

“A Sounding Happens: Pauline Oliveros, Expanded Consciousness, and Healing”

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A sounding happens. The sound continues or is followed or joined by another sound. The trajectory of sounding gradually constitutes a long line of soundings that is perceived as a shape or form that is music. Within that trajectory are myriad decisions that are intuited and join to refer back to the initial sounding and forward to the ending sound. – *Pauline Oliveros*¹

Our essay is written with the deepest (pun intended) respect for the life and work of Pauline Oliveros. We draw on her performances, recordings and writings, those of her numerous collaborators and others who write so well about her, and on our own experiences. By writing together, by generating a dialogue, or, perhaps better, by performing an improvisation around Pauline’s influence “a sounding happens.” Our metalogue of multiple voices, fragments of situations, and historical resonances parallels and reveals the subjective, experiential and embodied modes of knowing and healing that Oliveros’ work ultimately achieves and teaches. As in publications by Oliveros and her collaborator Ione, we blend methods of analysis and intuition through different modes of writing.² This format is designed to encourage the reader to allow connections and continuities to emerge.³ Mirroring the participatory role of the audience in many of Oliveros’ compositions, your performance as a reader plays an integral role in producing meaning out of our words. Please listen and sound with us!

Listening to this space I sound the space. Listening to the energy of all who are present I sound this energy. Listening to my listening and your listening I make music here and now with the assistance of all that there is. I dedicate this music to a world where peace is more exciting than war.

–*Pauline Oliveros*⁴

Our process led us repeatedly to Oliveros’ goal of expanding consciousness. Our meditations converged on exploring what that actually means and where it may take us in the future. It is no small feat to bridge such apparently contradictory worlds as technology and intuition, what we call “techno-intuition”. Allowing rational and supra-rational forms of knowledge to occupy the same space is by its very nature open to criticism from one side or the other. Yet, as a musician, Oliveros grounds these ideas and apparent contradictions in practical work, the practice of making music in the moment and the importance of the body in this process. She writes:

I consider my task to be to increase my conscious awareness as much as possible each day of my life and respect what the body signals to me through sensations and feelings just as much as what my verbal mind tells me through thoughts and intuitions. Synthesis and integration of all of these modes of perception and knowing empowers my musical being in the world. –*Pauline Oliveros*⁵

Following her lead, we embrace her synthetic and integrated model of creating knowledge. Doing so provoked us to seriously investigate the following topics: altered states of consciousness, telepathy and telematics, the artist as shaman, healing, and deep listening for environmental transformation.

The proper relationship of attention and awareness can be symbolized by a circle with a dot in the center. –*Pauline Oliveros*⁶

It is 1997, I am 21 years old and I am walking alone for four days and nights along the Devon coast and Dartmoor, leaving sound sculptures for an ‘absent public’ with found materials along the way. As a music student, I am absorbing the American experimental composers and trying to figure out how my music and art making relates to the environment. It is the first day of my journey. Crossing a field with my dog Mungo, we are chased and encircled by a herd of aggressive young female cows. This occurs at the height of the BSE ‘Mad Cow Disease’ epidemic and millions of cattle are being slaughtered. I know that people have recently been trampled to death by herds like this. They come in close and push us with their heads, rolling their eyes, stamping their feet, pushing Mungo over, cow saliva covering us. My dog is crouching on the ground shaking but I hold him on the leash so that he doesn’t run and get trampled when he gets caught at the edge of the field. I am shouting and lunging at the cows, throwing my arms at them, stamping my feet, swaying around in circles to ward off the cows coming at my back, trying not to be knocked over with the big pack on my back. We are encircled and there is no one around to help. I see a gate at the edge of the field, but we are in the middle. I steadily work my way towards it, somehow keeping my feet, dragging Mungo along with me. Nearly there, I see a very large bull appear behind me. We make it to the gate, I throw myself over it, Mungo squeezes underneath, we are both lying in a shaking heap, lost but safe from death by trampling.

“Listen to everything, all the time and remind yourself when you are not listening.” –*Pauline Oliveros*⁷

This oft-quoted imperative statement by Oliveros is actually two statements in one. The first part, “Listen to everything, all the time,” instructs us to be constantly attentive to sound, the sounds inside us and those outside, the interactions among those sounds, how they affect us and the environment in infinite feedback loops. Although the two parts are joined by the conjunction “and” suggesting “a + b,” the second part, “remind yourself when you are not listening,” is more than additive; it is also contingent. The second part functions like a conditional construct in a computer program, e.g., “if not x, then y.” Here the conditional construct takes the logical form, “if not a, then a” or in narrative form, “if you are not listening to everything, all the time, then remind yourself to listen to everything, all the time.” In other words, it is a recursive loop with a redundant safeguard designed to lock the practitioner into the desired behavior. The first part is itself a mantra: a self-programmed guiding principle that reminds us to refocus on what is important. The second part is

subterranean constellation
Photo by Todd Birdsong.

Sounds attack, decay and fold –
their latency enveloping and
possessing you like a spirit.



a meta-mantra; as a reminder to perform the first mantra, it loops us back to it if we should happen to stray. In cybernetic terms, the second part functions as negative feedback that helps us maintain our mantric self-programming, to regain our own inner balance and preserve homeostasis. The meta-mantra implicitly acknowledges that the task is highly challenging and perhaps impossible to achieve in the ultimate sense, short of becoming divine.

I am listening again to Oliveros' most well-known recording, *Deep Listening* (1989), performed with Stuart Dempster and Panaiotis in a two million gallon underground cistern, precipitating the birth of Deep Listening as a practice. Listening to the recording takes me into this place deep underground and immerses me in a liquidity of sounds let loose by the musicians in collaboration with the cavernous space. The long forty-five second reverberation makes these sounds hang in the space, filling it as if with water, like adding a drop of pigment into a bowl of water. Anthropologist Michael Taussig illustrates how color is not simply a quantitative characteristic added to an existing object, but rather a "polymorphous magical substance" that has the ability to transform states of consciousness.⁸ This sense of color resonates with the sonic palette of *Deep Listening*: trombone, accordion, didgeridoo, voice, all sounds of the breath and air. The musicians are pushing the air around them, mixing and stirring these polymorphic magical substances. I imagine inhabiting a three-dimensional liquid space, being free from gravity, in outer-space or underwater, and at the same time deeply grounded. As this sound-cauldron bubbles underground, the concentration is evident as the musicians are absorbed into their environment. As a listener I am pulled into the moment of each sonic happening, each sounding. These are ecstatic mental spaces, sonic spaces laid out for us to explore in multiple dimensions, conjured by musicians with supreme command of their improvisational abilities. In their own way and with their own music, they are tapping into the age-old understanding of how music gives access to fields of expanded consciousness, to trance states, those that are broader than the everyday awareness of our conscious mind.

I use the term "sonic consciousness" to access such states of being.⁹ By this I mean a heightened awareness of sounds around us and of the materiality of sound. Learning to listen more acutely to the sonic environments we live in day-to-day is literally ear-opening to my students. They inhabit an oculocentric world, in which their sonic environment has been usurped by recorded music incessantly played through headphones. Listening to other beings, other phenomena, other machines, strengthens relationships between us and our environment. It demands our attentiveness to other beings, and calls into question distinctions between human and nonhuman, sentient and insentient. Sound is often referred to as immaterial because it cannot be seen—a visual bias. Yes, it is non-visual, or perhaps invisible, but its material nature allows it to be created, sculpted, and manipulated. Sound asks for and requires us to pay attention. It requests a relationship with us. And it is active in these demands, which happen in the moment and can be fulfilled at that moment. Sonic attention is acute and diffuse at the same time. It has the effect of situating us within a field of relationships, a field of different qualities. Oliveros' challenge to listen to everything all the time has the effect of shifting our state of awareness from one consumed with *doing*, to one attuned to *being*.

Oliveros admitted that listening to everything, all the time is a "seemingly impossible task." In this sense it is both a mantra and a koan, an enigmatic riddle that serves an aspirational function. As intimated in Jack Kerouac's beat manifesto, *On the Road* (1951), the journey is at least as important as the destination. We may never fully realize Oliveros' command but the active pursuit of it reveals, onion-like, ever-richer layers of "sonic consciousness," a term that suggests how listening deeply can generate a heightened awareness

of self, environment, and the relationship between them. To listen to everything all the time must incorporate both "focal attention" and "global attention" to use her terms and, ideally, one simultaneously tunes-in to both. The performer must listen in a global mode in order to respond meaningfully but must shift to focal mode in order to "verify that the response was correct." The performer must remove intentionality from the equation, for if she is focused on her own intentions she will be distracted from listening to everything all the time. "The best state is for the player to have nothing in mind," Oliveros instructs. In improvised music performance, only by listening to everything all of the time—other performers, the audience, the environment, oneself, and the interactions between them as a temporal-spatial phenomenon—can one participate in the sort of musically meaningful exchange to which Oliveros aspired. To this end, she thought that her role as a composer was to create an "attentional strategy" that structured how performers play and develop a piece as it unfolds through collective improvisation.

Oliveros' mantra/koan "Listen to everything..." applied not only to her composition and performance practice but to her life and to life in general. As vital as it was to music, she believed that this method was equally vital to human interactions and to interactions between humans and non-humans on global and cosmic scales. Artist Cory Arcangel, a former Oliveros student at Oberlin College, recounted that,

The thing I took away from your class was about living more, about how to conduct yourself on a daily basis. It sounds crazy, but I just remember thinking about creativity as something bigger than "composition" or "counterpoint" or "performance." It was a way of being that involved listening to others and the world . . . and responding.¹⁰

Oliveros believed that if everyone (or even many people) followed this path, the resulting global expansion of consciousness would have healing effects on individuals, human civilization, and the Earth. As she noted, the *Sonic Mediations* can catalyze healing under several conditions, including when "individuals feel the common bond with others through a shared experience" and "when one is aware of and in tune with one's surroundings." In this sense, listening to everything all the time is itself an attentional strategy, a noble way of co-existing, and a survival technique.

The proper relationship of attention and awareness can be symbolized by a circle with a dot in the center. The dot represents attention, and the circle, awareness. In these respective positions, each is centered in relation to the other. Awareness can expand, without losing center or its balanced relationship with attention, and simultaneously become more inclusive. Attention can be focused as fine as possible in any direction, and can probe all aspects of awareness without losing its balanced relationship to awareness. —Pauline Oliveros¹¹

It is 1998, I am 22 years old, sailing across the Sargasso Sea. I'm trying to complete my graduating project, this time by making a journey at sea to assess an "absent public" in the Bermuda Triangle, legendary for disappearing ships. The sky is full of fast-growing thunderclouds that pile up in high columns. We nervously watch them growing around us. We have never sailed in this part of the world before. There is almost no wind, so we motor for hours day and night avoiding clumps of floating Sargassum seaweed. It is hot and the sun is powerful. We make the mistake of not rigging up shade for fear it will impede our speed. Three or four days have gone by and the heat overtakes me. Accompanied by the fatigue of menstruation my body gives in to exposure and heat-stroke, vomiting, shaking and hallucinating. Look! I can see the tall masts of old

sailing ships over the edge of the horizon! All this time the inboard diesel engine is throbbing, producing a drone that resonates the boat. Half delirious, I pass the time singing with the vibrating overtones and difference tones. It never changes but I am always content to sing to myself. I realize that days and nights have gone by and despite seeing the water and weed pass by the hull of the boat and the small trail of disturbed water behind us, it appears as if we have moved nowhere. I can trace our position on the chart but I can see no visible change in my surroundings. We are floating in the center of a disk, never moving closer to the circle of the horizon that surrounds us.

Psychedelics were probably the single most significant experience in my life. Otherwise I think I would be going along believing that this visible reality here is all that there is.... [T]here are levels of organizations of consciousness that are way beyond what people are fooling with in day to day reality. —Jerry Garcia¹²

Oliveros, like the beats and the generation that came of age in the 1960s in the US, was seeking alternatives to the restrictive, parochial culture of post-war US: McCarthyism and the House Un-American Activities Committee, the fear of the bomb, homophobia and other sexual hang-ups, patriarchy and the subjugation of women, the military-industrial complex and the Viet Nam War, sprawling and monotonous housing developments like Levittown, and the cookie-cutter lifestyle these elements conspired to sustain. Economic prosperity and a large, post-war generation fueled a powerful youth culture that opposed the “Leave It to Beaver” world of their parents. It witnessed, participated in, and benefitted from a concomitance of factors, including the Civil Rights movement, the attitudinal shift that beat poets and writers offered, the Women’s Liberation movement, the sexual revolution, the proliferation of rock and roll, the availability of marijuana and psychedelics, and widespread protests against the war in Viet Nam. They were emboldened to question authority and to reshape the world in a new way.

The Summer of Love, the Grateful Dead, the Haight-Ashbury hippies and drug culture were thus all part of a larger shift in consciousness, sometimes referred to as the “new sensibility,” a term popularized by Susan Sontag and Tom Wolfe. One aspect of this shift was explicitly involved with trying to expand consciousness through music and psychedelic drug experiences, often in combination. The Grateful Dead (or the Dead, as they are known for short), performed at some of the mid-sixties “Acid Test” parties hosted by Ken Kesey and the Merry Pranksters, in which people “turned-on” to LSD, which was legal at the time.

Both Oliveros and the Dead were committed to improvised music, which was essential to their common passion to always be creating something new. The Dead experimented with LSD and other psychedelics both onstage and off, and their music, particularly with respect to improvisation, evolved in relationship with these experiences. The Dead’s extended improvisations—they are the original “jam band”—are a distinctive feature of their live performances. Like Oliveros’ improvised music and attentional strategies, in the Dead’s jams and their even more abstract “Space” group improvisations, the band members closely listen to each other, intuitively anticipate and respond to each other’s sounds, and channel musical ideas from the audience and from other sources.

Oliveros and the Dead both performed as part of the legendary Trips Festival, a three-day acid test in San Francisco in 1966, with “Side Trips” at other venues. The event was co-produced by Kesey and the Pranksters, Stewart Brand (who published the *Whole Earth Catalog* in 1968), and Ramon Sender, who co-founded the San Francisco Tape Music Center (SFTMC) with Oliveros and Morton Subotnick in 1962. The Trips Festival thus brought together

a remarkable convergence of psychedelics, hippy culture, rock and roll, electronic music, and experimental dance and theater, “a meeting of the San Francisco avant-garde arts scene and the counterculture.”¹³ From Brand’s perspective, “The Grateful Dead and the Merry Pranksters pretty much stole the show.” The audience “sort of applauded politely” for the avant-garde performances, but “they wanted to dance.”¹⁴ Ken Babbs, a Merry Prankster who helped organize the Trips Festival, credits the Dead with playing a central role in the Acid Tests: they were “the power that propelled the rocket ship everyone rode to the stars and beyond the whole night the acid test took place.”¹⁵

It is unlikely that Oliveros rode the Dead’s rocket ship to the stars and beyond in 1966. Indeed, she and Subotnick were alarmed by Sender’s involvement with Richard Alpert and the psychedelic movement in 1965.¹⁶ They politely declined invitations to partake with Sender, despite his efforts to convince them of “the beauty of an LSD trip and how it could inform our humanity and creative work.”¹⁷ According to the Trips program, Oliveros performed with Elizabeth Harris and the 12-foot light sitar as part of the Sunday 10pm Acid Test, with a long list of participants including the Grateful Dead. At a “Side Trip” at the Encore Theater on Sunday at 3pm, Oliveros performed *A Theater Piece*: an hour-long, collaborative, multimedia event. Sound sources, including Oliveros’ compositions *Mnemonics III* and *Rock Symphony* both recorded at SFTMC in 1965, were processed by tape delay.¹⁸

Like many artists of her generation, Oliveros was on her own path to expanded consciousness that had a kinship with psychedelic culture but without all the accouterments or popular acclaim. Through her initial study of Karate and subsequent exploration of other non-western disciplines and systems of knowledge, her practice and process became increasingly meditative. By 1970, she had begun writing the *Sonic Meditations*, a landmark in contemporary music composition that continues to inspire composers and performers nearly half a century later. As William Osborne observes,

“Oliveros’ phenomenological analysis of listening led her to a special interest in the involuntary changes that occurred while the Ensemble sustained tones.... [S]he began to lead improvisations that encouraged spontaneous, subconscious transformation.” In this respect, her “involvement with meditation synthesized academic research with the revolutionary, consciousness-expanding characteristics of the new sensibility.”¹⁹

Although she shunned drugs, Oliveros recognized parallels between the elevated states of consciousness induced by psychedelics and those stimulated by her own methods. To wit, regarding the Deep Listening class that she taught at Rensselaer Polytechnic Institute in the 2000s, she explained,

I teach experiencing a heightened awareness of sound and sounding and silence, without drugs.... What happens is that your own serotonin—dopamine—is released when you experience the pleasure of listening and you don’t necessarily need anything to amplify that, although some people need drugs to break through to the point where they can have that experience. It’s why there’s so much drugging going on in the student population. Deep Listening is an inexpensive, healthful, and accessible alternative to drugs. Drugs take over the body whereas the effects of Deep Listening come from one’s own abilities.²⁰

Oliveros shared a passion for the nexus of music improvisation and expanded consciousness with the Grateful Dead and psychedelic culture. She tuned-in to and followed her own idiosyncratic path with the rigor that her vision for the future demanded. In common

with the utopian dreams that characterize the new sensibility, she unflinchingly pursued a new musical language that pushed the limits of the western concert tradition and entered into the domain of healing. Ultimately, this pursuit strived to bring “music to a world where peace is more exciting than war.”²¹

It is 2009, I am 34 and in Amsterdam, telling my Dutch therapist how disturbed I am that the EMDR treatment he has been giving me has changed an old repetitive nightmare. While listening to clicks once per second alternating between my ears, I have been recounting the moment of explosion of my Satellite Sounder lithium ion batteries in a hotel and the subsequent fire. I remember exhibiting my GPS instruments at the Schirn Kunsthalle Frankfurt and it is going well. I put the batteries to charge at night to be ready for the next day's events. A sudden flash and what seems to be an electric shock jolts me awake. I smell foul smoke and open my eyes to see a fire just an arm's length from my head! Remembering hotel fire codes I do my best to smother the fire with a pillow, open windows, and try to find the emergency number through a swimming sea of numbers on the hotel telephone. It rings, "I have a report of a fire in your room" ... (I later discover that John Cage was in a fire in Frankfurt too, somehow that intrigues me, what kind of initiation rite is this anyway?!) But that was not the nightmare that has changed. Now, instead of the cows chasing me and waking in a panic, the cows are walking the other way! How, please tell me how this is happening?! He answers that he wishes he was a psychotherapist and able to interpret dreams but this is not his expertise and he really doesn't understand how EMDR could achieve such results. He becomes so concerned that he immediately stops the therapy. I realize I need a dream helper to heal myself!

Healing is central to Oliveros' work and her approaches share affinities with recent therapeutic methods. The last decades have seen a dramatic increase in the clinical use of mindfulness practices such as MBSR (Mindfulness Based Stress Reduction) to treat multiple forms of stress and psychological illness.²² Mindfulness and meditation practices (purposely detached from any religious or spiritual tradition) have entered the mainstream, from large corporations to the military, as ways of increasing success in stressful environments. There has also been a cultural absorption and often, appropriation, of meditation and body practices that come from various spiritual traditions, notably Buddhism and Hinduism. While acknowledging her specific influences and interests in spirituality, Oliveros does not espouse any particular way but encourages a complete openness. As a participant in a Deep Listening session, or as a listener to her concerts, or as a reader of her many writings, one is never required to adopt a specific spiritual path. Rather, while drawing on an eclectic mix of influences her work embraces and celebrates the individual's choice.²³

Through her intensive studies of Zen Buddhist, Tibetan Buddhist and yoga meditation and the body practices of T'ai Chi, Qigong and Karate, Oliveros developed a discipline and language of mind-body energetic flow and control. Like the techniques upon which she drew, her practice and pedagogy are designed to rebalance the body's complex systems and thus promote health. It is inspiring to observe the flowing forms of a group doing Qigong. However, it is transformative to experience in one's own body how each form activates particular energetic fields and flows. In other words, these practices must be directly experienced in order to gain an embodied understanding of their physical and mental effects. Similarly, one cannot fully understand or be transformed by Oliveros' work without experiencing it directly. Her *Sonic Meditations* and Deep Listening workshops were designed in order to enable non-musicians to participate. In addition to musicians like myself, The Deep Listening Retreat that I attended also included a number of professional

healers. The processes and techniques in which we were immersed had notable healing effects, both in the short and long term. Healing takes place through the use of sound itself, the use of voice, specific vibrational frequencies as they affect the body, the support of one's breath, the support of the group, and the focus of listening. As Stuart Dempster, trombonist in the Deep Listening Band, writes, “The therapeutic component is so strong in this practice that one can make a case for it being the primary purpose of the work. There are audio, dreaming and movement exercises throughout containing either a direct or indirect healing message or result.”²⁴

In the Deep Listening Retreats, Oliveros' own techniques are amplified by those of her collaborators, Heloise Gold (dancer/choreographer and T'ai Chi/Qi Gong instructor) and Ione, (playwright/director and “Dream Keeper”). This combination of approaches places the composer's work in a context of therapeutic healing rather than academic scholarship and electronic music. The early *Sonic Meditations* were initially developed as a way of bringing presence and voice, and the healing that they bring, to women who were under-represented in musical life in her community at UC San Diego.²⁵ In the Deep Listening Retreats, Gold, Ione, and Oliveros combined practical techniques of sound improvisation, dream work, and movement to help participants recalibrate, transform, and heal. By providing a model of compassion and generosity throughout, trust is built up through the collective relationships formed by the participants. The Deep Listening community that develops around these retreats and continues afterwards demonstrates the need for methods that enable people who feel marginalized to claim their voices and strengthen their positions.

It is the summer of 2010, I am 35, and immersed in a week-long Deep Listening Retreat with Pauline Oliveros, Ione, and Heloise Gold, at a small art center in rural Catalonia. I am staying in a very primitive stable and I wake very early, walk across the field high with wild flowers at dawn, meet others under the small pine trees; silence, no talking, walking meditation up through the woods, stopping and lifting the arms in a great arc breathing in and pulling the energy into the lower body, to a large golden field; T'ai Chi and Qi Gong, group movement improvisations, facing the six directions; the slow walk back to the small house and rough land around it for breakfast under the trees; all very open, warm summer weather, calmness throughout and an expansion of listening, an expansion of general awareness, a sense of being part of the place and not a separate visitor on it.

We are eating breakfast in silence—aware of the awkwardness of being with others and not using words to navigate—how to thank without using words, how to ask for something? Yet this attunes me to other's needs, closer to the subtler exchanges of the group and individuals. Food of course tastes better, eating is more conscious, being with people without using words I feel more present and engaged. My sensory awareness of the early morning environment is magnified.

After practicing sonic meditations with Pauline (the Tuning Meditation is particularly powerful for the group) Ione the Dream Keeper leads us into the week's work we will be doing on dreams. This is partly so that we can learn to listen all the hours of day and night while awake and while asleep. Ione asks us to always recount our dreams in the first person present tense, which helps to bring them into present consciousness. She also lets us know that there is no one proper interpretation of a dream, and that a dream fragment contains a kind of holographic image of the whole dream. We form dream-pods, mine is a group of three women, and we work on our dreams everyday together. I start to notice that I dream almost every night of explosions and fires, usually in cities. By bringing the dreams into my conscious mind and intervening

sounding; resounding
Photo by Todd Birdsong

There is a binary relationship
with sound; the internal
and external that can be
expressed like morse code
moving between us and our
environments.



with them through lucid dreaming I begin the long but real process of healing.

It is about two months after the retreat and I wake with an unusual dream that I intuit concerns the dream-pod, so I share it with them. We are now in Amsterdam, Catalonia, and Colombia and have not communicated since the retreat. This is the unedited email correspondence between the three of us about this dream:

Yolande's dream, 5 September: I am crossing a big bridge over a canal and walking through fields to get to the river banks over there to swim, it is hot so i take off my shirt, there are people around, it is quite busy out here, hot day. two young women are coming out of the water with all their clothes on, wet. going on through a path with bare feet and tall tall grasses, i come to a young woman with long hair, she stands up and announces in a strong voice "i have been dreaming! it was here, these fields, full of white ostriches!" i ask if she's seen ostriches before? "yes, but this field is full of them, hundreds." I think of white feathers.

Olga's response, 10 September: Our project is called PARINAMA (impermanence in Sanskrit language) ... the couple of the centre call us the "eco-misticas"!

Three days ago we went to a fabulous place in the middle of the jungle, with a water fall and a natural piscine in between trees and many plants... we feel so peaceful there that we start to imagine and reproduce a part of our performance.

We decided to start our performance with us both coming from under the water and going outside with our clothes on... wet...

Also we are planning to do a curtain of feathers... to put in the middle of the jungle... to transmit the message of in between two realities...

Ximena's response, 11 September: One week ago when I read your dream Yolande, I smile and smile, because the weekend before in Colombia for the first time in my life I see...Ostriches! We went to a farm where they have a tour and explain the life of Ostriches, and then we can play with them, and feed them. The guide was telling us how it is lucky to collect feathers, and he gave me a bunch of these to take home. We were on horses, and from my pocket the feathers were trying to fly. Beautiful feathers, incredibly soft and with a special oil that's used to heal scars, amongst others. Ostriches are very incredible animals strong and fragile, strong and fragile. The eggs are strong like rocks, but fragile as porcelain.

On some level, music, sound, consciousness and religion are all one, and she [Pauline Oliveros] would seem to be very close to that level. –John Rockwell²⁶

Oliveros' praxis bears striking affinities with shamanic rituals. A shaman is a special individual, one who is partly self-selected and partly anointed by other shamans to play a unique role in a community. The shaman is at once revered and feared because of their powers, which can both cure and harm. Often a shaman proves their shamanic potential through a self-healing process. The shaman is both of this world and of the world beyond. The shaman communicates with spirits and ancestors in the beyond, learns from them, and brings that knowledge or wisdom back to this world in order to cure ill members of their community and to protect or heal the community as a whole. In "The Artist as Shaman" Jack Burnham states that, "it is precisely those artists involved in the most naked projections of their personalities who will contribute the most to society's comprehension of its self." For Burnham, society's pathologies could be overcome only through revealing its "mythic structures" and unfolding its "metaprograms." He saw art as a vehicle for such revela-

tions and certain individual artists as the shamans whose neurotic incantations could liberate us from those metaprograms, for the shaman "magnifies every human gesture until it assumes archetypal or collective importance."²⁷

The work of Roy Ascott, like that of Oliveros, emphasizes consciousness and joins art, science, and technology with various spiritual traditions.²⁸ In late 1990s, Ascott's conception of art was dramatically impacted by his participation in shamanic rituals with Kuikuru pagés in the Amazon and through his indoctrination into the Santo Daime community in Brazil. Ascott (who has organized the annual "Consciousness Reframed" international conferences since 1997, when he also first encountered the pagés) writes that, "The shaman is the one who 'cares' for consciousness, for whom the navigation of consciousness for purposes of spiritual and physical wholeness is the subject and object of living." In states of consciousness expanded through highly developed ayahuasca rituals, the shaman can "pass through many layers of reality, through different realities" and engage with "disembodied entities, avatars, and the phenomena of other worlds. He sees the world through different eyes, navigates the world with different bodies."²⁹ The shaman can embody the consciousness of other beings, including other animals, and in so doing gains insight into how, for example, humans can prey on much more powerful animals like leopards and alligators that might otherwise prey on far smaller, weaker, and slower animals like us. The shaman can exorcise evil spirits that have overtaken someone. By absorbing that spirit and then purging himself of it, the shaman can restore the victim to health. This procedure can be extremely dangerous, so the shaman must be very strong of spirit, capable of healing himself, and very knowledgeable in his craft.³⁰ Oliveros performed some of the shamanic roles described by Burnham and Ascott. The "navigation of consciousness for purposes of spiritual and physical wholeness" was "the subject and object" of her personal and professional life. Her compositions develop attentional strategies that enable performers and the audience member to "pass through many layers of reality, through different realities." Finally, as many personal testimonials demonstrate, the healing aspect of Oliveros' work is profound.

More closely connected to Pauline Oliveros' circle, American Experimental composer Sam Ashley, son of composer Robert Ashley, self-identifies as a shaman.³¹ In response to eulogies shared on the occasion of his father's death, Sam Ashley wrote:

I have been a mystic for more than 45 years. An actual "shaman." That's not a word I toss around because it's cool. I'm sure I've spent at least one third of my actual lifetime in trance. Being a mystic for real just means one thing ultimately: trance, lots of trance ("meditation", whatever). Like hours/day every day. Everything that could be considered real "shamanism" flows from that.

Oliveros strove to listen to everything all of the time. Meditation and other mind-body practices were integral to her work. Like Sam Ashley, she must have spent a large proportion of her lifetime in a trance. She pursued this path not because it was cool but because she was compelled to do so. It was, to paraphrase Burnham, a naked projection of her personality. Her very being questioned and resisted the status quo of classical music and western culture in general. She contributed to healing them by revealing, as Burnham proposed, their mythic structures and metaprograms, by exorcising toxic spirits that unwittingly inhabit us and our cultural forms. From *Bye Bye Butterfly* (1965) to *Sonic Mediations* (1974) to *Deep Listening* (1989-ongoing), Oliveros reprogrammed us to "listen to everything all the time," helping us to heal ourselves and to mend our relationship with others. Over decades of self-induced trances Oliveros expanded her consciousness, tuned into the consciousness of others, and helped

others do the same. As a result, her work plays an important role in stimulating new ways of thinking that are the prerequisite to healing society's pathologies and to recreating the world in a more sensitive, inclusive, and caring way.

This altered state of consciousness in performance is exhilarating and inspiring. The music comes through as if I have nothing to do with it but allow it to emerge through my instrument and voice. –Pauline Oliveros³²

It is 2011, I am 36 years old, and I am transitioning to the second stage of labor with my first child. I am experiencing an altered state of consciousness. We are at home as is the Dutch custom, in an Amsterdam apartment four floors up. I have been meditating on my breathing through the contractions for 18 hours without making a sound and the endorphins, the body's pain relief, have swamped me and presumably my baby too. I need to communicate something to Eddie who's been with me all along, but the hormones flooding my system make me able to speak only one or two words. The midwife comes close, holds my hands, looks in my eyes and tells me I must listen very carefully to her, which I hear and try to register. But my body is beginning to explode and a deep loud long roar rushes through me from the depth of my belly. I experience it as a massive force taking over my whole body released through my mouth where my vocal chords are just part of the huge vibration rushing through me. I have never heard or felt anything like this. I lose my voice. I lose my voice.

Relying on the body to play the music, listening not in musical styles that come through the intellectual mind but listening to what comes through and to the musical body, creates a different kind of flow, a different choice of musical material, and an openness to change in the moment that is external to stylistic musical sense but has bodily musical integrity. An embodied knowledge is built up through experience and deep listening to all sounds all the time, integrating global attention with focal attention. Such music is not reactive but super sensitive and alert. The sound is channeled through the body of the receptive musician. Sometimes it's as if someone else is playing through you, that the music comes from another place that is not your conscious mind.

Humanity has been forced to a new frontier by the accelerating rate of change instigated by technology. This frontier is the exploration of consciousness: all forms of consciousness and especially human consciousness.
–Pauline Oliveros, “Software for People,” 1980.

The joining of western science and technology with non-western systems of knowledge demarcates a domain of inquiry that Oliveros shares with a number of composers and artists of her generation, though with only a handful of women, notably Éliane Radigue and Annea Lockwood. Oliveros and Lockwood, the pioneering electronic music composer who also had been studying meditation, had a lively correspondence. A note from Oliveros to Lockwood in November 1970 ends with the warning, “Watch out for telepathic pitches. I send them out once in a while.”³³ In May 1971, prior to their publication, Oliveros shared several early *Sonic Mediations* with Lockwood, including “Teach Yourself to Fly” and “Telepathic Improvisation.”

Teach Yourself To Fly: “Any number of persons sit in a circle facing the center. Illuminate the space with a dim blue light. Begin by simply observing your own breathing. Always be an observer. Gradually allow your breathing to become audible. Then gradually introduce your voice. Allow your vocal cords to vibrate in any mode which

occurs naturally. Allow the intensity of the vibrations to increase very slowly. Continue as long as possible, naturally, and until all others are quiet, always observing your own breath cycle.”

As arranged through their correspondence, both artists performed the *Sonic Mediations* over the same weekend, May 21-22, with their own groups in remote locations (Oliveros in Joshua Tree, California and Lockwood in Epping Forest, England)³⁴. Lockwood recently noted that they were “interested in a telepathic exchange between our two groups, in seeing if it was possible. I think I recall some intriguing convergences but could not swear to it after all this time.”³⁵

When we tread, do we tread feeling through our sensitive feet, part of the place we are in, or do we tread heavily on top of it as a visitor or a clumsy one who stumbles in unaware? Can we feel the roots grow down through each step, the vibration of the ground for other creatures, as our weight lands? Do we feel the lift up, the flight into the air around as the birds lift off? Can we inhabit this exchange of weight and lift, ground and flight? Flying? Lightening the energy through the body and upwards, moving it with the breath through to the voice and with other voices for lift-off.

It is 2014, I am 39 years old and giving a performance / lecture on my recent work at Design Media Arts UCLA. Ed calls this my “coming-out”. I’m trying to explain how I experienced flying with bald eagles over the Puget Sound. I am very nervous about this in an academic setting in case its dismissed as an irrational anecdote, which would be reasonable after all, but it is so central to my work that I can’t adequately describe what I’m exploring without at least attempting to talk about it. Pauline Oliveros’ example gives me confidence. I read aloud:

“I am a hermit. I inhabit an eyrie. I look down on the resting eagles. I fly with them. There is no sense of time in this journey. Just the gliding of wings through air and the motion of water. Can you look through my layered lenses, open your ears and hear the air moving? Can you listen to the distance with me?”³⁶

Telepresence and telepathy were recurring themes in Oliveros’ work. Perhaps her first explicit reference to telepathy appears in her theater piece, *Aeolian Partitions* (1969), which calls on both players and audience members to influence the sounds performed. The third sonic mediation, which consists of “Pacific Tell” and “Telepathic Improvisation” is amplified by the fourth (untitled) which instructs groups of participants to perform either part of the third mediation while “attempting inter-group or interstellar telepathic transmission.” Telepathy also is manifest in the dreamwork element of the *Deep Listening Retreats*, as described above.

Also joining telepresence and telepathy, in the early 1970s, visual artist Nina Sobell began developing her brain-wave drawings. Whereas Alvin Lucier’s *Music for Solo Performer* (1965) utilized biofeedback to allow a single artist to trigger sound, Sobell’s *Brain Wave Drawing LA* (1974) deployed biofeedback and closed-circuit video to visualize nonverbal communication between two people as represented by the interplay of their alpha waves. Two subjects were connected to EEGs, with output sent to an oscilloscope, which displayed the combined brain wave emission of both subjects. “I arranged for them to sit very closely together, watching their faces on a monitor in front of them, and their Brain Wave drawing was superimposed on their faces,” Sobell explained.³⁷ One person’s brain waves were represented on the x-axis and the other’s on the y-axis, forming a lissajous pattern (an irregular circle). If both participants simultaneously emit brain waves of similar amplitude and frequency, the circle becomes regular; if they are not on the same wavelength, so to speak, the circle will distort. Paralleling Oliveros’ research on networked improvisation, in 2007, Sobell and her collaborators

made a brain wave drawing over the Internet between Poland and Los Angeles. As she recounted, “we could see each other’s physical image, color-keyed brainwave output, and text message, all in web-time. My idea is creating a non-verbal intimacy in cyberspace, one world one time.”³⁸

As mentioned above, Ascott’s work, like that of Oliveros, emphasizes expanded forms of consciousness. His praxis draws parallels between cybernetics and psi phenomena, telematics and telepathy, and virtual reality and expanded states of shamanic consciousness. At the same moment that Oliveros was writing the *Sonic Meditations*, Ascott’s 1970 essay, “The Psibernetic Arch,” drew parallels between “two apparently opposed spheres: cybernetics and parapsychology. The west and east sides of the mind, so to speak; technology and telepathy; provision and prevision; cyb and psi.” He further proposed that, “art will become, and is perhaps already beginning to be the expression of a psibernetic culture in the fullest and most hopeful sense: the art of visual and structural alternatives.”³⁹

The work of Oliveros and Ascott joins technology and intuition.⁴⁰ Oliveros’ artistic aims for expanding consciousness and transforming culture share affinities with Ascott’s aspirations for joining “cyb and psi” and for instant, global artistic exchanges. Recalling his first experience with computer networking, Ascott wrote, “In Mill Valley, California in the spring of 1978, I got high on networking. I had anticipated the condition ... years earlier, formulating a prospectus for creative work that could, as I saw it, raise consciousness to a higher level.”⁴¹ Joining east and west, ancient Taoist oracle and silicon techno-futurism, Ascott’s *Ten Wings* (1982) connected artists in sixteen cities on three continents via computer networking to facilitate the first planetary throwing of the *I Ching*. In a tellingly-titled essay, “Art and Telematics: Toward a Network Consciousness,” the artist explained the result: “We got close to eighth hexagram, pi (holding together/union), but the bottom line of the lower trigram was unbroken, which transformed the reading into the third hexagram, chun (difficulty at the beginning), which was undoubtedly true.”⁴²

Ascott’s praxis, especially his theorization of telematic art, offers profound insights that could inform research on networked music performance. Participants in Ascott’s telematic art projects experienced an emergent, global field of consciousness, which the artist framed in terms of Teilhard’s concept of the noosphere, Gregory Bateson’s notion of “mind at large,” and Peter Russell’s model of the global brain. In words that might as easily have come from Oliveros, Ascott proclaimed that telematics “constitutes a paradigm change in our culture and ... what may amount to a quantum leap in human consciousness.”⁴³ Throughout their careers, both artists have pushed the limits of their art and consciousness. Oliveros’ musings on quantum listening and quantum improvisation from the late 1990s to the mid-2000s parallel Ascott’s musings on technoetics and photonics from the same period, both offering artistic visions for the future.

Oliveros embraces emerging technology and is especially interested in applying it in ways that are intuitive or not purely functional. In “Quantum Improvisation” (1999) she lists the ideal attributes for a future artificial intelligence “chip” with which she could make music. They include the imaginable technical ability to calculate at speed and complexity beyond the human brain, as well as more abstract psychic abilities, including:

the ability to understand the relational wisdom that comprehends the nature of musical energy; the ability to perceive and comprehend the spiritual connection and interdependence of all beings and all creation as the basis and privilege of music making; the ability to create

community and healing through music making; the ability to sound and perceive the far reaches of the universe much as whales sound and perceive the vastness of the oceans. This could set the stage for interdimensional galactic improvisations with yet unknown beings.⁴⁴

Even as Oliveros consistently frames her work within the inexorable march of technology and scientific research, at the same time she insistently grounds her practice in embodied experience, an element that Ascott de-emphasizes. In this respect it must be noted that since the 1960s, women artists have been the primary force in making the body central to art discourses.⁴⁵ Oliveros was a key champion of this aesthetic shift. Throughout her career, she has combined technology and intuition in body-centered practices that rely on affective experience and subjective reflection.

I trust the accuracy of my body in this enterprise. I am bypassing “thinking” my way in the improvisation. I am counting on and trusting my body to manifest the music purely and freely I have progressed through many changes in music technology from the end of the 1950s to the present. Along the way I developed a bodily relation to machines for making music. It has always been necessary for me to have a bodily performing relationship with sound. I now understand this to be so because of the essential knowledge of the body that is preconscious and nonverbal.⁴⁶

Oliveros is techno-intuitive. Her methods for extending embodied knowledge and expanding consciousness, together with her visionary proposals for the musical application of future technologies in ways that “create community and healing”, lay a foundation for transforming our relationship with the Earth. Sound is relationship. Listening deeply brings us into a relationship with the environment; we merge with it. Oliveros’ emphasis on our embodied relationship to sound leads to the recognition of our inherently embodied relationship with the environment. Which leads to the many threads that link Oliveros to areas outside her domain of music, sound and healing, in particular to current ecological thinking and art making. In *Becoming Animal*, eco-philosopher David Abram explores the sensual relationship between human and the “more-than-human” world. He warns of “machinic modes of activity that stifle the eros between our body and the leafing forest” and claims that “it is time to listen ... [to] the animal stirrings that move within our limbs” and to “the tensions expressed by the sounds or movements of another creature ... [that] sometimes trigger a resonance in my own flesh.”⁴⁷ Embodied sentient knowledge is central to our understanding of other life on our planet.

Deep Listening is web-like in its implications: “Listening involves a reciprocity of energy flow, and exchange of energy, sympathetic vibration: tuning into the web of mutually supportive interconnected thoughts, feelings, dreams, and vital forces comprising our lives—empathy, the basis for compassion and love.”⁴⁸ In 2009, artists Beth Stevens and Annie Sprinkle (who once worked with Oliveros) married the Earth, launching the “EcoSexual” movement, which celebrates the human relationship with the Earth as a lover, promoting caring, responsibility and activism. The EcoSexual Manifesto calls “We invite and encourage ecosexuals to come out. We are everywhere. We are polymorphous and pollen-amorous.”⁴⁹ Donna Haraway describes their work as having a “polymorphic sensuality that is for and of the earth”⁵⁰, which recalls Taussig’s “polymorphic magical substance” of color and Oliveros’ first Deep Listening recording in the cistern. Like Oliveros, the ecosexuals present a positive, highly charged, celebration of life, aligned with Haraway’s

mantra “Staying with the Trouble”, a call to keep focused and to not allow end-of-the-world nihilism to deflect our energies away from healing our troubled-planet.⁵¹ In her *Camille Stories*, which follow five generations of a symbiotic human-butterfly child, Haraway revives the importance of story telling, or “speculative fabulation”, proposing the method of creatively imagining possible futures across multiple generations. It reminds me of Oliveros’ incantations on future listening, for example “how will we meet the genius of more rapidly evolving interactive culture—a genius of culture that could give us freedom of perception beyond present, physical, and mental limitations? Will we stop the evolution with destruction and annihilation, or embrace it courageously to go forward into the new world we are creating with all of its edges?”⁵²

Visionary imaginings of future ecological states of being are invoked through Deep Listening. Oliveros’ proposed ways of listening, rather than being confined to the audible (as is Acoustic Ecology), opens up richer possibilities of interaction with multiple sensual modes of perception and being. Deep listening expands the possibilities of relationships beyond any kind of sensory hierarchy—listening deeply teaches us how to relate to webs of interrelated phenomena on varying scales. It is this potential of sound to reach beyond sound, that helps me think of artists who are engaging in practical solutions to current and future ecological problems. Artists Helen Mayer Harrison and Newton Harrison, who were colleagues of Oliveros at University of California, San Diego, have designed large-scale interventions on the scale of watersheds and continents, transcending geopolitical boundaries and the aesthetic confines of art institutions. Their visionary scale of reimagining the world and the practical solutions they have developed emerge from an ongoing forty-five year dialogue between the artists and the life-web. “We always have to listen to what the life-web wants,” they explain.⁵³ Echoing the land ethics of indigenous people and the tenets of biodynamic farming practices, early in their career the Harrisons made a promise that their art would never take more from the life-web than it gave back.⁵⁴ This commitment of being an agent within a web, rather than an external force controlling it, is again a teaching of the practice of Deep Listening. Composer David Dunn, also friend and colleague of Oliveros, has honed his ability to listen to sounds and understand their potential role in maintaining or tipping ecological balance. His research has led to the implementation of a patented method of sonic intervention to combat bark beetle infestation in forests across western North America.⁵⁵ As Annea Lockwood observed, “[Oliveros] has left us an extensive teaching and much writing to guide us and as she anticipated, it will continue to expand and bloom because it is essential—to deeply listen to one another, to fully hear other phenomena on the planet; from that comes respect and caring. This is healing, and fundamental. Her work and that of her spouse, Ione, is profoundly generous, deeply informed, and continues.”⁵⁶

It is 2017, I am 41 and playing Balinese Gamelan again, now in Santa Cruz. I learn the parts by listening, watching, copying and repeating over and over again. Gradually my body becomes so confident in the part that my conscious memory plays little if any role, my bodily and musical memory takes over. If I try to learn the part by reading the notation I am preoccupied with remembering a string of numbers rather than remembering the sequence of sounds and hand movements. The conscious translation required to turn visual notation into bodily musical sound creates too much delay to the extent that it disrupts my ability to play in the moment and hear all the other interlocking parts of the musical algorithms. The trance like mental states that this music induces in me are disrupted by consciously foregrounding notation, or remembering a series of numbers, but are induced by playing from an embodied musical memory. This way of passing down music through

people’s musical memories rather than through memories’ surrogate, notation, creates a sensation that the music is alive. It is as if the music has a life of its own, that it is continuous, and that musicians tap into it to bring it into our present hearing. This aliveness and continuity of music, requires the necessary channeling by the musicians to bring it alive in our sensual world.

I come to these realizations while driving through the desert expanses of Joshua Tree, California. Finally Jasmin is asleep in the back seat, and I say to Eddie, “that’s it! Its as if the music is always there, every music possible is always there, and we as musicians tap into it, channel it through us, bring it into our waking consciousness—that’s what I mean by sonic consciousness!” The desert and the ocean tend to induce such realizations in me. The desert speaks to me, clarifies my thoughts, I see things clearly and held in a crystal air full of bright light dark shadows dust and distance. It may be called a hallucination, yes certainly music is always everywhere all the time all around me and all around everyone else far away from here. Its clearest here right now a water fall of falling sounds music that I catch dreaming some things sounded some things not yet sounded some never sounded the ecomisticas the ecomusicas. Yes even a waterfall can appear in the desert. I can fly.

Endnotes

- 1 Pauline Oliveros, “Improvising Composition: How to Listen in the Time Between,” in Gillian Siddall and Ellen Waterman, eds. *Negotiated Moments: Improvisation, Sound, and Subjectivity*. (Duke University Press, 2016): 89.
- 2 Harris’ personal reflections interspersed in our essay emulate Oliveros’ *Deep Listening: A Composer’s Sound Practice*, iUniverse, 2005 and Ione’s *Listening in Dreams*, iUniverse, 2005, which both include extensive personal commentaries written by participants who worked with them.
- 3 For another example of joint writing inspired by Oliveros, see Ximena Alarcon and Ron Herrema “Pauline Oliveros: A Shared Resonance” in *Organised Sound* 22–1 (Cambridge University Press, 2017). Ximena contributes in the section on telepathy and dreams later in this essay.
- 4 Pauline Oliveros “Pauline’s Solo” in *Sounding the Margins Collected Writings 1992–2009* (Deep Listening Publications, 2010): 266
- 5 Pauline Oliveros, “Improvising Composition: How to Listen in the Time Between,” in Gillian Siddall and Ellen Waterman, eds. *Negotiated Moments: Improvisation, Sound, and Subjectivity*. (Duke University Press, 2016): 89.
- 6 Pauline Oliveros, “On Sonic Meditation” in *Software for People*. Smith Publications, 1984.
- 7 Pauline Oliveros, “Quantum Listening: From Practice to Theory (to Practise Practice) *Music Works* (Spring 2000): 38.
- 8 Michael Taussig. *What color is the sacred?* University of Chicago Press, 2010.
- 9 Yolande Harris, “Scorescapes: On Sound Environment and Sonic Consciousness” Doctoral Dissertation, Leiden University, 2011.
- 10 Cory Arcangel, “Pauline Oliveros by Cory Arcangel” Interview. BOMB 107 (Spring 2009).
- 11 Pauline Oliveros, “On Sonic Meditation” in *Software for People*. Smith Publications, 1984.
- 12 David Jay Brown and Rebecca McClen Novick, “Tales of the Living Dead with Jerry Garcia,” *Voices from the Edge*. Freedom: Crossing Press, 1995. Online at <http://www.mavericksofthemind.com/gar-int.htm> Cited July 20, 2017.
- 13 David W. Bernstein, “Interview with Stewart Brand” in David W. Bernstein, ed., *The San Francisco Tape Music Center: 1960s Counterculture and the Avant-garde*, 2008, p 243.

- 14 Ibid, 244, 243.
- 15 Andrew Olson, interview with Ken Babbs, The Fountainheads website, <https://sites.google.com/view/andrew-olson/ken-babbs> Cited December 7, 2017.
- 16 Alpert was a colleague of Timothy Leary at Harvard and he co-authored with Leary with Ralph Metzner, *The Psychedelic Experience: A Manual Based on The Tibetan Book of the Dead* (1964).
- 17 Pauline Oliveros, "Memoir of a Community Enterprise," in Bernstein, op cit, p 90.
- 18 Ibid. It was directed and staged by dancer-choreographer Elizabeth Harris and Ronald Chase, with slides by Tony Martin and light instruments by Bill Maginnis, both SFTMC collaborators, and a cameo performance by San Francisco Mime Troupe founder and director Ronnie Davis, playing violin in the nude. The music was performed live by Oliveros and others. See Bernstein, op cit, p 90 and Rob Chapman, *Psychodelia and Other Colours*, Faber and Faber, 2016, ebook, np.
- 19 William Osborne, "Sounding the Abyss of Otherness" (2000)
- 20 Cory Arcangel, "Pauline Oliveros by Cory Arcangel" Interview. BOMB 107 (Spring 2009). <https://bombmagazine.org/articles/pauline-oliveros> Cited July 12, 2017.
- 21 p 266 Sounding the Margins "Pauline's Solo" 1998-2003
- 22 Jon Kabat-Zinn (Thich Nhat Hanh, preface). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. Delta, 2009.
- 23 Douglas Kahn states "She comes from a spiritual and occult tradition among American modernist composers that was influenced by Theosophy ... Theosophy invoked contemporary physics, alongside a panoply of Western esotericism, Hinduism, and occult practices, in proposing a vibratory cosmos" *Earth Sound Earth Signal: Energies and Earth Magnitude in the Arts* (Berkeley: University of California Press, 2013): 176.
- 24 Stuart Dempster, "Forward," *Deep Listening A Composers Sound Practice*, xii
- 25 This coincides with other movements in this direction, which responded to a gross need to explore women's psyches through the art of storytelling, dreams, and Jungian archetypes. See, for example, Clarissa Pinkola Estes, *Women who run with the wolves: Myths and stories of the wild woman archetype*. New York: Ballantine Books, 1992.
- 26 John Rockwell, "New Music: Pauline Oliveros," New York Times, Sept 23, 1977.
- 27 Jack Burnham, "The Artist as Shaman," in *Great Western Salt Works: Essays on the Meaning of Post-Formalist Art* (New York, 1974): 141.
- 28 Edward A. Shanken, "Technology and Intuition: a Love Story? Roy Ascott's Telematic Embrace." (abstract) *Leonardo* 30.1 (1997): 66. Full text online <https://www.leonardo.info/isast/articles/shanken.html>. Cited Oct 4, 2017.
- 29 Roy Ascott, "Weaving the Shamantic Web: Art and Technoetics in the Bio-Telematic Domain" (1998) in *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*. Ed., Edward A. Shanken. (Berkeley: University of California Press, 2004): 356-62.
- 30 Marilys Downey, Skype interview with Edward Shanken, May 5, 2017.
- 31 Robert Ashley's seven episode opera for television, *Music with Roots in the Aether*, 1975, includes "Landscape with Pauline Oliveros," consisting of an interview with Oliveros and several multimedia and music performances by her and collaborators.
- 32 Pauline Oliveros "Introduction," *Deep Listening: a Composers Sound Practice*. iUniverse 2005, p xix.
- 33 Martha Mockus, *Sounding Out: Pauline Oliveros and Lesbian Musicality*, (London: Routledge, 2008): 58.
- 34 Ibid. p 59.
- 35 Annea Lockwood, Email correspondence with Yolande Harris, July 19, 2017.
- 36 Yolande Harris *Listening to the Distance: Eagle* (2015)
- 37 Nina Sobell, artist's website: http://colophon.com/ninasobell/parkbench_docs/portfolio/3/frame.html Cited July 21, 2017.
- 38 Evelyn Stermitz, "Interview with Nina Sobell" (Aug 2007) <http://rhizome.org/community/9286/> Cited July 21, 2017.
- 39 Roy Ascott, "The Psibernetic Arch" (1970). Reprinted in *Telematic Embrace*: 162.
- 40 See Edward A. Shanken, "Technology and Intuition: A Love Story? Roy Ascott's Telematic Embrace" (1997). <https://www.leonardo.info/isast/articles/shanken.html> Cited October 27, 2017.
- 41 Roy Ascott, "Art and Telematics: Towards a Network Consciousness" (1984). Reprinted in *Telematic Embrace*: 186-200. In Indeed, In 1966-67, Ascott anticipated artistic and interdisciplinary exchanges between participants in remote locations, interacting via electronic networks: "Instant person-to-person contact would support specialised creative work... An artist could be brought right into the working studio of other artists ... however far apart in the world... they may separately be located. By means of holography or a visual telex, instant transmission of facsimiles of their artwork could be effected... [D]istinguished minds in all fields of art and science could be contacted and linked." Roy Ascott, "Behaviorist Art and the Cybernetic Vision" (1966-67) in *Telematic Embrace*...
- 42 Ibid: 186.
- 43 Ibid: 189-90.
- 44 Pauline Oliveros, "Quantum Improvisation: The Cybernetic Presence," in *Sounding the Margins*: 53
- 45 See, for example, Amelia Jones, *Body Art/Performing the Subject*. University of Minnesota Press, 1998.
- 46 Pauline Oliveros, "Improvising Composition: How to Listen in the Time Between," c. 2012, in Gillian Siddall and Ellen Waterman, eds. *Negotiated Moments: Improvisation, Sound, and Subjectivity*. (Duke University Press, 2016): 83.
- 47 David Abram *Becoming Animal: An Earthly Cosmology* (Vintage Books, New York 2010) p.80 and p.192
- 48 Pauline Oliveros, "Quantum Listening", in *Music Works*, Spring 2000: 45
- 49 Beth Stephens and Annie Sprinkle 'Eco Sex Manifesto' <https://thecosexuals.ucsc.edu/ecosexualmanifesto>
- 50 Beth Stephens and Annie Sprinkle film 'Water Makes us Wet' (2017), premier Documenta XII, Kassel, 2017.
- 51 Donna Haraway *Staying with the Trouble: Making Kin in the Chthulucene* (Duke University Press, 2016)
- 52 Pauline Oliveros, "Quantum Listening", *iMusic Works*, Spring 2000: 45
- 53 Conversation with the authors 2017.
- 54 Helen Mayer Harrison and Newton Harrison *The Time of the Force Majeure: After 45 Years Counterforce is on the Horizon*. Prestel, 2016
- 55 David Dunn <https://vimeo.com/206778388>
- 56 Email correspondence with author Yolande Harris, July 19, 2017.