To Hear and be Heard: Listening, Embodiment, and Ceramics

by

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Abstract

This thesis is a phenomenological investigation of sound as a form of touch and the effects of close listening. A methodology for studio process is first proposed that relies on a background of memories and embodied experiences that contribute to a narrative about sonic observations and how one can materially visualize them through the creation of sculptural objects, instruments or vessels. Science is employed as part of the theoretical framework and as a generative guide to help map out a visual language, using clay as a conceptual medium, to express what it means to hear and be heard. This thesis addresses the sonic experience and considers several associated psychological meanings from it. Ultimately, the thinking and narratives discussed in this thesis contribute to both the fields of ceramics and sound art in rendering a body of non-auditory ceramic sculpture that considers how careful listening to sound acts as a form of resistance and suggests further explorations.

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To my mother, who would wake me in the morning to Handel's Water Music and to my father, who encouraged me to wander magnificent art galleries.

Introduction

"All we hear is,
Radio ga ga
Radio goo goo"
- Queen

It begins with listening. Everything in the studio is a rhythm. My key to the studio door has a certain metal grind against the keyhole as I insert it. As I push the door open it stutters as it rubs against its jam. Walking into the space, the radiant heater switches on. I can hear the fan whirl, relays click, and the igniter heats up and combusts the gas into flame. The heat flows down a black metal tube and it vibrates low and resonant. Electromagnetic radiation is released into the space. I feel the warmth. It's all a vibration. I ascend a wooden ladder as I move into the wheel room. Each of my footsteps percussively contacts a wood step as I move upwards. In the wheel room there are rows of shelves that are a home to plants in pots, pails of tools, and glass jars containing oxide colourants and ceramic stains. The sequences of colours, shapes and forms engage my senses. A wood drying rack on casters rests next to the wall and has rows of vessels lined up in various stages of dryness. They make me think of running my fingers over dozens of smooth fired porcelain surfaces. There is a basket that contains dozens of ceramics, art, and sculpture magazines which are located next to a shelf of books that detail clay history, method, and technique. These texts remind me of the rich historical narrative of clay and a contemporary practice I replicate or invent with each repetitive visit to the studio. I press a button on a speaker and music at low volume enters the room. The sounds evoke a vulnerability in me which cause me to pause for a moment and listen.

This thesis is about sound as a form of physical touch. It is also about silence and practicing deep listening as an act of resistance.[1] Beginning in the studio I make a case for

[1] The term *resistance* here refers to the agency of a listener to engage in or resist a sonic experience.

ceramics, as a conceptual medium, to explore and capture the sensory and embodied experiences to make sense of sound. I also call upon my background in electroacoustics and physics to help create a groundwork of art over three territories broadly categorized as objects, instruments, and vessels (the human body being considered a vessel). As a result, this thesis postulates the following. First, sculptural artworks about the phenomena of sound and its psychological implications can be made even if the works themselves produce no sound. Second, artwork about close listening to sound assists in evaluating the ways we encounter its touch and how our desires to physically connect have an intimately physical and psychological presence in our lived experiences. Ultimately, the propositions in this thesis investigate what it means to hear and be heard.

The providence of my listening began decades ago with my background education and teaching experiences in electroacoustics and physics. From the moment I began studying diagrams of air particles covered with springs as visual representations I was fascinated with how one brings visual imagery to unseen phenomena. The philosopher Ludwig Wittgenstein said, "You cannot enter any world for which you do not have the language". Like the physics laboratory, my ceramics studio is a place to utilize and learn new languages, define terms, and wrestle with incomplete ideas until they become visible. Artist William Kentridge taught at the Mahindra Humanities Center at Harvard University that the studio is, "both event and epistemology" (06:33). Kentridge has long asserted and described that his repetitive pacing of his studio space, his actual physical moving forwards and backwards and circulating in and around it, leads to important thoughts that help reveal "the relationship about the physical making and the thinking" (University of Tel Aviv 00:57). Visual artist Liz Magor succinctly stated it this way: "[the studio] is a place for physical philosophy" (02:36). Indeed, when I listen to Kentridge

and Magor describe their epistemological processes, it makes me wonder how I come to know and realize work through my own process. In considering this, my first instincts are to reach out to a material and begin working it with my hands to model out an idea or thought. In a lecture to the ceramics students at Pennsylvania State University, ceramic artist Julian Stair emphasized a ceramist's engagement with material as being utterly haptic and that touch has the ability to describe things beyond sight. He stated that "touch picks up the details that the eye doesn't appreciate" (Arts and Arch 12:58). The physical experiences that occur during the making of work contribute to my thinking and I have begun a new kind of embodied listening in the studio which helps initiate this investigation. In paying attention to the audio-rhythmic patterns of the space, I hypothesize about the effects they might have or play in the creation of new ideas. These sonic experiences, which have been tacit to my experiences over the years, have now made me wonder what it means to really hear and how could that listening translate into material forms?

I remove my coat and put on one of the aprons hanging on the wall. As I put it on, my hands feel the spots of clay and plaster from previous sessions of work. I take out my keys and run them down smooth clear tape on a cardboard box housing the clay. I angle my fingers into the box, grip the plastic bag and remove a heavy sack of porcelain. Grabbing the clay cutters, I run my fingers down the wire and feel the friction grip the wire and remove the dried clay that hangs on them after each cutting. The small bits of clay pop off the thin wire in rhythmic ticks. I cut the clay and take a mass of porcelain and wedge it on a large plaster slab. I begin to knead it. It's a familiar, comforting rhythm. I press down on the clay, it responds, I roll it back, it responds, I press down again and repeat this over and over until I lose track of counting. I slice the kneaded clay into a row of hand sized pieces and pat each ball into a slight conical shape and take the pile of prepared pieces to the wheel. There is a familiar click as my finger catches the

wheel's switch. The wheel head rings out in response to throwing a piece of clay on-centre on top of a supporting bat. As I press down the pedal, the wheel starts spinning counter clockwise. I simultaneously immerse both of my hands into a bowl of room temperature water and like a religious sprinkling, I christen the spinning clay and securely grasp it. My right-hand fingers press into the base and my left palm compresses the spinning mass. I move it up and down several times to feel the clay particles become correctly oriented. I press into the clay and open the form, noting the swirl as I pack and compress the base. There is a particular centric spinning texture that ascends up the side of the form caused by my fingers that ride a compression wave up the side as I pull it into a cylindrical form. The clay continues to spin. I again wet my hands and compress and shape the form. Using an aluminum scraper, I erase the marks made by my fingers on the exterior of the spinning form (but I can still see the traces of my hand captured within the vessel). I stop the wheel, release the bat supporting the vessel, place the piece on the drying rack and insert a new bat and begin again with a new lump of clay. Again and again, vessel after vessel, whether I'm making multiples of forms on the pottery wheel or mold making and slip casting multiple forms, the music that was on fades into the background, having yielded to the flow of haptic experiences.

These haptic experiences with materials and their eventual realization into artworks have their inception in a methodology best described by French philosopher Maurice Merleau-Ponty. His 1962 descriptions of phenomenology outline an 'Embodiment Theory' which, in essence, describes that thinking is sustained by a background of ideas and then is more fully realized by our embodied communication with the world (xxiii). He states, "the process of expression brings meaning into being or makes it effective" (213). Thus, the vital combinations of touch and thought connect somewhere in the studio that truly fuel art making. In a review of embodiment

and creative practice, author John Haworth emphasized this theory by suggesting that images and ideas “emerge in the process [of making] and [are] incorporated in the flow of vision to produce” (88). If the enacted making process is unfolding moment by moment, what happens in the studio that propels one to understand something at its very essence? Will the experiences with a material alone yield ultimate conclusions?

After teaching physics for nearly two decades, science has become part of my natural theoretical framework of thought, a language or literacy I can call upon. When I look at materials, sometimes I look at them through a microscopic lens like the Greek philosopher Democritus, who philosophically dissected material down to their “uncuttable” atom-like limits (Berryman). What constitutes the un-cuttable building blocks for sculptural artwork? Ceramists Edmund de Waal and Judit Varga compose works out of base units. For de Waal, the cylinder is the primary object set in rhythmic configurations within vitrines and shelves. Varga’s works are set with specific limits for her constructions based on referenced geometries such as circles, squares, and knots (Lovelace 46). Indeed, realizing the essence in form was one of the major objectives of the modernist language that I commonly employed in my previous work which was rooted in design. Still, both my past and present work centres on minimalistic aesthetics using industrial processes producing carefully profiled objects with the traces of the hand removed. This homage to a more reductive and design-based process, I believe, speaks to my desire to tease out the underlying structure of a thing through simplification of form and colour and then see it multiplied and reworked in combinatory ways to produce vessels and sculpture. So,

considering Democritus' approach, how does one begin to visualize the essence of something unseen like sound?[2]

In his classic work *Tractus Logico-Philosiphicus,* Wittgenstein described how "the limits of [our] language mean the limits of [our] world" (74). With my background in ceramic art and science being considered as languages, I use them to investigate sound with all its physical descriptions as well as its potential overlapping of meaning, metaphor, and psychology. Most important of these physical descriptions is an understanding that sound is a physical force we experience through listening, even when the source is at a distance. We don't often think that just by speaking someone's name to them that we are touching them. However, we are. The energy we send out does work on a fluid medium of particles carrying the energy without transmitting matter and does work on the biological structures in the listener's ears. Its a touch without hands. In my view, understanding this connection assists in expanding my language base to make a body of sculpture that considers important neurological, psychological, and emotional experiences associated with listening to sounds. As I step back and circulate around these ideas about philosophy and sonic phenomena in physical form, I wonder who *is* really listening? Whether they are in their studio, through social interactions, or to their own voice, do they listen? Listening researcher Ralph Nichols stated in an interview with the International Listening Association that at our basic core, humans have the need to understand and be understood and *listening* is the key to both.

In analyzing my own epistemology, I recognize that my methodology begins with a combination of memories, embodied actions, thoughts, and feelings in a building of vessels or

[2] Democritus, who correctly proposed atomic theory, also proposed that the unseen human soul was composed of soul-atoms and set forward a descriptive visual imagery to describe them. His visualizations proposed that souls were composed of spherical fire atoms as he associated the life force with heat (Berryman).

objects where a meaning can then be derived. Therefore, I *listen* to my memories and thoughts with all their perceived vacancies and mysteries. I listen to the variety of simple harmonic performances that occur within my studio. I listen while in the embodied moments of making and remember the conversations and acoustics that engage my mind and stir my soul. I begin making artworks to make visible those invisible acoustics of sound and speech and formulate imagery about the psychological intentions behind them. I listen and imagine the essence of the sounds themselves.

The Sounds Themselves

Ring out, wild bells, to the wild sky,
The flying cloud, the frosty light:
The year is dying in the night;
Ring out, wild bells, and let him die.
- Alfred Lord Tennyson

Data collection for this sonic investigation can begin anywhere. I begin with a nearby thrift store and search it for objects that are reminiscent or symbolic of the sonic experience. I begin to peruse the shelves of mass-produced goods, glassware, used clothes, and decades of miscellaneous plastic children's toys. I become fixated on the technology shelves. I find a wireless battery-powered radio headset from the 1970s and put it in my basket. In the toy section I find a clear plastic yellow recorder. In handling it, I can see that it would still produce sound. It too goes in the basket. I walk to the decorative ornaments section aptly titled "Knick Knacks" and become transfixed with sets of commemorative souvenir porcelain bells. To an artist who works primarily with porcelain clay this seems to be an utter historical contradiction! Porcelain was prized for its whiteness, translucency and fragility. To royalty, it was deemed 'white gold,' with an ancient Chinese recipe that took ages of painstaking work to discover in the West. I pick one of the bells up and ring it. The clapper strikes the edge, and it rings out high and resonantly. I put it back on the shelf and stare at them a little longer.

Why clay? Why specifically porcelain for that matter? I could use metal, plastic or stone. What is it about clay as a material that invites the sonic experience? Perhaps artist Oliver Beer best answers that question in his 2019 exhibition of "Vessel Orchestra" at the Metropolitan Museum of Art in New York. His work featured a selection of vessels from the museum collection from antiquity to modern contemporary that were fitted with tone generators and used to harmonically amplify his sonic compositions. Physics describes that all objects have a natural

frequency with which they resonate. With ceramic vessels, the produced harmonics and wavelengths are definitely alluring if not an essential aspect. From master potter Lucie Rie tapping her vessels to test their soundness after kiln firing to Netherlands-based artist Jelle Mastenbroek's nickelodeon-like contraptions of plinking porcelain, there is a vital percussive and auditory connection with the ceramic experience that, in my view, makes the expression of sonic phenomena in clay (even if rendered as non-auditory) more complete.

Fig. 1.
100, ceramic, 130" x 10" x 7", 2019

What does sound look like? What would Democritus or chemist John Dalton visually conjure as imagery for sonic vibrations, atomic frequencies, or wavelike disturbances? Indeed, casting thousands of small billiard balls to set into different ratios is tempting. However, I begin with volumes such as a cylinders, bent cones, and curved ellipsoids as base units, taking Edmund de Waal and Judit Varga as inspiration. I repeat the shapes over and over until I have produced dozens of them, even hundreds. The collection of cylinders becomes a three-dimensional topography reminiscent of a three-dimensional digital audio graph (see fig. 1). The

Fig. 2.
Reflection, ceramic, 16" x 9" x 8", 2019

cones comprise a stroboscopic-like motion captured in a curving arc in one direction and then experience their own echo-like reflection (see fig. 2). The curved ellipsoid arrangements hang close together in clusters. One cluster curving upwards sits directly below another cluster suspended from above which spirals laterally as a kinetic sculpture (see fig. 3). I view these frequencies or rhythms like molecular renderings of waves propagating through phases of matter. I see myself as a creator of rhythms without a drum or echoey guitar. I accept the fact that these objects don't realistically illustrate actual air particles Still, the constructed forms are assembled together and become my first creative glimpses of structured objects in motion. They become references to a disturbed medium where displacement from an equilibrium position can result as a reflection or refraction. I imagine each unit that comprises them as wave packet with volume, depth, curvature, and information. They are my first renderings of objects as sculpture with reference to sonic vibration but they themselves produce no sound.

Fig. 3.
Untitled, ceramic, 18" x 16" x 25", 2019

I continue to employ a minimalist aesthetic of pure form through repetition. While porcelain has a preciousness and translucency to it, these surfaces lack texture or colour, and there is an avoidance of glaze. These features, or lack of them, speak to my reaching for the essence of the medium of clay and sound propagation. Still, what do those surface choices say within a work and how will they be interpreted? Will these sonic-inspired renderings read as sound? Philosopher Jacques Derrida stated in his critique of structuralism that "everything begins

with structure, [but] cannot have an absolute subject or an absolute centre" (7). Thus, it is expected that the interpretations of these works will not only be varied but questioned. Therefore, when reading a work, Derrida proposes that a reading would ultimately illicit a circling and repositioning, inviting multiple meanings.

Indeed, the empirical looking and questioning is fruitful. It takes me on a historical review of what symbolism gets used to describe sound and causes me to wonder if those symbols could be incorporated into works as form, image, texture, or colour. Interestingly, author Matilde Battistini wrote in her guide to *Symbols and Allegories in Art* about the five senses. Of sound, she notes that some animals (such as the stag) are very sensitive to sound and are used in art to portray the sense of hearing. In addition to animals, she notes that musical instruments such as the lute, singing, or even Latin texts that describe the auditory organs all contribute to symbolistic readings in artistic works (321). When I review this historical symbolism it makes my data collection visits to the thrift store increasingly relevant. While there I am able to find objects and instruments that in effect are used to produce sound as a means of touching another through, noise, music or voice. It is there I begin to locate objects, like the headset, that are specifically made for careful listening.

What is also fascinating is to historically investigate how we have come to envision the sounds themselves. In Aristotle's treatise on the senses, *De Anima*, he describes sound and the act of hearing as ". . . something of external origin and is not native to the ear . . . we hear by means of what is empty and resonant, because that by which we hear has air confined within it" (Hicks 87). More contemporary philosophies and science exploring sound and hearing describe specific effects on brain processing and emotions that make up a vital part of the human experience (Altenmuller et al.). It's no wonder that in discussions about what people hear, how

they hear, their perceptions and emotions while listening to each other, music, or other sonic phenomena, the field of sound art was born and rapidly expanded.

Hampshire College philosophy professor Christoph Cox referred to sound art as a "stony field to navigate" (Barnes Foundation 06:07). From Luigi Russolo's futurist conceptions in the early 1920s to Max Newhaus' in the 1960s and 1970s, many prominent public works feature magnificent constructions and engineering feats that harness our planet's wind currents and ocean tides to power resonant tubes, making eerie combinations of whistles or loud bursts of low frequencies. Artists such as Swiss-born Zimoun or Netherlands-based artist Bob Bothof combine elements of resonance, rhythm, and engineering to create marvelous immersive and sonic environments as installation sculpture. Within the field of ceramics, there are several artists that construct amazing new resonant instruments in clay or combinations of ceramic and electronics. Other ceramic artists such as Chris Wight and Céleste Boursier-Mougeno utilize technologies to ensure resonant vessels are tapped, struck, or collide to create captivating soundscapes. Still, others steer away from instrument building, field recordings, minimalist electronica, or the monitoring of acoustic ecologies to create combinations of sound and image or sound and sculpture with no audible sounds at all, an approach I employ for this thesis. Among those are artists such as Steve Roden and Jonathan

Fig. 4.
Sound Installation, ceramic, Largest ⌀ 350mm, Smallest ⌀160mm, 2021, image used with permission of artist Chris Wight

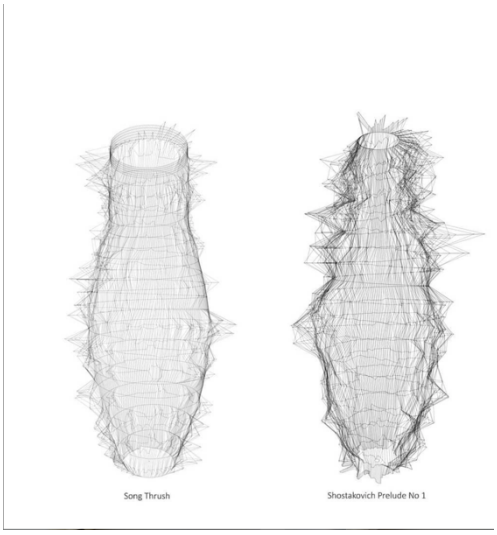


Fig. 5.
Sound Surface Series, processing coding format, 2016, image used with permission of artist Jonathan Keep

Keep who reach out to science and/or mathematics as a means of finding the essence of phenomena and compose marvelous works using science to generate new conceptions, forms and meanings.

From this preliminary research and historical description, I begin to conjure ways to communicate about the sonic experiences we have through listening and vibrational touch. I research the physical equations that describe acoustical wave propagation. I begin modeling enlargements of the smallest bones in the human body that comprise the inner ear. The yellow plastic recorder and 1970s radio headset that I purchased at the thrift store become potentially symbolic forms as I make molds of them in plaster and cast multiples of them. In addition to these, I listen to the sounds all around me: in the studio, in my home life, and on my walks in the nearby river valley close to my home. I carefully make note of them, thinking of ways to bring them to light.

Communication and Understanding

Oh brother, I can't, I can't get through
I've been trying hard to reach you 'cause I don't know what to do
Oh brother, I can't believe it's true
I'm so scared about the future, and I wanna talk to you
Oh, I wanna talk to you
- Coldplay

I once heard a speech that was so engaging and moving that I was entirely persuaded to the cause of the speaker. The words conveyed ideas and intentions that evoked an emotional response that left me inspired and uplifted. Indeed, words can convince. They are used each day to communicate facts, lies or love. In our daily communications, thinking signals vocal cords and breathing. Our lips, mouths, and tongues shape the air from our diaphragm into frequencies of waves that pass from us, through the air, and into the ears of listeners. In a recent series of interviews featured at the contemporary craft fair *Collect* put on by the British Craft Council, Edmund de Waal, while describing a recent installation of his, said, "The most basic human need is to hear a voice and make a space where a vast number of objects (vessels) become a poem" (Craft Council 31:44). In my view, experiential descriptions of sound and voice have a very important place in art as they help us describe our desires and intentions. Sound and voice are paramount in our ability to form and be a part of relationships. Philosopher Alain de Botton explains, "[The desire to be heard] sounds desperately simple, and in a way it is. And yet how little of this emotional nectar of acknowledgement we ever in fact receive or gift to one another" (*The School of Life Articles*).

Fig. 6.
Malleus Incus Stapes, ceramic, 15” x 15” x 6”, 2020

Fig. 7.
Malleus Incus Stapes - close up, ceramic, 2020

This thinking into the vital importance of communication and the questioning of intentions and perceptions of voice became a catalyst for the creation of four works. The first (see fig. 6), features cast enlargements of the three bones of the inner ear (mentioned previously). It is an important starting point for me as I imagine the wave bundles of information (referenced in the previous sculptural objects figs.1-3) interacting with these interception points of human physiology. Because of the enlarged scale of the bones, I also imagine an enlarged capacity for sound receptivity. It makes me think of times I spent in acoustical sound booths and anechoic chambers listening to low frequencies and feedback loops through large speaker systems shaking back and forth. I install an on/off switch onto one

set of the bones and title the work *Selective Hearing*. My reasoning is that for every sound we hear there is a physical stimulus that registers in our brain. This action reaction law for hearing can't be turned off, but rather only filtered by our consciousness (or lack of it). A second work, titled *Potty Mouth* (see fig. 8), considers communication of taboo words and the psychological effects they have on those listening. Sound is our primary sensory warning system as it provides stimulus for information 360º around us as opposed to our visual sense which is limited to 180º in front only. Sounds alert us to potential dangers. I recall a time while I was playing hide and seek in the woods and a friend jumped out of a hiding spot screaming which truly scared me. I also recall an overly aggressive colleague talking with me in his office using several expletives

Fig. 8.
Potty Mouth, ceramic, 18" x 8" x 13", 2020

to communicate his frustration and anger. Because we can't shut off our hearing (only filter it) we make contact with noise, sounds, or language that we potentially may not want to experience. Sound can be used as a form of abuse. *Potty Mouth* was inspired by these sonic interactions and supported by a lecture given by psycho-linguist Stephen Pinker, who reviewed how humans respond to taboo words while being monitored within an MRI (magnetic resonance imaging) scanner. The lecture discussed how, upon hearing taboo words, the amygdala becomes stimulated and registers the stimulus as a heightened level of aggression (RSA). This artwork interprets the experience of aggressive taboo language. When sounds are a form of physical touch the shapes of the sound waves (ultimately wavelengths and frequencies) are transformed into meanings. Sounds plus meanings can pack a conceptual punch! My sculptural rendering employs yellow glaze to taint the lips of the speaker and shows up in the explosive internal structures of the listener. Pinker asserts that taboo words can be used for shock effect or domination. Thus, *how* we listen to them can be a form of resistance and restraint. The third work in this series (see fig. 9) was an investigation of the auditory experience of an apology. Like most, I have said things I shouldn't have. I have been irresponsible with my sound output touching others in negative ways. I have hurt others and in turn have been hurt in the quintessential *war of words* which I now also understand as a war of sounds. Can there be any aural balm for the acoustical kickboxing we engage in? The work titled, *How Precious the Lips*, is a sonic exploration of an apology. It is laden with symbolism associated with acoustical physics and speech pathology, as well as some psychological perceptions around one's desire to receive an apology and the precious lips that offer it. Texts of the apology are inscribed on the head and written in IPA (International Phonetic Alphabet) as a means of reducing the words

Fig. 9.
How Precious the Lips, ceramic, 16” x 9” x 62”, 2020

down to the essence of the sounds that comprise them. Mathematical equations placed on the lips and ear represent the action of delivery and reception. The gold on the lips imbues the delivery of acoustical information with preciousness. Gold is also an excellent conductor of electricity for signal thus emphasizing the clarity of this apology to heal the sound bruised and sonically broken. The fourth work titled *Words Like Honey* (see fig. 10) considers the words we use to convince. It references several wisdom adages from the Book of Proverbs that deal with listening to the words of others, some to seduce and others to exalt.

> Death and life are in the power of the tongue (18:21). The lips of a strange woman drop as an honeycomb (5:3). Lips of knowledge are a precious jewel (20:15). Meddle not with him that flattereth with his lips (20:19). Pleasant words are as an honeycomb, sweet to the

soul, health to the bones (16:24). A word fitly spoken is like . . . an earring of gold (25:11-12).

What are the words we use to speak to others and convince them (or manipulate them)? What are the words spoken to us and the intentions behind them? In making this work I left the traces of the mold that were used to form the heads (a deliberate deviation from past surface work) to provide contrast in the materiality, imperfectness and fragility. Gold is used to bring the eye to the fluid words that drip from the lips and fill the ear of a listener. The eyes of the sculptures are closed to exclude the suggestion of other senses being active. Indeed, I wanted the words to be the essence and focal point of this piece. An important moment in this piece was in working with the glaze. It was the first time I considered how a glaze could be used as a sculptural effect rather than purely for surface design. I fired the heads to vitrification and then added a lower temperature glaze (mostly frit) that oozed out of the pieces when it fired. To me, this is an

Fig. 10.
Words Like Honey, ceramic, 16” x 9” x 62”, 2020

important place to be. In describing a sonic experience, a new material exploration immerged providing potential places to further explore.

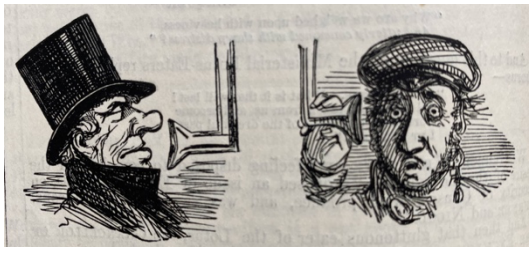
In making these works I found that I was consistently visiting and revisiting the pieces from inception to completion. For some of the pieces, the meanings didn't reveal themselves until I had the opportunity to contextualize the objects and consider the spaces and their relationships in them. Only then did the work become clearer of its intentions. Kenyan-born ceramist Magdalene Odundo asserted in her lecture given at *Collect 2021* in London, England that when we make an artwork, we also enter into a dialogue with that artwork. She described that as she creates her works, she is both in a "dance and dialogue with the piece" (Lowe Foundation 26:40). These four discussed works have many pieces and parts that I positioned and repositioned over and over. I felt that dance and dialogue as I circled around the meanings and ideas until they materialized.

Who is Listening?

There is no pain, you are receding
A distant ship, smoke on the horizon
You are only coming through in waves
Your lips move, but I can't hear what you're saying
- Pink Floyd

There is a park in London called Hyde Park where one can take refuge from the busy aural cacophony of a large modern city. In Hyde Park, there is a fascinating corner called Speakers Corner where people have been allowed to speak on any subject deemed lawful to any member of the visiting public interested in listening. It has a rich history of speakers including missionaries, orators, and activists who, over the past two centuries, have used the corner as a place to be heard. In the early 1800s for example, proselytizing missionaries would stand on soapboxes and project their sermons. The soapbox, of course, helped change their elevation and assisted in propagating their sound waves further out. This classic technology aided those early Victorians (and likely many other 19th century speakers around the world) who had not yet begun to envision microphones, radio systems, or fibre optics.

When I was visiting an antique bookstore in Edinburgh, Scotland, I picked up a collection of Punch cartoons (Victorian political satire) and noticed that there were several images that



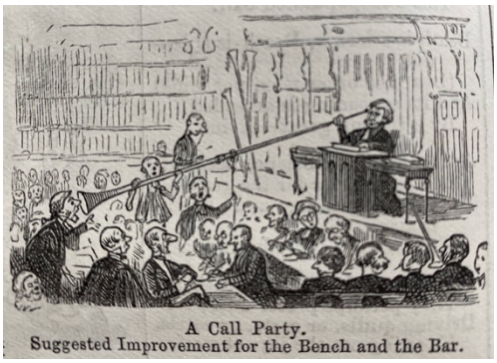


Fig. 11.
Punch, Volume 84, London, 1883

featured ear trumpets used as listening devices by the hearing impaired. I was mesmerized by the devices used as early technological hearing aids. Essentially, the ear trumpets were inspired by and fashioned after seashells that could be brought to the ear to amplify sound waves. The Victorian designs incorporated horn and urn shaped vessels with small tubes that could better connect the hearing impaired to a sound source. Fascinated by the evolution of the hearing aid, it quickly becomes another symbol for close listening for a series of works. For one piece (see fig.12), I cast two large vessel shapes and fashioned them with sprigged lace designs in porcelain and attached them to a headset that could be worn. I kept imagining what it would be like to wear the headset and how sounds would be amplified. I felt humor in the piece as I build it. Trying it on a couple of times in the studio I felt like I was somewhere between a Nick Cave Soundsuit

Fig. 12.
Ear Trumpet Headset, ceramic, metal, plastic, 10” x 13” x 5”, 2020

and a Monty Python mockery of Queen Victoria. In this work and a few other headsets (see figs. 14-15) I deviated from using only ceramic materials incorporating the plastic and metal parts of the disassembled headsets. I felt those nonceramic pieces needed to be incorporated for it to function more like an instrument for close listening.

The Punch book of political satire also featured images of the elderly using ear horns, old men in top hats whispering in each other's ears, and parliamentary antics where long ear trumpets were being used by the house speakers to blast *hearing impaired* crown representatives. The imagery made me think about what it means to be heard by politicians or those in positions of power. Using the mold of the recorder, I cut and stitched several cast pieces together to create a long five-foot *political ear trumpet* (see fig.13) worthy of abolitionist and suffragist William

Fig. 13.
Political Ear Trumpet, ceramic, 5” x 5” x 57”, 2020

Lloyd Garrison, who shouted to a prejudiced majority, "I am in earnest . . . and I will be heard!" (The Liberator 1). This piece, however, is filled with holes! The sounds will never truly reach a listener. The recorder pieces used in the construction look the part for what might be music to the ears yet, disappointingly, sound dissipates as political hot air.

Encouraged by the ear trumpets symbolic way of presenting close listening (albeit futile in that work), I began thinking of the environment and my own walks in nature. What was the natural environment really saying if I listened? Inspired by a recent capture and relocation of an unwanted squirrel that was inhabiting my attic, I cast a porcelain set of ear horns featuring common squirrels running up and down them directly connected to a headset to deeply listen (see fig. 14). The squirrel became the symbolic *voice* for the natural environment reaching out to

Fig. 14.
Environmental Headset, ceramic, plastic, 16" x 16" x 9", 2020

sonically touch. Its presence in both my home and in nature seemed a close connection for it to relay messages back and forth between the two seemingly separate spheres. Furthering this discussion, I cast the 1970s radio headset in ceramic and placed an owl, an animal known for its wisdom and listening, carefully perched on top (see fig. 15). So often we want to connect with animals in the environment but assume that connection must be in the form of touching with our physical hands. Sound Artist Pauline Oliveros, who pioneered the practice of *deep listening*, declared that "Sounds carry intelligence. Ideas, feelings and memories are triggered by sounds. If you are too narrow in your awareness of sounds, you are likely to be disconnected from your environment" (4). Indeed, deep listening allows that contact of the natural world to occur as a

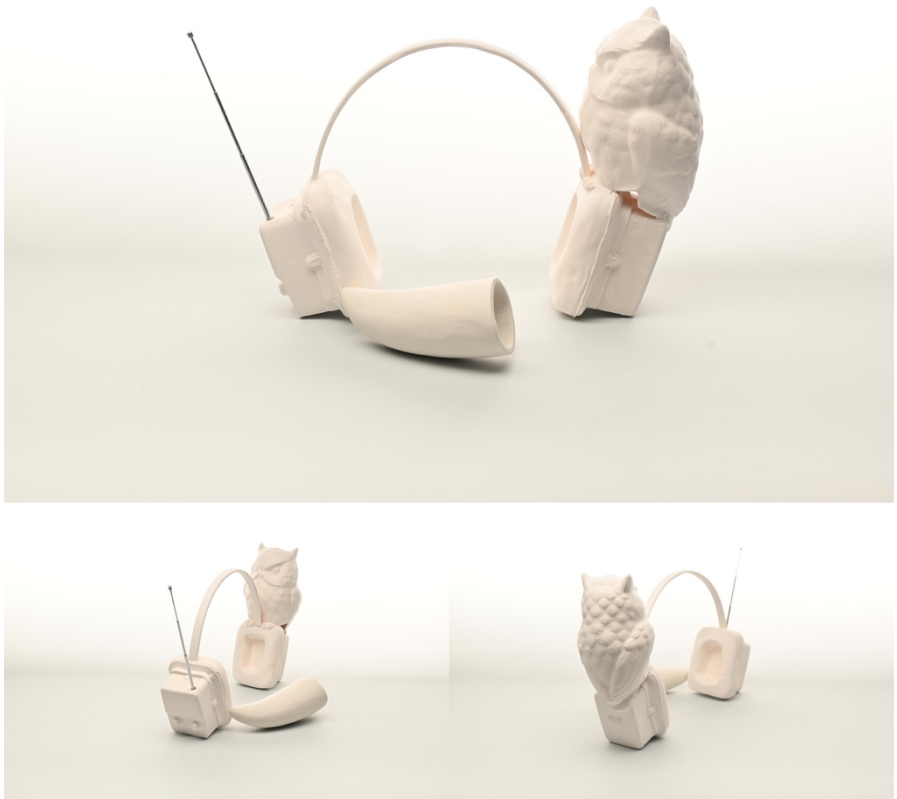


Fig. 15.
Headset of Wisdom, ceramic, metal, 13"x 5" x 9", 2020

form of resistance to touch with physical hands allowing all the living signals and warning signs to be audibly registered. Oliveros continued on to say that,

> Animals are deep listeners. When you enter an environment where there are birds, insects or animals, they are listening to you completely. You are received. Your presence may be the difference between life and death for the creatures of the environment. Listening is survival (4).

Whether it is a woodpecker tapping on a tree, a dog bark or a child's cry, through conscious listening we are touched and become more aware and connected with each other.

It has been said that "listening is a sign of unselfishness." This quote with an unknown origin was something my mother would say to me during my formative years. I believe she was encouraging me to learn the simplicity of focus and concentration during conversation without formulating or composing my own ideas and arguments. I also think she was teaching me that there are more than my views alone and something can be learned from another speaking when time is taken to give their words a place. Listening requires humility, a concept I still grapple with putting into practice. Real conscious listening can be so intense that a conversation can become part of you. It becomes an experience.

What happens then in a society where so many want to be heard and few are ready or willing to listen? In my view, talk *is* cheap when we all speak at once and over top of each other in an acoustical pillow fight. It becomes even cheaper when we filter into silence those whom we assume have nothing to say. Who is willing to listen? *Seen, Not Heard* (see fig. 16) is a work composed of two 20-inch curved slabs of ceramic. A silent video projection displays a pair of lips speaking in a way that only a lip reader might be able to decipher. An ear is drawn on the second slab using graphite and its simplistic curves bend around almost like a question mark hanging in space. I can just hear my mother's words echo again as I reflect on being a listener, but this time as a question: "Is *my* conscious listening a sign of unselfishness?"

Fig. 16.
Seen, Not Heard, film still, ceramic, video projection (no audio), 16” x 6” x 16.5”, 2021

What One Wants to Say but Doesn't

Hello darkness my old friend
I've come to talk with you again
Because a vision softly creeping
Left its seeds while I was sleeping
And the vision that was planted in my brain
Still remains within the sound of silence
- Simon and Garfunkel

There are times my wife falls asleep before I do. I lay in bed motionless under the covers, looking at the ceiling, listening to her deep breathing. If I wait long enough, she'll enter into her dream state and her breathing then changes and is coupled with other noises. These are soft grunts usually, but sometimes there are other sounds that might be words muffled by the layers of sleep. Listening to the sounds of her dream state makes me wonder about what's really happening in her mind (see fig. 17). What kinds of visions, combinations of fantasy and realities, or emotions are being experienced? I'm listening but am rendered helpless to know what's going on inside. I am keenly aware of being on the outside of another thinking being fully unable to interpret the goings on of their inner psychology. What's being spoken and to whom? What thoughts and feelings go expressed but unrevealed by sound? I begin to search my own soul for

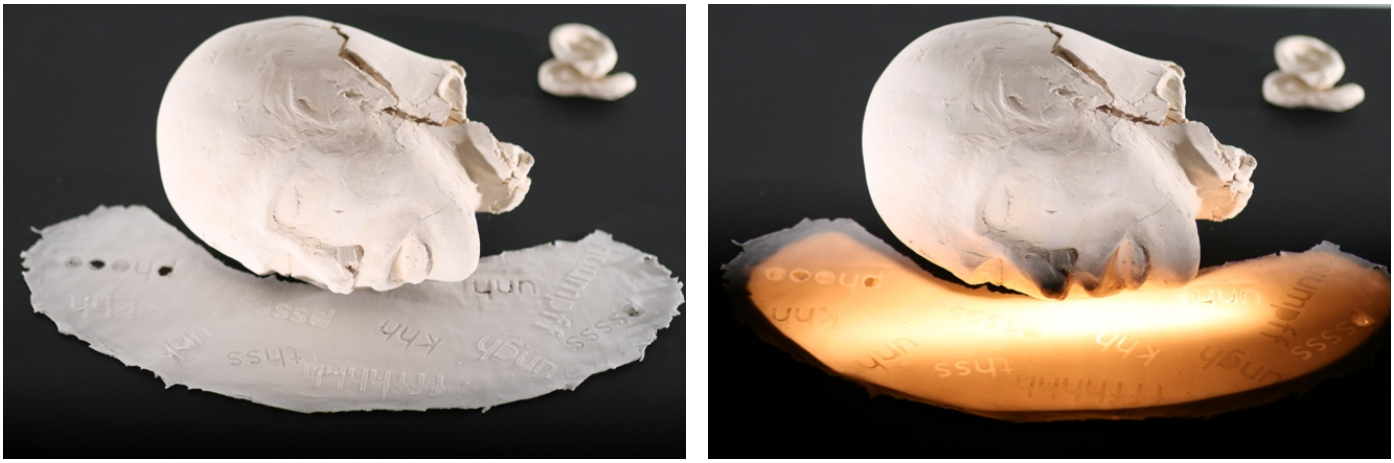


Fig. 17.
Sound Sleep, ceramic, LED light, 24" x 24" x 7.5", 2021

things that I suppress. What messages do I long to speak or call out to God or the cosmos? I imagine bottles and vessels with written texts of the soul cast into oceans, forever floating and never voiced.

Magdalene Odundo said, “ceramics affords us to have a vessel, an inside and an outside” (29:50). As part of her making practice she would pay specific attention to how the inside of the vessel was made just in case it should ever break and someone could see inside it. She went on to say that

> the inside is the most important of the work. If the inside isn’t made well then neither is the outside. The inside is the most important, it’s the womb for all my thoughts and imagination. It’s the healer’s storage space . . . for feelings and emotions that inform the outside (47:26).

Speaking of the vessel, Julian Stair said, “[it’s] a container of the mind or of the liquid” (Arts and Arch 51:23). His work titled *Quietus* was a series of large-scale sarcophagi. In his discussion of the work, he indicated that the vessel has so many references to the human body such as a foot, belly, or neck, and found justification in asserting that the inside of the vessel could be considered a place or container for the spirit or soul (1:06:20). The psalmist wrote, “put thou my tears into thy bottle: are they not in thy book” (Psalm 56:8)? This is another way of saying gather the evidence of my sadnesses and remember them.

Indeed, the vessel can be seen as a place to put our feelings and emotions, even an extension for one’s soul. I break my meditative routine of vase making by taking my vases and then slicing them open with a scalpel and peering into the vacant interior, looking for something that I can’t see. I record the performance and call it *Soul Searching* (see fig. 18). I soon begin to craft strips of clay and inscribe messages onto them. I fold them up and drop them into the

vessels as I make them. Some vessels I cut open revealing the contained message. Others are uncut, the messages unseen.

Fig. 18.
Soul Searching Performance and inside text, film stills, porcelain, video (no audio), 2021

Fig. 19.
Soul-Searching, ceramic, 16” x 10” x 6.5”, 2021

I feel determined to consider both the inside and the outside of forms for this exploration of things I'd like to voice but never do. Much like my *Soul-Searching* exercises I consider what voices are on the inside and how they are heard. So importantly, sound consultant Julian Treasure remarked of our inner voice that "you are *not* your inner voice, *you* are the one who is listening [to it]" (118). I cast several vases and then begin to combine them together into larger forms. When secure, I use a scalpel and slice out sections revealing the interior of the compositions. Long strips of porcelain that have inscribed texts and messages of thoughts and emotions are twisted together and placed within the forms. During the firings, the exterior forms slump and warp around the interior message strips like a body gripping onto the things inside

Fig. 20.
Hidden Message, ceramic, 18" x 4" x 5", 2021

that it doesn't want revealed. I picture myself throwing the sculptural vessels into the ocean, knowing the internal messages will never be spoken or revealed.

Fig. 21.
Hidden Message (in process) and close-up side detail, ceramic, 2020

What Resonates? From Surface to Interior

Oh, how I long to be the man I used to be!
Fascinating rhythm
Oh, won't you stop picking on me?
- George Gerswhin

My father and mother loved opera. As a child, I found it entirely difficult to see how. Still, my mother, an amateur mezzo soprano, made several low-profile public performances with her sister who was a soprano. Their duets would cause audiences to cheer and praise. To me, it seemed very loud and the vibrato was truly perplexing. I recall one performance where I was sitting with my cousin on the far right of a church stage, uncomfortably stuffed into a suit and tie, and in full view of the audience. I seem to recall that it was in the middle of Delibes' Flower Duet when the audience suddenly erupted with laughter. I looked over at my cousin and found him with both of his hands around his neck pretending to strangle himself. I clearly wasn't the only one suffering.

Since then, my feelings about opera have become quite the opposite. During my undergraduate university years, my father took me to opera performances featuring Kathleen Battle and Kiri Te Kanawa. That changed everything. I recall sitting in a performance listening to Kathleen Battle, who was dressed in an amazing yellow dress, and who sang with such clarity and force that I literally felt my body resonate! It was tremendously moving. I have reflected on this experience and wondered how I could render my vessels (metaphors for the human experience) as resonators. This set of works began with scientific studies of resonance patterns of closed and open columns. Often, the resonant vibrations of particles (essentially longitudinal standing waves) are translated by science textbook authors into sine wave forms to express areas

Fig. 22.
Resonance Vessel (in process), ceramic, 3.5” x 10” x 3.5”, 2020

of air compression and rarefaction within a form. Fascinated with the actual particle vibration, I cast a vessel (see fig. 22) with a white clay body exterior and dark stained clay body interior. Using a drill, I partially drilled into the surface to exploit the contrast and reveal a dotted resonance pattern following the fundamental frequency patterns of nodes and antinodes in a closed column vessel. In another series of vessels, I examined air pressure patterns within vessels and Chladni plate vibration patterns. Chladni plates are essentially flat plates connected to tone generators. Fine sand is placed on the plate to assist in locating where the medium of air reaches points of minimum and maximum displacement in a beautiful display of seeing the unseen medium of air through the forces at play in sonic vibration. In order to take these resonant patterns as a form of imagery and translate them onto the surface of thin ceramic cylinders, I had to invent a new technique (see fig. 23) to capture the air particle behaviour through a pointillistic surface approach using thin foam, a sharp needle tool and a plaster mold of the foam. Techniques, like

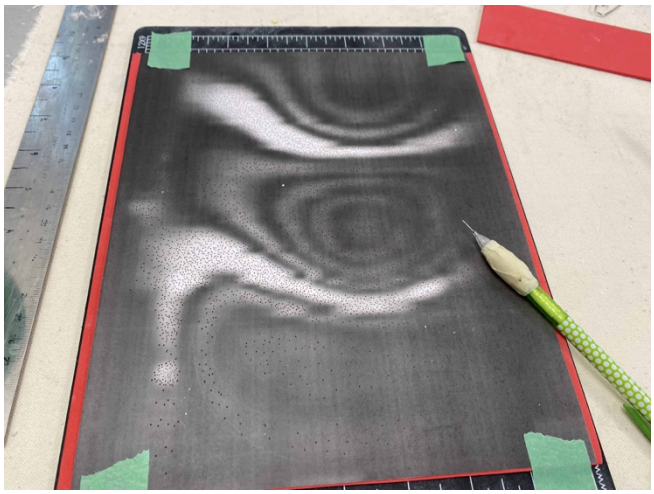


Fig. 23.
Resonant Surface Vessel (in process), 2020

languages, are invented to speak the art and not vice versa[3]. Returning to the cylinder as a unit of form was an important aesthetic choice as well. It amazes me how little of form it takes to reference the human body with a vessel. By positioning each vessel relative to each other in space and by varying the heights and widths of the vessels they become a small community with their own unique conversations and resonant qualities (see fig. 24).

Fig. 24.
Resonant Surface Vessels, ceramic, 20” x 9” x 9”, 2021

[3] In my work previous to my MFA I would search out and study ceramic techniques with an insatiable appetite thinking that the technique alone might speak the art. My thesis work has shown this to be quite the opposite.

Percussionist Dame Evelyn Glennie declared, “Hearing is a form of touch. You feel [vibrations] through your body and sometimes it almost hits you in the face” (Treasure 183). The resonance designs featured in fig. 24 capture the physicality of the standing wave vibrations on the exterior of the vessel. However, in the opera performances my father took me to, my body literally vibrated within, which was emotional and moving. If sound resonance can be featured as an external surface design, what could an interior conception of resonance look like? Scaling up my vessels using three-dimensional software, I created a large two-foot profile template and a plaster slump mold to make vessel halves where an internal resonance (or propagation of sine

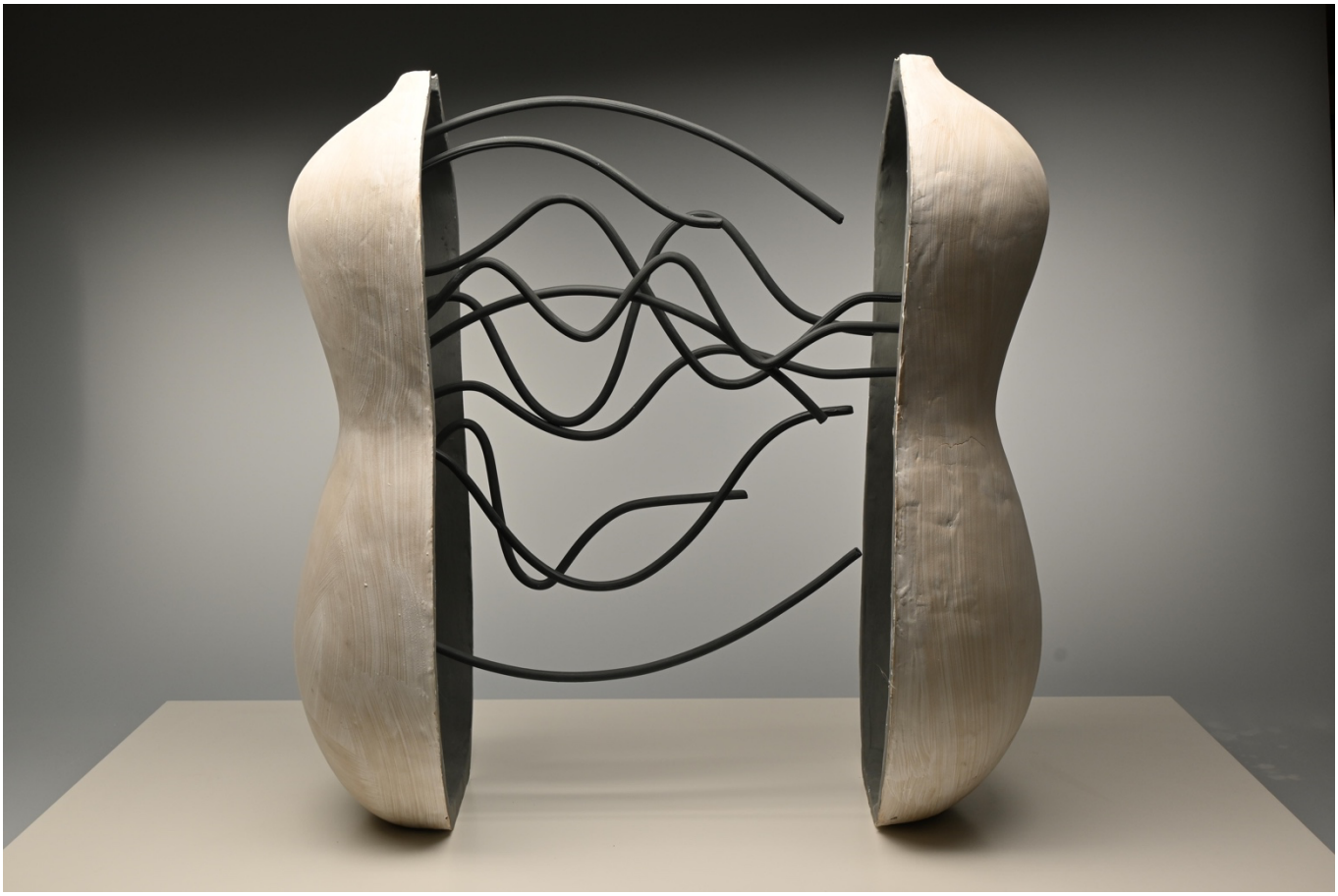


Fig. 25.
Resonating Within, ceramic, epoxy, 23” x 11” x 24”, 2021

waves) could be seen. I kept the halves separate, as if they had been cut open to reveal the internal workings (see fig. 25).

Can words or sounds once heard be captured as a kind of mental resonance or vibration? I often hear people speak regarding what resonates with them. Indeed, our language employs the concepts of sound to articulate the ring of truth or emotion. After all (and to reiterate Ralph Nichols), isn't one of our deepest human desires is to be truly heard and understood? In thinking about this, I decided I would excavate the human head much like I did while creating my vessel halves or soul-searching vases. I cast a human head in clay and once done, I sliced it in half and fashioned thin extrusions of black ceramic at connecting points between imagined brain hemispheres displaying a kind of mental vibration or reflection. Gold leaf was used to bring our eyes to points of contact or connection within the cranial hemispheres, my ultimate expression of neural firings within our synapses. As I stood back and looked at the piece, I wondered, "could this be epistemology"?

Fig. 26.
Epistemology, ceramic, epoxy, 8” x 7” x 9.5”, 2020

What Does it Mean to Be Heard?

When setting out to describe the human desire to be heard, what languages do we have to visually describe those desires and what languages do we need to imagine or further develop? Wittgenstein declared, “to imagine a language is to imagine a form of life”. To the potter, the vessel *is* the imagined language for the human experience and through my haptic interactions with clay material, I found paths of expressing those inner places of sound and thought through embodied action. This thesis set out to investigate sound as a form of touch and in the process of deep listening contemplate its affects using sculpture to communicate about it. Additionally, it asked if artwork about the phenomena of sound could be made even if the artworks themselves produced no sound. For this thesis I used clay to haptically map out an overlapping of the fields of ceramics and sound art to conceptualize the spaces between them. The result of this was the production of a series of rhythmic objects, instrumental listening devices and excavated vessels. Each group of artworks revealed something vitally important as well as indicated places to further explore.

For example, the series of objects (figs. 1-3) became an important bridge for me to move from a background of making designed functional ceramics into more formalized sculptural objects. This series shows how I enter into a work, not with a blank slate, but with a background in physical science from which I can draw on for creating new art. Techniques such as throwing and slip casting and mold making continued to serve as ways to create multiples of objects that could be attached and arranged in space to illustrate the important design principle of rhythm. Forms were organically arranged into patterns, waves and vibrations as I thought out and scaled up objects inspired by microscopic physical interactions of air molecules. This series of work left

me with questions about scale and form. Indeed, I was scaling up imagined microscopic objects, the smallest bones in the human body, and vessels to show structure. In what ways do I want to further engage scale? Moreover, these objects are primarily about form and the meanings behind them are only loosely associated making me question better ways to make meaning with sculpture in this way.

The series of work featured as instruments (figs. 12-15) were the first works where I found that I could employ symbolic meanings into artworks as well elements of humor. This was critical in my research because it is the first point in my studies where I realized art as a conceptual place to say something more than just a location for formalistic designs and aesthetics. I found that I could make work that could say something about how sound affects us in the environment, through political discourse, or personal agency in sonic experiences. In this series, there were also some important experimental deviations from using purely ceramic materials. Plastic headsets, metal antennae, and rubber tubing were used. Though I wasn't directly questioning the ability of ceramic material to be a conceptual medium, it was the first time I felt that an entire piece did not have to be comprised of it.

In the series of vessels (figs. 18-25 and 8-10) I realized just how important the inside of the vessel is as a place of expression and how vital an exploration of it is in my work. Understanding the sonic experience helped me search inwards to better understand and conceptualize psychological space. This resulted in my cutting open, searching, and excavating vessels to haptically search out where emotions and feelings reside during or as a result of sonic experiences. The cutting and slicing served as a way to search out things unseen and imagine what they might say or look like. They became acts of revelation. Still, when the objects were

fired, the exterior parts warped around the inner pieces placed within and the sculptures became imbued with a sense of mystery.

When I step back and look at these three series of works completed for this thesis, I see how a study of what it means to hear and be heard has helped in imagining rhythms of scaled objects, examining physiologies, and excavating exterior form to search for inner meaning. Additionally, this thesis shows evidence of how languages, such as science, can further assist in a generative way to conjure new expressions of forms and phenomena contributing to the fields of both ceramics and sound art. Philosopher Jacques Derrida noted that "the centre [of classical thought] is paradoxically, within the structure and outside it" (2). The organizing structures investigated in this thesis serve as illustrations of how one listens (and desires to be understood) and considers some of the ontological meanings behind the generation of sounds and how they are physically and psychologically experienced. Our current cultural experiences can become so saturated with noise creating a climate of displacement and disembodiment. Thus, careful listening can resist this effect causing me to hypothesize about the primacy of the auditory experience over a visual one.

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