)

Re/generative Space (Home) is a live-streamed performance broadcast from home in which live sounds in, of, and around the architecture of my home are processed through musical instruments connected to the home, constructing an immersive and intimate musical space. The work channels sound through a number of microphones placed in different spaces around the home, through the body of my electric guitar outfitted with a contact speaker and custom-fabricated granular synthesizers. The performance is composed in collaboration with the plants outside via biofeedback sensors placed on leaves, amplifying minute electrical signals to control synthesizer parameters. Sounds of physical contact with home architecture are also amplified through a contact microphone and channeled through the arranged musical systems, literally transforming my home site into a musically generative space.

Following my thesis' focus on meaningful connection across distance through sound, this work represents the beginning of an overseas sonic collaboration with my colleague Jason H Lim, musician, technologist, and founder of specialist synthesizer collective Instruo Modular in Glasgow, Scotland. Jason has pioneered a number of developmental audio platforms for live improvised sound performance and has hand-selected and custom-built a number of elements arranged for this work. The plans for this performance were devised during a video-chat conversation with Jason while we were both walking through our respective neighborhoods in San Diego and Glasgow,

¹⁶ One of which was co-created with Dr. Sebastian Lexler, musician, sound artist, and current lecturer at University of Glasgow, and built on a Pure Data programming architecture which was created by Miller Puckette of UCSD Music.

on opposite sides of the world. This work imagines a similar bridging of social and physical distance, inviting others in to share my home, and imagining any familiar home space as a site for sonic and aesthetic discovery.

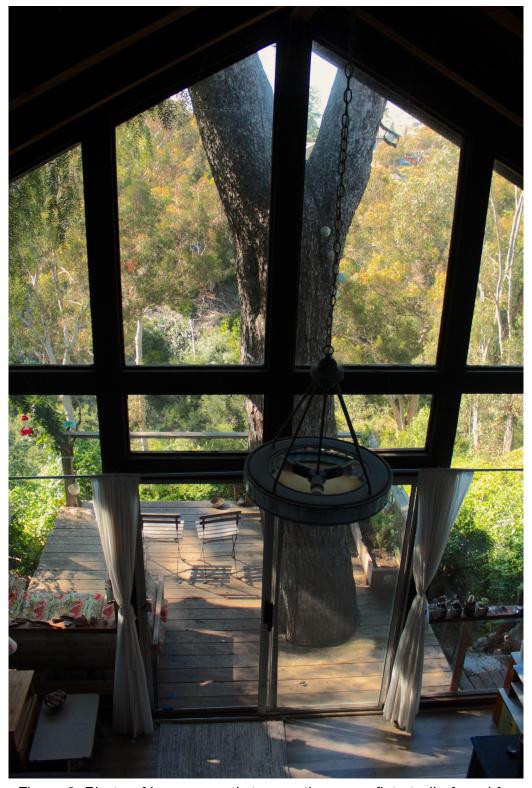


Figure 9. Photo of home, month-to-month granny flat studio found for rent on Craigslist, San Diego, California, 2020.

Sensitive Listener



Figure 10. Drawing for Sensitive Listener, ink on paper, 2020.

A set of wind chimes with wind sail removed hangs at ear-level from the ceiling, suspended by aircraft cable, and only rings in response to loud sounds in and around the gallery. The work functions via a micro-controller connected to an audio sensor and servo motor (hidden above) which are programmed to respond only to loud sounds.

Many of the interactive installations I have made exist similarly to wind chimes: wind chimes are always site-specific—they exist always in physical relation to and interaction with the environment in which they are placed; wind chimes are often situated in spaces meant for reflection and repose—museums or galleries are not so different from gardens; wind chimes call attention to listening as a form of engaging with any space. Since 2011 I have been intermittently researching the cultural significance and uses of wind chimes as well as the various physical aspects of different aeolian instruments. I have also been working toward creating a series of altered wind chimes as both conceptual sculpture and for music composition. Each ideation involves variations and limitations on the chimes' traditional function—wind chimes in a vacuum, wind chimes that hang upside down, microtonal wind chimes, and so on. While I plan on eventually creating these works, *Sensitive Listener* was inspired by the cacophonous environment of UC San Diego.

Prior to moving to Southern California, I had not experienced any place that was so often under construction. When I first arrived in San Diego, the bedroom I was assigned to in UCSD graduate student housing was situated directly next to what became a very active construction site. My apartment was also in clear visual and aural

proximity to the Marine Corps Air Station (MCAS) Miramar flight path.¹⁷ I awoke many mornings to the sounds of passing fighter jets, and later to the regular rumble of construction vehicles only a few feet outside of my window. I did not however have the most unfortunate experience that Pauline Oliveros had while living in San Diego:

"A jet passes over. Some of its sound moves through my jawbone and out the back of my neck. It is dragging the earth with it. I would like to amplify my bowl of crackling, shaking jello. (Once in 1959 a bulldozer came through the side of my house while I was eating lunch. The driver looked at me, backed out, and continued to operate the bulldozer.) I would like to amplify the sound of a bull dozing. The bulldozer has stopped again. On the other side of the freeway, a dog repeats a high bark which curves downward. My dog has a tinkling collar. I would like to find a free way" (103).

I have been constantly amazed at how difficult it is to find a quiet space on the grounds of this university, due in large part to the passing air traffic from MCAS Miramar. It seems somehow fitting that the weaponized death-dealing arms of the military industrial complex regularly and deafeningly roar over UCSD, causing classes and conversations to pause, as if in reverent reflection on the institution's deep ties to the national war machine that contributes in large part to our presence on these grounds. As a resolute pacifist, I have found the constant presence of these flyovers deeply disturbing, at times frightening. The sound of these aircraft when heard in other skies, over other communities, nearly always represents death and destruction by a distant and unstoppable oppressor.

¹⁷ Marine Corps Air Station Miramar was once known as "Fightertown USA" and is the site of the iconic American movie *Top Gun*.

I am both troubled and oddly encouraged to have learned that other artists in the institution's past and present had shared these sentiments. Besides Oliveros' account, and my conversations with visiting artists and faculty, Chris Burden once notably proposed an installation for the Stuart Collection—a massive mechanical arm that would swat fighter jets out of the sky as they passed over the institution.¹⁸

As the overbearing sonic presence of these jet fighters has been so relentless throughout my time at UCSD, I felt it necessary to devise a way in which the sounds of those aircraft might be altered or diminished in some way. Through my research, I discovered that ancient Romans used wind chimes for protection, good luck, or prosperity—curiously adorned with many auspicious phallic symbols (Whitmore 17-32). The form of the *tintinnabulum* generally involves a massive, often winged, phallus with the legs of a beast, adorned with multiple other phalluses from which hang a number of bells. The disembodied erect phallus was a ubiquitous apotropaic symbol seen across Roman culture, often integrated into the designs of jewelry, wind chimes, animal harnesses, and architecture to ward off and potentially attack the evil eye (Parker 57-88). This material and symbolic history lead me initially to consider creating my own version of the tintinnabulum—in embrace of my own queer identity, and in protest to the nefarious military jets which unremittingly penetrate our sonic space and the skies above.

After much deliberation, I found that my true intent was on sonically shifting the presence of the jet fighters, and that the symbolic history of the tintinnabulum might be lost in translation. I set out in search of the most ubiquitous and iconic wind chime

¹⁸ Conversation with Mathieu Gregoire, Project Director, UCSD Stuart Collection.

possible, which I found in a local hardware store. I taught myself how to program javascript, experimenting with different micro-controllers and motors over the winter of 2019. The form of the piece underwent many mechanical transformations until it was fully operational. I installed the work in my studio and found that it would chime at unexpected moments, when a door would slam, or as I was moving things across the floor. The sound of the chimes subtly attuned my senses, not only to the loud sounds around the space, but also to the loud sounds connected with my own actions. I realized I had created a system that mimics my own internal recoil-response to unexpected loud and overbearing sounds. Unable to literally "tune out" the oppressive aspects of the soundscape, I have made an instrument to assist in "tuning in" to potentially harmful noise that is pervasive yet rarely acknowledged.

On Looking

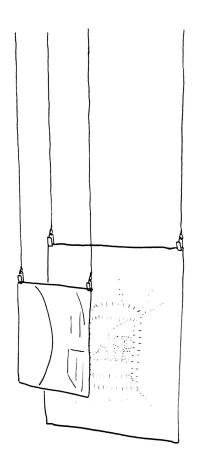




Figure 11. Drawing for On Looking, ink on paper, 2020.

A letter-sized fresnel-style page magnifier lens, of the sort available at any office supply store, is situated just far enough away from a sheet of translucent diffusion gel such that light in front of the lens is projected onto the gel's surface, resulting in an inverted and upside-down camera obscura projection of light in the immediate space. Both the lens and diffusion hang from the ceiling via thin metal cable, situating them as two vertical rectangular planes at eye-level, centered one in front of the other. The image of the space, as focused light on the surface of the diffusion, is clearly discernible as an image of the immediate space and visible from either side of the translucent gel.

On Looking is a reflection on the physiological visual system necessary to understand it. Although the work portrays a basic function of the human eye, it bears no resemblance to the human form—distancing the optical process to such a degree that regarding the work becomes an experience of something new although it's function is entirely familiar to every seeing person. Diffusion gel is used in film and photography lighting to spread or diffuse an otherwise narrow beam of light and illuminate a subject or space. In this application, the diffusion's role is inverted—it functions as a surface on which environmental light is focused. The 8.5" x 11" page magnifier lens is generally used as a reading aide, held above a text to magnify it's contents. In On Looking, if one stands in front of the assemblage and looks directly through the lens, one's body occludes the projected light in the optical system and sees only blank diffusion gel. If the viewer moves to one side or around the work, the projected light image can be viewed on both sides of the diffusion.



Figure 12. Documentation of first camera obscura experiment, 2016.

My interest in camera obscuras began in 2016 in Richmond, Virginia when I was rearranging my bedroom studio and had placed a magnifying glass atop a shelf. I had unintentionally placed the glass such that it projected a focused image on the wall, of the window on the other side of the space and the juniper tree outside. I began a series of experiments with various projection surfaces and photographic framing possibilities. At the time, I was working on film sets and small commercial video productions mainly as a lighting technician and had been collecting various 'expendables'—color and diffusion gels that were damaged or would have otherwise been thrown away.¹⁹

¹⁹ Working on set, I was fascinated by the many ingenious ways in which my film crew superiors would manipulate and sculpt light in space for each take. Diffusion gel was first explained to me by photographer, filmmaker, veteran lighting technician, and close friend Kevin Gallagher. He compared diffusion gel's response to the angle of a light beam as similar to the way the sun illuminates a cloud-covered sky at different times of day.

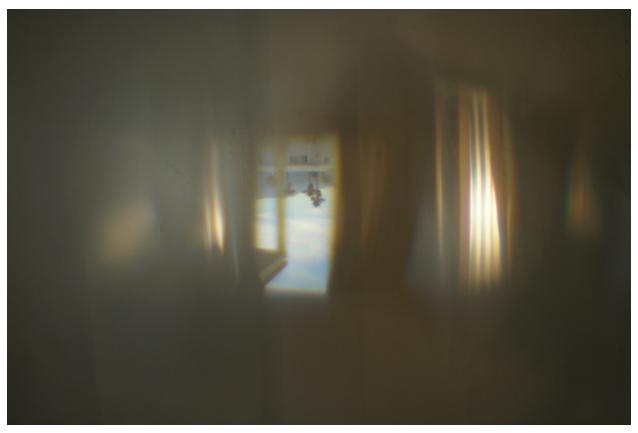


Figure 13. Light Moments (Sandpiper Inn), 12/25/2017, 3:59:58 PM, photo of light on diffusion from the series Light Moments (Motel), 2017.

Between jobs, when I was able to afford a shared studio space, I began working on a series of camera obscura experiments with used diffusion gel in the studio. After moving to California, I continued developing this methodology in different locations, fascinated by the quality of Southwestern sunlight and it's interaction with the landscape, specifically the high desert. I created my first photographic series of site-specific camera obscura images, *Light Moments (Motel)*, documenting sunlight over the course of a day through the vacant Mid Century Modern architecture of a derelict motel in Desert Hot Springs, California.²⁰ Each site-specific photograph portrays an

²⁰ I was visiting my dear friend, artist and curator Claude "Dusty" Dustin Marin Fenton, who had arranged a free room for me at the semi-derelict Sandpiper Inn in Desert Hot Springs, where they were working at the time as caretaker. I am forever grateful to Dusty for their facilitation of this work and for their continuing friendship.

image-of-an-image of sunlight through a hand-made camera obscura, composed of precisely arranged lenses focused on both near and far space. *On Looking* continues the trajectory that I began with these original initial experiments, focused not only on light, but also the space in which light is experienced.

As the image in On Looking relies on light as it exists in the installation space. and the materials hang from the architecture above, the work is always in direct dialogue with the space in which it exists. Each time this work is installed, it in some way becomes part of the space and works also to reflect attention back to the space. In its first iteration, the work was temporarily affixed to the surface and framing of an interior window, between the hallway and the gallery space of the Structural Materials Engineering Building at UC San Diego. In that iteration, the projected image in the work was of the light outside, and whoever passed by the exterior window or through the gallery space was momentarily incorporated into the work. In this current version, the materials are physically connected to the structure of the gallery, activating the entire space as an imagined series of sensory systems, or a sort of body within which others can move and reflect on their own internal processes. The work employs a variation on the traditional camera obscura in which an enclosed box or an entire room becomes the apparatus for projection.²¹ Instead of focusing this piece completely on the light of the outside world as Zoe Leonard does in 945 Madison Avenue, On Looking must be situated deep within the gallery such that the space becomes a frame, or body, through which the light outside is seen. My focus here is on light, but as we perceive it, through our respective physiological capacities. Perhaps if we become aware of the ways in

²¹ See also Abelardo Morell's camera obscura photographs.

which our senses and our own physiological systems operate, we might begin to become aware of the many other systems in which we operate, be they social, economic, political, or otherwise.

Light Moments (Home)

In continuation of my photographic practice documenting light in space through camera obscuras, *Light Moments (Home)* documents the changing light outside and within my home at various times of day throughout the current national COVID-19 'shelter in place' mandate. I have continued to make at least one photograph for each day, focusing on the many ways in which the light interacts with and highlights the space my partner and I have been honored to call home. This body of work also includes short videos, meant for online exhibition, to possibly exist as looped projections in space without sound. Many aspects of the work as it is created have been broadcast online via social networks (Instagram and YouTube), and following with

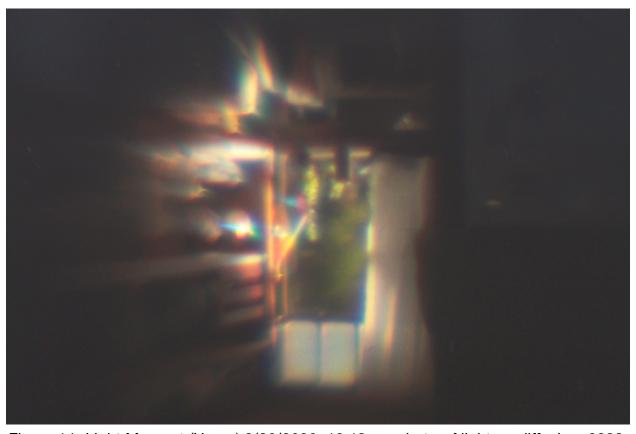


Figure 14. Light Moment (Home) 3/30/2020, 10:13am, photo of light on diffusion, 2020.

my former *Light Moments* works, the title of each image includes the date, time, and place it was created.²²

The work is a meditation on the concept of home, its relationship to the materiality of light, and the capacity of both to represent warmth and solace in dark times. The series began, coincidentally, one day after the vernal equinox, and also orients the home-space in relation to cosmic changes—as the Earth rotates around the Sun, our Earth's positioning is notable daily in the ways that sunlight falls and moves across the walls and through the windows of the home. In a way, the work is a continuous opening of my home to the social world in a time of social distance—in broadcasting this work on social networks as it is created, the act of documentation becomes a way of sharing intimate space and reflective moments with friends and others as they happen. Sending the work to others on social media in lieu of a physical thesis exhibition is also an improvisation in relation to the context of the moment, through process. This focus on active daily process is also a form of improvisation—a skill that I am forever trying to learn, and that my generation and the generations that follow must acquire and possess—as the world is and will continue to be confronted with ever-escalating global change.

Both of my *Light Moments* series focus on the specificity of light and space in California, and I see this work as having a direct relation to the trajectory of the Light and Space movement of the 1970s. Where Robert Irwin, Nancy Holt or Robert Smithson might construct or modify objects and architecture on-location to interact with the sun or the geography of a specific place, the creation of this work is limited by

²² See: https://www.instagram.com/john.dombroski/

the current conditions to my home's pre-determined structure and becomes a relation to immediate space. This work reorients the art experience and the site of significance from the distant place, and the pilgrimage, to the immediate personal space. This work represents the anti-pilgrimage. In the current social moment amidst a pandemic that limits our movements from space to space, the home of another has the potential to become a desired destination. Society's currently prohibited freedom of movement through space has established a context of the present moment that affects all art being created, and effectively reorients every action at home as site-specific to the home. Light Moments (Home) is an attempt to broadcast embodied phenomenological experience across distance, with the hope of sharing my home and the embodied experience of light in this space together with others again, at some point.



Figure 15. Light Moments (Home), process documentation, 2020.

Echoic Memory

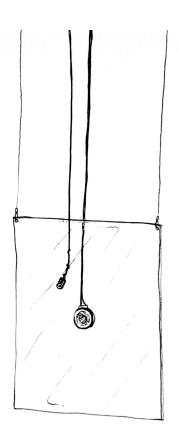


Figure 16. Drawing for Echoic Memory, ink on paper, 2020.

Sound from the immediate space is audibly repeated every three seconds through a suspended rectangular glass sheet. The glass hangs vertically, like a window in space, from thin metal cables at eye-level, outfitted with a surface transducer which activates it as an audio speaker. Mirroring the formal presence of *On Looking*, an omnidirectional microphone hangs in front of the glass. Sound from the space is channeled from the hanging microphone through a custom digital signal processor affixed to the ceiling and heard every three seconds as an echo through the glass. This work illuminates a simplified yet essential aspect of the human audial sensory system known as echoic memory. Unlike our eye's capacity to constantly scan and reference the visual world, our sensory understanding of sound involves a very brief sensememory that lasts only a few seconds (Watkins and Watkins 251). Echoic memory is integral to our temporal understanding of sound, contributing to our perception of our bodies in relation to acoustic space, and facilitating our ability to comprehend spoken language.

Hearing one's words echoed in space every three seconds while attempting to have a conversation near the *Echoic Memory* system makes communication nearly impossible. This aspect of the work subverts the normal conversation-filled gallery experience that one may be accustomed to during an opening or otherwise, distracting from verbal communication by referencing one's attention back to their own presence in time and space.²³ The omnidirectional microphone in the work was chosen for its ability to capture sound from the encompassing area rather than a specific focused location. Near the work, one hears sounds from the immediate space and the

²³ Starting with *Time Piece Beacon*, the work of Max Neuhaus has been of great influence to my thinking.

immediate past and momentarily becomes incorporated into the work. As the installation redirects one's attention to the development of auditory events in the space, the glass through which the sound is heard becomes a window through which the space and people in the space can also be regarded or re-viewed.²⁴ This external re-presentation of a continuous internal mental process affects a doubling of one's own echoic memory, potentially creating the experience of an auditory feedback loop.

Sound is inherently temporal and has the potential, through recording and replay, to become spectral—it is invisible, yet it has the ability to emotionally and physically affect us, and it is repeatable, a recording has the potential to echo from the past, or beyond our present far into the future. Édouard-Léon Scott de Martinville created the first known recording of a sound in Paris on April 9, 1860—his own voice singing Au Clair de la Lune. His song was unable to be heard until 2008 when it was rediscovered and digitally rendered by audio historian David Giovannoni and his colleagues at the Lawrence Berkeley National Laboratory (Rosen). Giovannoni notes that Scott "...didn't send his voice a great distance, but he was the first human being to send his voice into the future... Over time, not just distance—that's the ghostly part" (Jones). Jacques Derrida explains in Ear of the Other that the utterance of one's thoughts in text or recording is an act of signing, an otograph, which is only completed once it is understood by a reader or listener, "...it is the ear of the other that signs. The ear of the other says to me and constitutes the autos of my autobiography. When, much later, the other will have perceived with a keen-enough ear what I will have addressed or destined to him, or her, then my signature will have taken place" (51). The

²⁴ I had initially devised this work with a double-sided mirror as the material through which one hears the echo, but decided against it due to the material relationship with surveillance.

extremely short-term echo in *Echoic Memory* allows for a micro-iteration of Derrida's otograph—the gallery visitor has the ability to acoustically scribble or tag their presence on the work, on their own or with others, every three seconds. This short term repetition is not dissimilar to the effect of hearing one's own voice as an acoustic echo in physical space, though *Echoic Memory* can reiterate both a shout and a whisper. I believe that this recursive meditation on the brief and specific moment has the potential to suggest a broader scope of meditative thought—on the potential of the many ways in which many aspects of one's existence may be echoing further in time, across many spaces and through many contexts.

Vanishing Point

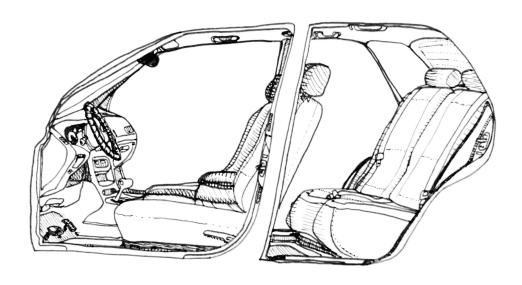


Figure 17. Drawing for Vanishing Point, ink on paper, 2020.

A surround-sound composition of environmental field recordings collected from spaces I have traveled with my now in-operational Toyota Corolla are heard via contact speakers through the vehicle's body.²⁵ Visitors are welcome to sit in the car and listen with the doors open or closed. The work's title gestures toward a perspective of the road into which the car has driven countless times, and to the inevitable end of the car's life as a vehicle. *Vanishing Point* acknowledges the potential end of the road trip as it is currently known and idealized by society, with self-driving and automated vehicles on the techno-cultural horizon. It shares its title with a 1971 cult film about a rebel who becomes the subject of a cross-country police chase, drawing the attention of a counterculture radio DJ who broadcasts gleefully on his disrespect of authority until the chase ends in a fiery collision on the road (*Vanishing Point*).²⁶

This car has been in my life for a long time, it was my father's car which he bought, used, after we moved back to the USA from the United Kingdom. It was the first car I learned to drive with, in high school it was the car I used to escape as an angsty teen and explore the suburbs. When I bought it from my dad years later, after graduating university, it became the literal embodiment of leaving and needing to go and having that mobility so often idealized as quintessentially American.

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²⁵ Heard through the vehicle's doors: multiple recordings of AM and FM radio interference between frequencies while driving between various places, a slow repetitious harmonica tune echoing in the acoustic space of one of Donald Judd's Chinati bunkers with the buzz of a Dan Flavin installation in the background, and rain on the car's body while driving; heard through the vehicle's roof: Wyoming Department of Transportation AM radio station, various rainstorms (outside the home of Derek Caterwaul (aka DJ Caterwaul of KUNM) in Albuquerque, New Mexico, storm while driving with AM radio interference in Austin, Texas, storm on the roof of my home in San Diego, California); heard through the vehicle's trunk and hood: thunderstorms from the Petrified Forest, Arizona, night wind through desert juniper trees, Kaibab National Forest, Arizona, bat colony under Congress Bridge, Austin, Texas, water lapping on the bank of the Hudson river, the roof of Donald Judd's *Arena* in the sun, Marfa, Texas, ocean waves and foghorn from secret campsite in Marin Headlands, ocean waves and cars, Leucadia, California.

²⁶ I owe my gratitude to Prof. Ricardo Dominguez for recommending this film to me.

Now, after it's been with me for eighteen years and taken me across the country three times, it has started to die. In 2016 while crossing the Laguna Mountains as I drove my last journey West to attend the Visual Arts program at UC San Diego, the check engine light came on. Since then, I have worked hard to keep it going, but the car is now too expensive to repair and unable to pass California's SMOG test or be reregistered. I decided then to make the car itself into an artwork so that others could experience some semblance of the places it's taken me and what the car has meant to me. I turned the body of the car itself into a sounding body—installed audio elements physically affixed to the inside panels of doors, the roof, hood, and trunk—so that my collection of sound recordings from across the country can be literally heard through the vehicle. I have shown the work at three exhibitions to date, and in each place people sincerely resonated with it.27 I have been told that my car became a place for stationary road trips, for delicate conversations with friends, for reflection on one's own poetic and fraught relationships with vehicles, this country, and the road. Following this thesis exhibition, I had intended on donating the vehicle to KPBS, the local public radio station, so that it could perpetuate the world of publicly accessible sound that it had so often been a listening space for through so many journeys.

²⁷ The Last Resort, UCSD Main Gallery, La Jolla, CA, 2019; Other Places Art Fair, San Pedro, Los Angeles, CA, 2019; Soundings, UCSD Music SpringFest, San Diego, CA, 2019.



Figure 18. *Vanishing Point*, installation view at Other Places Art Fair, San Pedro, Los Angeles, California, 2019.

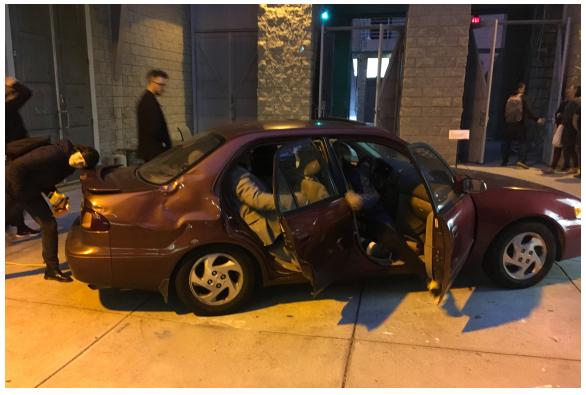


Figure 19. *Vanishing Point*, installation view at *The Last Resort*, UC San Diego MFA Main Gallery, La Jolla, California, 2019.

The story of the car starts with a journey—it took me from Richmond, Virginia to rural Mt. Desert, Maine where I worked at Acadia Summer Arts Program for a long summer.²⁸ Following that summer, while on the road south from Maine, I received a call from long-time collaborator and friend Ander Mikalson who told me that Skowhegan wanted to commission us for a re-imagining of Cage's *Variations VIII* for the inauguration of their new Manhattan headquarters.²⁹ It is nearly impossible to find a parking spot in New York City (Ben-Joseph). After a formative year of rigorous effort for piecemeal work, I left New York in the car that became my home as I headed West, to drive across the country.

Moving so often in my adult life, and growing up between the United States and England, I never had a strongly established sense of home. I had always wanted to see the West coast of the United States and to understand this country from the ground level—to try to comprehend how I was connected to a place that had always seemed

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²⁸ From June to September 2014, I worked as a videographer at Acadia Summer Arts Program for one of the last great patrons of the arts, Marion Boulton "Kippy" Stroud. The job was one of the most socially demanding I've ever experienced, and revealed to me the deeply subjective inner workings of a portion of the art world that I had been skeptical of. I met face-to-face with (and provided technical support to) art stars the likes of Carrie Mae Weems, Terry Allen, Janine Antoni, Jessica Stockholder, David Lang, Kevin Beasley, Paul Ramirez Jonas, and more, as well as top curators and museum directors from the Museum of Modern Art, Guggenheim, Walker Art Center and nearly every major museum in the United States (including UC San Diego's Stuart Collection). It is my understanding that Kippy played a significant role in the economic stability of these and many other high-functioning and well acclaimed artists and institutions throughout her life. In my time at ASAP, I learned that the institutions I held on high, and that a number of the artists whom I revered received great support from Kippy throughout their careers. Since, I have always wondered if their success is really the result of society's approval or of their financial relations with Kippy. She had a specific penchant for art containing dogs and the color light blue. This was the most stressful and best paying job I have had to date, the remunerations from which definitely supported my journey west and my creation of The Broadcast Project.

²⁹ While at Skowhegan School of Painting and Sculpture in 2013, I performed a work I called *Residence*, with microphone feedback in the school's Old Dominion Fresco Barn (lecture hall), moving through the space and slowly scanning the floors and walls of the interior space with a wireless microphone, searching for resonant zones, instigating feedback tones within the natural acoustics of the architecture. While researching *Variations VIII* in 2015, Ander and I discovered that Cage's piece, which was performed only once in the same Skowhegan Fresco Barn in 1978, involved uncannily similar instructions and instrumentation (scanning the floor and walls with microphones, opening the doors and windows of the space, moving inside and outside, etc).

so vast and often literally distant from my own identity. I have always had a difficult time understanding how people feel so strongly about where they come from. I still do not fully associate myself with American identity—I feel that this country is far too socio-geographically varied to classify oneself with such a broad term as *American*. I was on a search, "what place feels right—where to go next—what place could I afford—what place could feel like home?" Somewhere between Marfa and Albuquerque, on a back highway driving 80 miles an hour through the desert, I felt at home for the first time.



Figure 20. *Untitled*, digital photo, 2016.

I lived in the car for just over a year, working as much as I could and performing music as I travelled. The car started to represent my home space, although it was never comfortable to sleep in. Between Texas and New Mexico, I calculated a budget for my trip and realized it was possible. In a little economy car, refueling at the right places, camping secretly or staying with friends, it is possible to navigate the country with less economic means than it takes to live in any metropolitan city. I was not eating a lot but it was surprising to understand that I could have a front doorstep that was forever changing through beautiful landscapes that cost less than any apartment in Brooklyn or Los Angeles. The car represented my idea of home, and I have probably spent more time in that car than I have spent in the place I live now or any other apartment or bedroom I've rented.

The journey facilitated *The Broadcast Project*, an ongoing series of sound performances remixing and cataloguing local music and history live on public radio stations across the country.³⁰ My continued effort to create that work facilitated my journey, as I met many new friends to whom I am indebted, and who supported me along my way.³¹ They provided places for me to stay, food for me to eat, and recommended the true music and sounds of each place I stopped. Not popular music, but the rarities, idiosyncrasies and lost frequencies of these places. Listening to this music deeply, finding parts of myself in it, and replaying it on local radio stations in

³⁰ See https://johndombroski.net/The-Broadcast-Project

³¹ I am deeply indebted to my dear friend Charlie Blevins who first invited me to perform on WRIR in Richmond, Virginia, and to my friend and mentor Bob Kaputof who first suggested that I continue performing on radio stations as I travel. I am also eternally grateful to my friends David Nelson and Chris Brown of Shreveport, Louisiana, who gave me a place to stay, taught me about local history, and invited me to work with a hand-selected curation of local music and rarities from their town on KSCL, beginning a trajectory that would evolve into The Broadcast Project.

these places became my way of understanding what Pierre Schaeffer calls the soundscape as it relates to environment, music, and culture. I became aware of and deeply interested in the first music and culture that existed in each place, and was honored and fortunate to listen to the songs of many native people.³² It is difficult to find a feeling of identity or place-ness in the United States as most of present-day roadside America looks the same: Taco Bells, Starbucks, Seven Elevens, and Wal-Marts. In my search to understand American identity, I came to understand that my own appearance as a straight-passing cisgender white man positioned me with unique privilege and ability to move throughout the country with such ease, and would not have been so if I had appeared otherwise (Green),³³ I now understand that the true identity of a place is deeper within these spaces, and if there is such a thing as *American identity*, it looks like Taco Bell, Starbucks, Seven Eleven, and Wal-Mart and has the same regressive late-Capitalist values.

To fully understand a place, I believe one must listen patiently and sincerely, open to anything and everything there is to hear. Collecting the environmental sounds used in *Vanishing Point*—of places, events, or moments that were significant to me—became a way of both understanding a place and orienting myself in relation to that place. This said, the audience does not need to know where each one of these recordings comes from. I am not as interested in this work being listened to as a musical composition or travelogue, but more in the potential interplay between the

³² From the Caddo of the South, to the Chochenyo of the Northwest, the Lenape of the Northeast, to the Cherokee of the Southeast, I felt it important not to edit any native song I played on the radio, broadcasting it entirely from start to finish.

³³ I made an effort to focus on the persistent social issues connected to race and socioeconomic identity in the United States: rebroadcasting news about a Los Angeles census review of Chicano tract housing, police raids on Black Panther headquarters, editing an advertisement about white bread I found at the beginning of an episode of *The Cisco Kid* (to call out my own whiteness), and more.

sounds of elsewhere, and the space of the car, and what one brings to those sounds while experiencing them in that vehicle. I have received feedback from numerous art goers on their experience of *Vanishing Point*: of unexpectedly delightful journeys with strangers, awkward moments that become relaxing, and intimate serious conversations with friends that would not have occurred otherwise. I was alone when I made each of these field recordings, now the car has become a place to share all of the spaces I have experienced with it. These sounds have become an environment in which others can be together in a very specific and intimate way; a world in which to have their own stationary journeys. I use listening as a way of understanding myself as *in relation* to something or some-other. This is what happens when we drive alone, or with others, the car becomes a reflective space for that kind of meditation. The sounds in *Vanishing Point* have the potential to take one on my journey, but also to orient one where they are.



Figure 21. Vanishing Point, installation detail at Soundings: UCSD Music's SpringFest, San Diego, California, 2019.



Figure 22. Untitled, digital photo, 2016.

Noise Variations

NOISE VARIATIONS	skin across fabric,
	fingers stroking short hair,
breathing in,	wheatgrass in a field in the breeze,
a flock of birds taking flight together,	a glass half-full of soda water,
Atlantic waves on the rocky coastal island shores of Maine.	a cappuccino milk steamer at the café bar,
distant cargo planes passing over	autumn leaves scraping and rolling in a breeze atop cold asphalt,
the Mojave desert, summer storm torrents on a	that silence at the end of a tape before the tape player stops,
corrugated tin roof, pouring dry rice into a metal pot,	a mother quietly hushing her child in an elevator,
cool air through an aluminum vent on a dry hot afternoon.	sledding down a snow-covered hill,
passing subway trains in the	pouring corn flakes into milk,
Greenpoint Ave. G station,	gravel sliding down a hill,
river rapids in spring,	sweeping the dusty concrete floor of an empty warehouse with a push-broom,
passing freeway traffic: northbound,	
hot oil sizzling stir-fry in a wok,	crunching potato chips (heard from inside your head),
passing freeway traffic: southbound,	
skin on skin-slowly, softly,	plastic bags in the wind (blowing toward the ocean),
passing freeway traffic: eastbound,	socks sliding on a polished wood floor,
car tires splashing through a long	
puddle, passing freeway traffic: westbound,	whipped cream puffing out of the dispenser,
a fervent crowd applauding, heard	air filling a flat tire,
from outside an auditorium, an unintentionally long moment	a street-sweeping truck slowly passing,
between songs on late night community radio,	a seashell held against your ear,
salt pouring into water,	a heartbeat through an ultrasound monitor,
a long pine forest in the wind as late afternoon turns to twilight,	sandpaper smoothing hardwood,
shower water falling on your forehead,	dirt pouring out of a truck bed,
	fire burning a pile of dry twigs,

the pages of an old book scraping as they turn,

fire burning a pile of dry twigs,

crumpling tin foil.

every waterfall, bus airbrakes at a stoplight, opening venetian blinds. peeling packing tape from the roll, pouring dry lentils into water, cars passing on cobblestone roads, one hundred voices talking at once, a rocket blasting into space, extending the legs of a camera tripod, a hose pumping water onto grass, a washing machine's spin-cycle, breathing in smoke, metal fan-blades oscillating, a cement mixer rotating. welding metal with an oxyacetylene torch, spraying paint onto a brick wall, walking on a gravel road, a circular saw cutting through a bike tires rolling down a dirt road, AM radio static on the I-40 West between Arizona and New Mexico, cicadas on a summer day, thousands of crickets near a lake in humid summer night air,

the first minute of sand in an overturned hour glass,

blood flowing through your own circulatory system,

desert winds on desert sandstone, a passing freight train, throwing clay on a wheel, a lint roller on velvet, a camera lens while focusing from far to near, ice skating (deep curve, fresh ice), shaving with a razor, slow crunch of a popsicle, crushing spinach between your stirring a martini, hands moving across a carpet, wringing out a sponge, a sliding screen door closing. car tires skidding. breathing out smoke, air through an open car window at 80 miles per hour, small flags in strong wind, a door opening, spreading mortar for a brick. a beer can being opened, a life support machine breathing, hands moving on warm concrete. a cigarette burning, many wine glasses shattering, winding rope on a reel,

snow sliding off a plow shovel,

liquid splashing onto rocks,

mopping a polished concrete floor, butter melting in a hot pan, surface noise on a record, driving a screw into drywall, pouring champagne into a flute, hiking through thick kudzu ivy, summer breeze through maple tree leaves, passing subway trains on elevated tracks two blocks away water flowing through a metal pipe, a hailstorm on midwestern plains, pouring marbles onto wood floor, pouring oats into a bowl, pouring dry pasta, wind through bare winter tree branches, tearing tin foil, tearing wax paper. tearing photos, a hair dryer from outside the bathroom for ten minutes, rainwater through a rain spout. an entire city walking, typing keyboards in an office, a cat licking it's fur, a hairbrush through long hair, a paintbrush across canvas, pulling thread through fabric,

breathing out...

wiping linoleum with a sponge,

Figure 23. Noise Variations, print on tabloid paper, 2020.

Noise Variations is to be read as a poem, a conceptual text, or a sound composition performed in the mind of the reader. The work details a list of different types of noise, from specific noise from specific locations, to abstract noise, to quiet noise, to nearly inaudible or imagined noise. Printed on tabloid paper and presented as a small stack with padding compound on one edge, the physical print is large enough that one would find it difficult to maneuver or read the work without causing some sort of audible noise.

True silence for the human listener does not exist, noise is ever-present, it is the natural state of all life. *Noise Variations* perpetuates these ideas that Cage first brought to the fore—there is still no such thing as silence. Noise may be defined as unwanted or unpleasant sound, but *Noise Variations* continues a lineage of the sort of listening that accepts all sound as listenable. As Pauline Oliveros' deep listening directs our aural focus inward, to ourselves and one another in *Tuning Meditation* and other works, as Lucier directs our ears to descriptive sonic lists and asks that we try to hear them as different sounds in *Gentle Fire*, and as Cage poetically states in his *Lecture on Nothing*, to hear noise as a sort of poetry or music would completely change the nature of our perception of sound itself. Could any noise be understood and listened to as a medium for poetic resonance? Listening in this way is still relevant, if not more essential than ever.

Each sound listed in *Noise Variations* holds a specific energy for me personally, and the written word seems the most effective form through which to approach communicating this intimate specificity. It is my hope that while reading through the work, the reader employs their own audial imagination to a point where the words

cease to be read as text or internal voice but become sounds which are understood or heard internally. These internal sonic simulations have to do with tuning one's mind to listen in a certain way, such that one employs their own unique audial imagination to create the sounds described. One may have never heard the sound of screws rattling in wall fixtures as a nearby train passes, but each reader can imagine and thus hear it in their own specific way.

This work approaches a composition style that I would like to pursue—a music that sounds different to every single listener and yet still allows each person to hear the same thing. This is an acoustic reality for any experience of live music, but I am speaking of a focus on specific sounds, not specific timbres or positioning, but sounds that are specific to how your own mind, how your own experience, builds a timbre that is specific to you. If one is able to read the piece in this way, the work itself becomes a participatory engagement. It becomes a collaboration between myself and the person reading it, and in some way the reader ends up performing this music in their own mind.

I've taken particular care in creating both complementary and dissonant relations and juxtapositions that occur often and rather quickly throughout the progression of the piece; from Atlantic waves on the rocky coastal island shores of Maine, to distant cargo planes passing over the Mojave desert, or blood flowing through your own circulatory system, to every waterfall. This movement from one type of noise to a contrapuntal environment, space, texture or dynamic level further emphasizes these noises and their respective material qualities. When within a particular place, many noises go unnoticed, though if one were to experience many

disparate noises in close proximity and contrast to one another, the respective presence and aesthetic quality of each would become immediately apparent.

While so much of my work is tied to a specific place or site and requires some kind of journey, this work, like former writings and takeaway pieces I've made, is intended to be portable and easily proliferated. In their ideal use, artworks in unlimited editions on large format copy paper such as Felix Gonzales Torres' *Untitled (The End)* and Bruce Nauman's Body Pressure are meant to be treasured and reflected on outside of institutional zones, but many of these objects are unfortunately destined to show up crumpled in the bottom of a bag on the train ride home, lost under a sofa, or in the back of a car along with the other lightweight material noise that quietly gathers in the periphery of our lives. I acknowledge that this sort of treatment could be a potential reality for the work, but I set it in the gallery with my best intentions and highest hopes. I hope it is understood as a precious object, and I would rather make something that anyone can have and take with them, with the potential to carry and convey a specific poignant experience wherever it is, rather than a single object that is only accessible to the affluent or educated few. Noise Variations does not have to be tied to a place, but can be tied to all places, it can be experienced and shared, and it can relate to whatever space and whatever context it exists in.

Noise Variations is a sort of Manifesto on a single page, short-form and easily reproduced. The printed word, tabloid, or handout has been used historically as a tool for dissemination of radical thought. I can only hope this work functions in such a way —a list of demands for revolutionary listening. The list creates a rhythm that suggests a recurrent meditation on the un-wanted and the un-heard—noise, but also sound in

general, and encourages aural imagination. The list reiterates the rhythmic printing process involved in the physical creation of the multiples, and that rhythm is then still heard in the mind of the reader and performer as they are moving through the piece. Perhaps that rhythm creates a certain tempo, that one can follow after moving through the piece in its entirety. The list is a cadence that offers a different tempo than that of the everyday, it is a rhythm through which one can move in one's own time. After so many repetitions, we might understand that we can even move through our own day-to-day rhythms in a different and perhaps more sincere and attuned way—if only we start listening to the world around us.

Works Cited

Bachelard, Gaston. The Poetics of Space. 1958. translated by Maria Jolas, Boston, Beacon Press, 1994, pp. 46–47, and ff.

Ben-Joseph, Eran. Rethinking a Lot: The Design and Culture of Parking. Cambridge, Mass., MIT Press, 2015.

Cage, John. "Lecture on Nothing." 1961. Silence: Lectures and Writings, by John Cage, First Wesleyan paperback ed., Middletown, Ct, Wesleyan University Press, 1973, pp. 109–128.

---. Williams Mix, 1952, medienkunstnetz.de/works/williams-mix/.

Deleuze, Gilles, and Félix Guattari. A Thousand Plateaus: Capitalism and Schizophrenia. 1987. translated by Brian Massumi, Minneapolis, MN, University of Minnesota Press, 2005.

González-Torres, Félix. Untitled (The End), 1990.

Green, Victor H. Travelers' Green Book: For Vacation Without Aggravation. 1963rd–64 International Edition ed., The New York Public Library Digital Collections: Manuscripts, Archives and Rare Books Division, Schomburg Center for Research in Black Culture, digitalcollections.nypl.org/items/666fe280-82ee-0132-31f3-58d385a7bbd0. Accessed 2015.

Gregoire, Mathieu. "Chris Burden and the UCSD Stuart Collection." received by John Dombroski, 2017.

Huyghe, Pierre. Wind Chime (After Dream), 2009, walkerart.org/magazine/wind-chime-after-dream-by-pierre-huyghe.

Jones, J. "Sound." PBS, 2014, ucsd.kanopy.com/video/sound-0. Accessed 20 Mar. 2020.

Leonard, Zoe. 945 Madison Avenue, 2014.

Lucier, Alvin. Gentle Fire. MusikTexte, 1971.

Merleau-Ponty, Maurice. Phenomenology of Perception. 1945. translated by Colin Smith, New York, NY, Routledge, 2005, pp. 3–60, 235–429, 515.

Nauman, Bruce. Body Pressure, 1974.

Neuhaus, Max. Time Piece Beacon, 2006.

Noë, Alva. Action in Perception. Cambridge, Mass.; London, Mit, 2005.

O'Brien, Kerry. "Listening as Activism: The 'Sonic Meditations' of Pauline Oliveros." The New Yorker, 9 Dec. 2016, www.newyorker.com/culture/culture-desk/listening-as-activism-the-sonic-meditations-of-pauline-oliveros.

Oliveros, Pauline. Quantum Listening: From Practice to Theory (To Practice Practice). 1999. SoundArtArchive.net, soundartarchive.net/articles/Oliveros-1999-Quantum_listening.pdf.

- ---. "Some Sound Observations." Audio Culture Readings in Modern Music, edited by Christoph Cox and Daniel Warner, New York Bloomsbury Academic, 2017, pp. 102–103.
- ---. "The Difference between Hearing and Listening | Pauline Oliveros | TEDxIndianapolis." YouTube, 12 Nov. 2015, www.youtube.com/watch? v=_QHfOuRrJB8. Accessed 1 Jan. 2020.

Parker, Adam. "'The Bells! The Bells!' Approaching Tintinnabula in Roman Britain and Beyond." Material Approaches to Roman Magic: Occult Objects and Supernatural Substances, edited by Adam Parker and Stuart Mckie, vol. 2, Oxbow Books, Oxford; Philadelphia, 2018, pp. 57–68. JSTOR, www.jstor.org/stable/j.ctvh1dnfj.9. Accessed 15 Jan. 2020.

Radigue, Eliane, and Charles Curtis. Naldjorlak. 2005.

Rosen, Jody. "Researchers Play Tune Recorded Before Edison." The New York Times, 27 Mar. 2008, www.nytimes.com/2008/03/27/arts/27soun.html?hp. Accessed 15 Mar. 2020.

Schafer, R. Murray. The Soundscape: Our Environment and the Tuning of the World. 1977. Rochester, Vt., Destiny Books, 1993.

Taylor, Casey. "Now Might Be the Time People Need ASMR Most." Wired, 1 Apr. 2020, www.wired.com/story/coronavirus-covid-19-asmr/. Accessed 3 Apr. 2020.

Treiman, J.A., and Lundberg, M., compilers, 1999, Fault number 127f, Newport-Inglewood-Rose Canyon fault zone, San Diego section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, Accessed 08/20/2020

Vanishing Point. Directed by Richard C. Sarafian, 20th Century Fox, 1971.

Varela, Francisco J., Thompson E., and Rosch E., The Embodied Mind: Cognitive Science and Human Experience. 1991. Cambridge, Massachusetts, The Mit Press, 1993.

Watkins, Olga C., and Michael J. Watkins. "The Modality Effect and Echoic Persistence." Journal of Experimental Psychology: General, vol. 109, no. 3, 1980, pp. 251–278, 10.1037/0096-3445.109.3.251. Accessed 5 Mar. 2019.

Whitmore, Alissa. "Phallic Magic: A Cross Cultural Approach to Roman Phallic Small Finds." Material Approaches to Roman Magic: Occult Objects and Supernatural Substances, edited by Adam Parker and Stuart Mckie, vol. 2, Oxbow Books, Oxford; Philadelphia, 2018, pp. 17–32. JSTOR, www.jstor.org/stable/j.ctvh1dnfj.6. Accessed 24 Apr. 2020.

Zoladz, Lindsay. "Learning to Listen to, and Beyond, the Siren's Call." The New York Times, 5 Apr. 2020, www.nytimes.com/2020/04/05/arts/music/coronavirus-sirens-music.html. Accessed 5 Apr. 2020.