

Background Noise  
Second Edition

Perspectives on Sound Art

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B L O O M S B U R Y  
NEW YORK • LONDON • NEW DELHI • SYDNEY

## Appendix: Peripheries—Subnature, Phantom Memory, and Dirty Listening

The theme of relationality has been central to mapping the historical and theoretical developments of sound art throughout *Background Noise*. I've been particularly concerned to underscore sound art as a practice (or field of practices) whose strategies are often focused on *relating* sound to additional materials, places, and persons; to expand our perspective onto the world through a deepening of the listening sense. The medium of sound seems to inspire such relational approaches and concerns; as if sound is already unfolding a broader horizon, leading us to heighten our attention to the proximate as well as the distant, to what is present as well as the shimmering trace of what is no longer there. The propagating, vibrating, and resonating movements of sound draw us toward this greater view, and importantly, put us into dialogue with all that surrounds. A dialogue that is not necessarily spoken, but rather embodied, *sensed*. This understanding has further led to exploring sound art according to spatial thinking, recognizing that such dialogical intensities are also spatial inquiries and propositions, and even spatial constructions. As the resulting force of a particular friction or contact, sound propagates and travels to become a spatial figure, linking the materiality of its source with the acoustical dimensionality of space; as such, it immediately activates our surroundings, passing *through* and *against* it to create an extended spatial and animate event. In this regard, acoustic spatiality is a temporary formation of auditory events and their interaction, giving way to modes and instances of inhabitation and cohabitation. Of gathering and of participation, as well as drift or disruption.

Following these relational and spatial trajectories, I'd like to turn toward the sheer expansiveness of that horizon opened up by sound and sound art by focusing on the subnatural and the subarchitectural, the energetic and the molecular. While my attention has been consistently drawn toward sound art as an overarching practice of sociality, of the dialogic and the relational—which I would characterize as producing radical forms of “association”—this has also been charged by a concern for the *humanness* of the auditory: how sound art addresses myself as a sensing body full of culture, a body pressed and shaped by those agents of language and

lawfulness, and involved with others. Yet in following these issues, I've also been brought closer to a mode of relationality that connects across subjects and objects, and even species, conversations that lean toward the hidden, the invisible, or the quantum; a sound art that relates us to the non-human, as well as the *all too real*. Such additional topics appear dramatically within expressions of sound art, often leading to a concern for animals and insects, the overlooked and the underheard, the haunted and the imaginary, as well as supporting strategies of secrecy, intervention, quiet reverie, and radical dreaming. Sound, in other words, is harnessed as a medium for extending precisely what may constitute a body, a *singular form*, or an "actant," and what or who might take up residence within acoustical spaces. I would suggest that sound art fundamentally puts into question the singularity of any bodily presence through such profound relationality: as a listening subject, one is prone to fragmentation, amplification or dissolution when brought into the *presencing* sound seems to enable and hearing supports.

Subsequently, it is my interest to draw out a number of additional perspectives by way of this appendix, to literally tack on an extra spatial coordinate to understanding all that is at stake, urged, or proffered within sound art. I'm interested to consider the works of a number of artists whose attention rests precisely on the terrain of the peripheral, where energy waves, weather conditions, detritus, and the abandoned incite aesthetical productions. What these topics share, from my view, is a relation to what David Gissen terms "subnature," or those elements, forces, and bodies that surround, through a type of informal and somewhat repressed presence, the environments we come to occupy. Subsequently, subnature can be understood to unsettle the conventional boundaries that define place, the centralizing and formalizing configurations and constructions that secure particular orientations, while also contributing an extremely important element, that of ambient presence and the temporal fluctuations so vital to sensing and relating.

Taking cue from Gissen, I want to consider sound art as it leads us into the peripheries of architecture, forcing us into contact with all that appears rather marginal to the built environment; and by doing so, to sink deeper in, toward the energetic patterns, molecular forces, and phantom memories that impart so much influence onto the animate (and inanimate). By exploring and paying attention to such hidden or obfuscated elements, artists bring forward an expanded understanding precisely onto the field of the relational; they unsettle notions of agency and presence, as grounded in human expression, to critically realign the hierarchies of the senses and the sensible. What constitutes a body and its powers to enact types of intervention? What or who has been marginalized in favor of others, and what power structures perform to hold them in place? How to locate oneself in relation to the foreign, or what appears beyond myself? Is not *this body* always already more than how it appears?

Focusing on the works of Sabrina Raaf, Tao G. Vrhovec Sambolec, John Grzinich, Juan Downey, the collective The House of Natural Fiber, and Leif

Elggren, among others, these questions are used as vehicles for considering agency as not only centered around the human subject, but equally found in forces and forms of subnature. In doing so, I'm interested to elaborate a critical view onto sound art, explicitly in support of its diversifying project.

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As a medium, sound is often put to use to give registration to what is below or above, under or inside, forgotten or ineffable; it is precisely a trigger for bringing into acoustical relief what is steadily marginalized, or located within the more peripheral zones of presence—the left-over, the abandoned, the haunted, and the unseen—through an array of vibrational, resonant, interventionist, contaminating, and compositional tactics. By moving through and occupying all types of spaces, disregarding borders while fueling powerful territorializations, and enabling articulations of what is often below the line of the represented, I'm led to consider sound as a dirty (and dirtying) force. Sound affords a radical relationality precisely with what may be found in the gaps of appearance, alongside the object of a particular desire or economy—it is the continual emergence of alterity; like a vapor passing in and out of so many bodies, hovering in the cracks to suddenly interrupt the scene, sound continually disorganizes, reconfigures, and supplements the fixity of form.

These sonic qualities greatly enable artistic expressions aimed at the extremes of perception, giving way to a vocabulary of affect, transmission, interference as well as assurance, alien energy, enchantment, and deep resonance. Yet I would emphasize that it not only leads us to hear such hidden or marginal forces, but also constructs a plane of presence fully marked by agents foreign to “my body.” An opening where such peripheral and immaterial forces may ultimately *capture* us. In this regard, I want to posit a notion of “dirty listening,” as a listening contoured by the radically heterogeneous force of sound.<sup>1</sup>

The notion of dirty listening is emphasized here as a means to harness what I understand as sound's potentiality to connect and integrate precisely those things or bodies that *intrude* upon the scene, that *interrupt* and lead me away from what I know, and that bring us into relations not only with each other, but importantly with what might exist under my skin, in the water, or within buildings. Sound art is an occult project seeking out all the intense and feverish life-forces that surround us, and that live within us; in doing so, it draws into question assumptions as to what qualifies or constitutes a life-force in general.

Timothy Morton gives a wonderful evocation of dirty listening in his book *Realist Magic*; as the author sits by an open window writing, he is suddenly caught by the croaking of frogs:

A wall of croaking filled the night air. Hanging on either side of a human head, a pair of ears heard the sound drifting over the pond towards darkened suburbia. A discursive thought process subdivided the wall of sound, visualizing thousands of

frogs. A more or less vivid, accurate image of a frog flashed through the imagination. The soft darkness invited the senses to probe expectantly further into the warm night. On the breeze came the wall of sound, uncompromising, trilling like the sound of frozen peas rattling around inside a clean milk bottle multiplied tens of thousands of times. While the author was writing the preceding sentence, a whimsical taste for metaphor enjoyed linking the sound of the frogs with the sound of frozen vegetables.<sup>2</sup>

Morton's descriptions spiral from one point of reference to the next, linking the sound of frogs in the pond to the warm night breeze, further to his own imagination, and finally to frozen peas; the itinerary of this particular sound unfurls a radical connecting thread, which captures Morton's thoughts and writing—he continues:

A single sound wave of a certain amplitude and frequency rode the air molecules inside the frog's mouth. The wave was inaudible to a mosquito flying right past the frog's lips, but sensed instead as a fluctuation in the air. The wave carried information about the size and elasticity of the frog's mouth, the size of his lungs, his youth and vigor. The wave spread out like a ripple, becoming fainter and fainter as it delivered its message further and further into the surrounding air.<sup>3</sup>

The ever-expanding, propagating wave of sound Morton attends to is generative of an elaborate web of associations and contacts; by following this single event of sound an entire world of life-forms, energetic fluctuations, observations, and imaginings are triggered, leading the author into meditations on the unseen, the felt, and the intuited—captured in the writing itself, as a description that ultimately veers into suggestive imagery: “The wall of croaking caused the grasses in the pavement next to the pond to vibrate slightly.”<sup>4</sup>

The potential reach of sound is vast; as Morton highlights, the ability to catalogue the event of sound is endless—his descriptions continue, across pages that attempt to follow the sound wave as it pulls into its movement any number of things and bodies. It is precisely this movement, and this ambulatory itinerary of sound that fills our listening with too much: as listeners we become *excessive subjects*—we are immediately more and less of ourselves—transgressed by the invasive and voluptuous messiness of sound.<sup>5</sup>

### Weather Conditions, Energetic Architectures, and the Senses

David Gissen outlines in his book, *Subnature: Architecture's Other Environments*, how the primary elements, such as air or water, are dynamically supplemented by secondary forces: “I argue that, forms of nature become subnatural when they are envisioned as threatening to inhabitants or to the material formations and ideas that constitute architecture. Subnatures are those forms of nature deemed primitive (mud and dankness), filthy (smoke, dust, and exhaust), fearsome (gas or debris), or uncontrollable (weeds, insects, and pigeons).”<sup>6</sup> Gissen is interested to

consider these secondary, more “denigrated” elements not solely as negative effects onto our environments, but rather as forming a level of spatial, experiential, and conceptual input. Put forward then is a certain challenge to the architectural and environmental imagination, and related practices, to utilize “subnature as a form of agitation or intellectual provocation.”<sup>7</sup>

Gissen aims to shift our understanding of the built environment from that of forms of enclosure that shelter us from contact with the elemental, toward that of the subnatural. Mud, debris, gas or dust—and to which I would add vibrations, noises, and other ambient energies—these may intrude upon architecture, yet they do so by also reminding of the intensities of our environments. Such engagement may give way to an expanded view onto our spatial habitats; by integrating ambient energies, the fluctuation of weather conditions, as well as the more peripheral movements of life around us, subnatures do more to impart meaningful substance to our spatial habitats than architectural conventions tend to demonstrate. In this regard, subnatures contribute an important platform for experiencing the often “unwanted” and yet ever-present forces and forms to which we are deeply bound.

The urban researcher and theorist Jean-Paul Thibaud equally considers this dimension of space, by way of the themes of “atmosphere” and “ambience.” Through theoretical and practical work developed at the research institute Cresson, Thibaud poses that the ambience of a place functions as an energetic flux that greatly influences spatial and situational conditions, while also encouraging our feelings for being somewhere. As Thibaud states:

An ambience can be defined as a time–space qualified from a sensory point of view. It relates to the sensing and feeling of a place. Each ambience involves a specific mood expressed in the material presence of things and embodied in the way of being of city dwellers. Thus, ambience is both subjective and objective: it involves the lived experience of people as well as the built environment of the place.<sup>8</sup>

As I’ve been interested to show, sound participates in the ambience of place by lending an extremely dynamic, temporal, and impressionable force. We can understand sound as a vital form of movement—a primary and elemental event of animation whose stirrings move us together. Sound occupies the *in-between*—between a source and a listener, between a space and another, between a body here and another there (and which are not always human or even visible)—and thereby brings into *contact* so many objects, bodies, and places. Sound is an intensity that links the body to others, disrupting and enlivening singularity with the force of listening. Importantly, this underscores particular socio-political effects and opportunities, whereby the emanations of sound afford a radical connectedness, a *poetics of relations*.<sup>9</sup> It is my view that the primary animations and phenomenological stirrings of auditory events contribute to delivering forceful content, empowering and enabling the articulation of agency from not only subjects and bodies, as *singularities*, but also from matters and things, and collectivities, precisely from within

the *in-between*. Importantly, experiences of listening uncover pathways for *joining together*, often with what is ungraspable by sight or even recognizable as “a body.” In this regard, I’m interested in how sound art occupies an uncertain zone between the elemental experience of sensing *and* the demarcations placed on the sensible—and how it may fuel articulations of subjectivity precisely through extending and problematizing its singularity, and its appearance within the social field.

To return to the subnature of Gissen, and the ambience of Thibaud, sound imparts such intense atmospheric presence by often dropping below the line of audibility. Sound is, in essence, a form of *pressure*: it is a stirring of the molecular figuration of air, a force of oscillation that travels through a given medium, such as air or water, and also, *through* bodies and buildings. These pressures of the acoustical are certainly recognizable when turning to the topic of vibration. Vibrations traverse buildings, passing through walls and floors, along columns and infrastructures, and in doing so, often create “connections” that can be understood to displace the visual logic of an architectural space. Vibrations literally *rearticulate* a given architecture according to certain energy patterns. Ventilation systems, electrical boxes, internet servers, external elements, the movements of bodies, all may introduce vibrational energies that journey through the structures of a building. Such vibrational presence can be aligned with the question of subnature by specifically undercutting the formal material and ocular arrangements of an architecture. Vibration, in *displacing* the independence and stability of the built forms around us, also unsettles the boundaries between space and people, between this room and this body; in contrast, one is located as an object within a greater field of sensation: these vibrations, these energy waves, passing around and through me, force me into greater contact with surrounding materiality. In doing so, vibration creates a rather invisible yet palpable process of affective transmissions that conditions, and mostly disturbs, the operations of architecture and our place within it.

The artist Mark Bain has often worked with vibration, particularly as a means for unpacking this alternative view onto buildings. Bain’s interest, or obsession with vibration as a phenomenon found within buildings and cities has led the artist to produce works that often aim to capture the embedded resonance of architectural structures—how buildings themselves contain an inherent acoustical identity whose properties can be harnessed or activated (we can refer back to Alvin Lucier’s *I am sitting in a room* as a primary example (see chapter 8)). A permanent work by Bain, titled *Bug* (2009), presents an extremely rich articulation of this approach. *Bug* is an installed work located within an office building in the city of Berlin.<sup>10</sup> By fixing a series of geodata and seismic sensors directly into the infrastructure and concrete foundation during construction, the work captures “micro-sensations” occurring throughout the building. Vibrations that pass through the building’s structure, or picked up along the exterior come to form an expanded auditory perspective onto the architecture. To access these sonic energies a visitor may connect headphones directly into a mini-plug permanently fitted to the façade of the building. Passersby are literally invited to tap into the building and listen to the noises therein.

Bain's work leads us to recognize buildings less in terms of visual boundaries or cubic volumes, and more as vibrational networks; rooms no longer end at their visual threshold, rather they extend deeper in, through and down, or up and above, linking any single material form or structure to a range of events and spaces. (This view onto vibration is also found in the work of Toshiya Tsunoda examined in chapter 15.) I think of his work as forming an auditory geometry, rendering a complex spatiality according to the energetic intensities of contact and friction, vibration and tactility. In this regard, his work poses a dynamic elaboration of Barry Truax's theories of environmental listening, whereby a sound wave not only brings forward but also multiplies our understanding of the current state of a place *beyond* that of audibility: the sonic pressures and energies envelope us equally within a tactile web of events. The acoustics of an environment are precisely a territorial layer that often brings into contact things and bodies, events and voices, and from which alliances and resonances, as well as ruptures and agitations, are experienced and produced. Such productions radically shift attention from sightlines, and even audible soundings, to a deeper, vital materiality that enliven as well as disturb our bodies.<sup>11</sup>

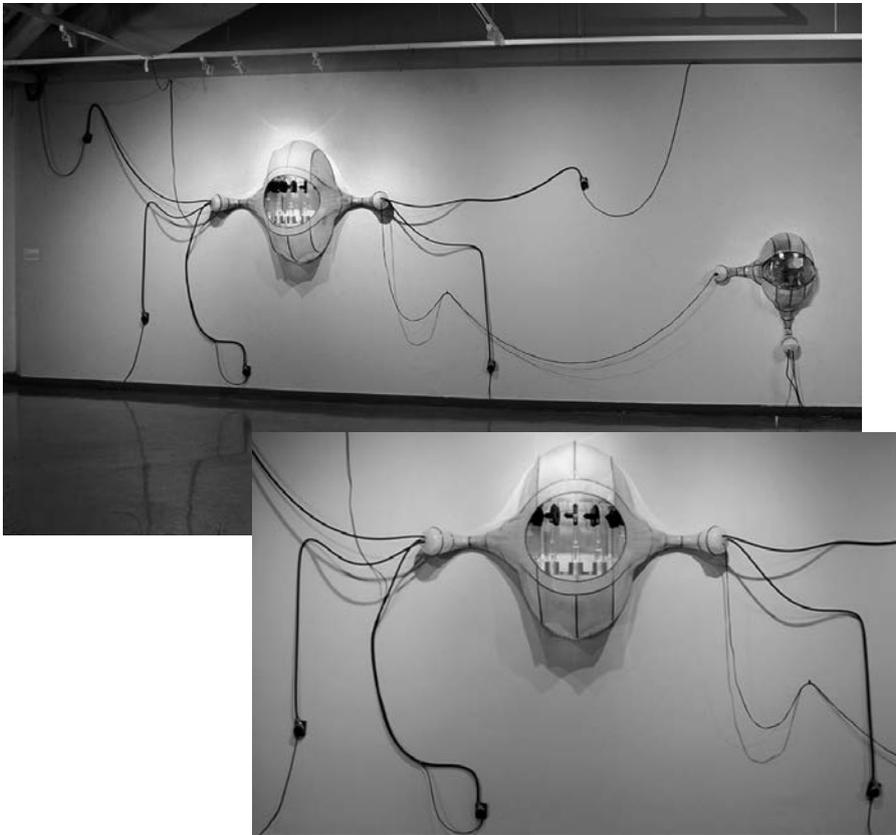
As Shelley Trower outlines in her book *Senses of Vibration*, the energetic force of vibration can raise questions about the stability of forms, the health of the body, and even the certainty of thought.<sup>12</sup> Yet it may also, in doing so, locate us within greater environmental sensitivity, highlighting how audition is a process of energetic exchange and relational contact, a hearing that extends to that of tactile sensing. The forceful and connective qualities instantiated through vibration are suggestive of how bodies may come into contact within environments, to form collectivities and initiatives. In this regard, vibration and the vibratory provide a material pathway for realizing radical forms of togetherness.

In considering the built environment through the lens of this expanded auditory and tactile presence, sound appears on the level of an energetic force, an atmospheric pressure, a vibrational friction, and a wave occupying and setting into relief the *in-between*—across architectures, and within the arenas of meeting. Accordingly, I'm interested to add this onto understandings of subnature, highlighting how the practices of sound art lead us to peripheral and often-unseen elements. Of course, as Gissen asserts, by paying attention to the marginal elements that continually surround us, it is clear that what is understood as peripheral—the energetic fluxes and subnatural elements—are, in fact, central to experiences of place. Sound, for instance, draws us into attunement with this ambient order, readily traversing the demarcations between center and periphery, above and below, to construct forms of subarchitecture: an aesthetics of pressure that invites or pushes us toward greater assembly and cohabitation.

The work of artist Sabrina Raaf draws us into these more peripheral forces, bringing focus onto ambient elements, such as background humming. Her elaborate sculptural work, *Unstoppable Hum* (2000), considers the common experience and phenomenon of background humming produced by an array of electrical and mechanical infrastructures, such as heating and ventilation systems, elevator

and escalator units, refrigerator systems, computers and servers, etc., all of which introduce a continual hum to our architectural environments. *Unstoppable Hum* appears as an extended sculpture designed to monitor a particular space; through a set of contact microphones applied to specific points in the space, such as computer workstations, automated doors, ventilation ducts, etc., the sculpture gathers sonic information pertaining to the space and applies this to generating its own humming produced through a set of “fans” that blow air into corresponding glass jars filled partially with water. Raaf’s interest is to counter the rather monotonous background hum of rooms with a “musical” addition, shifting from banal intrusion to that of articulated sonority.

*Unstoppable Hum* operates through a type of inversion; by appropriating background elements and manifesting them through a foregrounded sonority, the artist tries to unsettle the spatial features common to the environment in which a background often intrudes with a somewhat subliminal, droning pattern. The background hum, in other words, may actually be something to listen to. Yet this



Sabrina Raaf, *Unstoppable Hum* (2000), Betty Rymer Gallery, Chicago. Photos courtesy of the artist.

inversion is further developed by a second sculpture that is placed alongside the first. This other object focuses instead on the presence of human bodies. Fitted with a small video camera, which registers the movements of people, and a geophone that detects footsteps, the sculpture produces a sniffing, gurgling water sound when confronted with visitors. Such a response, for Raaf, aims to turn the architecture into an animate form: the space itself amplifies our own presence so as to make us wonder, *is it alive?*

What I appreciate about Raaf's work is its sensitivity and real-time performativity that draws out this topic of the subnatural; in other words, Raaf creates a spatial and sonorous articulation constructed precisely from the "detritus" of electro-mechanical systems, most of which trail behind walls, across ceilings, in corridors and tracts hidden and buried within architecture. As the artist states, her interest lies in challenging the background-foreground dichotomy, while also playing with what we understand as animate and inanimate presence.<sup>13</sup>

Questions of architecture and the energetic are also central to the work of Tao G. Vrhovc Sambolec. Sambolec's *Virtual Mirror* and *Virtual Hole* projects, in particular, are developed through an overall interest aimed at destabilizing the relation between interiors and exteriors. The series of works attempt to create a heightened sense for the temporal and the transitory, the flux of pressures and energies that come to effectively condition space. His strategy, in bridging and blurring the lines between outside and inside, might be said to *fray* the edges of architectural space, expanding the senses to that which is always already present as an influencing and effective factor and yet often remains beyond spatial consideration. Whether through acts of mirroring external phenomena, or by "cutting" a virtual hole into a building, Sambolec occupies this territory of the subarchitectural.

His performance project held at a public library in Oslo in 2009, *Virtual Mirror—Sound*, is a poignant example (and echoes some of the key elements investigated in the works of Achim Wollscheid, Atau Tanaka, and Apo33). The project functions as a sited, performative action located within the library's main rooms and focuses upon the ambient conditions of the space over the course of a single day. Two performers move through the library, concentrating on the ebb and flow of sounds as they trickle in from the street, or appear from within, as people search the shelves or spend time reading at various tables. The performers wear small wireless microphones and attempt to vocalize in response to the sounds they hear; they move through the library, seeking out small resonances, new perspectives from which to tune themselves to the space, and the situation. Yet their vocalizations remain subsumed within the greater ambient volume; they do not break the sound environment, rather their vocalizations integrate themselves, attempting to mirror back the ambient, unintentional sounds occurring, such as doors opening and closing, the buzz of neon lights, the turning of pages, etc. In this way, the performers occupy this zone of background sound, following the ambient patterns and fluctuations of the existing soundscape—they intermix with what is there. As in the work of Raaf, space is given a type of agency, or as Sambolec further



Tao G. Vrhovec Sambolec, *Virtual Mirror – Sound* (2009), Oslo public library. Photo courtesy of the artist.

states, a “sound-consciousness.”<sup>14</sup> A sound appears here, and then is echoed from over there, passing from one source to another, and from one body to another; a concentration of energy is gathered, a mirroring that, while being extremely subtle, collects and accumulates into an ambient presence that contours the spatial environment. The question of presence is, in fact, central to Sambolec’s working methods, and his projects aim to support, through various real-time systems, a dynamic manifestation, what I might call a process of *presencing*.

By creating links to the exterior forces that surround an interior space, his works perform soft ruptures onto the demarcating lines that place inside and outside into binary relation. In contrast, Sambolec’s work is more concerned with a sense of interweave, temporality, envelopment, and extension. As the artist states, “What interests me is how aware we are of the immediate atmosphere we breathe, we are immersed in, and what all we do in order to make ourselves unaffected and independent of it. The installations are sensing the immaterial ... and heightening our awareness of all these flows.”<sup>15</sup>

For another project, *Virtual Mirror – Rain* (2009), Sambolec focuses on the relation of a building to the exterior force of rain, in this case installed at the Museum of Modern Art in Ljubljana. Through the construction of a digital sensing system, the installation responds to the presence of rain: each drop of rain, as it falls onto a specially constructed horizontal plate located on the rooftop of a nearby gallery, comes to trigger a “mirror image” in which a small spray of water rises from the floor inside the Museum. This extremely delicate and yet no less



Tao G. Vrhovec Sambolec, *Virtual Mirror – Rain* (2009), Museum of Modern Art, Ljubljana. Photo: Dejan Habicht. Courtesy of the artist.

dramatic orchestration figures a spatial play. As viewers we are asked to follow the corresponding relation between an exterior input and an interior result, between a remote cause and its resulting effect. By forming a dialogical link between the rain outside and the interior event, Sambolec materializes the possibility of the exterior world coming in. The temporal instant of rain finds a way into the building, generating a performative and spatial event, defined by what the artist terms “undoing architecture.”

Sambolec’s project creates a network that comes to reform the built; in his work, architecture is more than the capturing of spatial volume, or the modulation of structure, but an event in time—a *presencing* that is also suggestive of a radical subarchitectural materialization.

In his book, *Fire and Memory*, Luis Fernández-Galiano provides a rich examination of architecture as a carrier of energy.<sup>16</sup> For Fernández-Galiano, energy operates as an extremely dynamic undercurrent to built form. This is initially examined by way of a consideration of fire and its place within the home. As that central (mythological) feature, fire is underscored as imparting warmth to the first dwellings, acting as an elemental force around which human life gathers and by which inhabitation takes shape. Architecture is thus immediately an enclosure surrounding this dynamic force, a spatial envelope that seeks to capture, sustain, and transmit the life-giving energy of fire. In this sense, architecture is held within an essential and determining dialogue with energy.

The primary example of fire, as that vital energy source, is further extended through an analysis of the laws of thermodynamics (e.g., entropy), forms of

combustion, and the material transubstantiation occurring in construction itself—how the building process involves innumerable material transformations, reconstitutions, and expenditures. Accordingly, matter and energy, architecture and fire, construction and combustion are placed into an extremely complex relation, forcing a suggestive link between architectural forms and energy expenditure.

Following Fernández-Galiano's analysis, energy is highlighted as a forceful, enriching, and undeniable element within built form; the material alterations taking place within construction may be understood to linger within any final architectural form as a type of memory. In this regard, elements of the ambient act as vital presences within architecture, where the flows and transversals of heating, electrical current, ventilation, and related infrastructures radically condition the stability and atmospheres of buildings. (I might extend this to questions of "digital ambience" and the flows of data and connection that create new spatialities, energy expenditures, as well as new modalities of inhabitation.)

Returning to Sambolec, *Virtual Mirror – Rain* considers how forms of weather continually envelop the built environment, to touch, to give texture, to effect and influence the conditions of spatiality. As Juhani Pallasmaa proposes, the ambient and atmospheric elements effecting architecture impart a feeling for lived experience, creating an important affective intensity "enabling us to inhabit the continuum of time."<sup>17</sup> The energies of the outside are thus elements that, while requiring resistance or partial control, impart a dramatic feeling for the passing of time. From seasonal changes to the passing of a day, the transitory conditions that flow around us are elements that may appear in contrast to the stability and seemingly immutable nature of buildings. Buildings might be understood as the things that mostly withstand time, that resist the pressures of the everyday and lend continuity to our daily rituals. In contrast, the shifts in light throughout the course of a year, the flux of weather conditions, and the vibratory undulations that flow over and around environments and buildings, for example, all come to animate the built. They may be the very means by which we gain a deeper sense of *locatedness*. *Virtual Mirror – Rain* stages this lived time, placing it at the center of a building and shifting focus from bodies in space to greater environmental forces. In doing so, Sambolec articulates a deep spatiality, capturing ambient and temporal occurrences not as supplemental to architecture, but as core material.

In constructing works that draw us into a field of relations, of weather conditions and the presence of ambient energy, as well as the performative events that heighten an expanded listening, Sambolec brings us into this zone of subnature and the subarchitectural articulations central to sound art. Such an approach is further elaborated by artists that seek out neglected sites and peripheral or left-over structures. In this case, we're led away from the question of weather and toward the detritus and debris of the abandoned building. It is my view that sound art is a form of research dedicated to the operations and behaviors of spatial form, explicitly utilizing the auditory as a platform for querying subject-object relations, as well as the atmospheric and ambient pressures that encircle us. In this regard,

it is often the case that sound artworks seek out the abandoned site, the marginal location, or the unique space for investigation and exhibition; rather than perform within the typical gallery space, works of sound art often bypass the official or major designs of architecture in favor of the textured territories of the everyday, and the idiosyncratic structures of the discarded and the hidden.

The works of John Grzinich, for example, poignantly express such tendencies, and in so doing afford opportunities for enriching not only our sonic consciousness, but also a deep engagement with the locationally dynamic conditions of the abandoned and the found. Grzinich has developed an extensive body of work aimed at deepening an understanding of sound as context-specific, as well as a vehicle for performative and collective expressions. What arises out of Grzinich's activities, as a performer, researcher, and teacher, is an engaging activation of sound within given spaces and through found materials, and brought forward through collective improvisation. These form an elemental foundation from which workshops, staged performances, and recordings are produced within a range of sites. For example, a workshop that Grzinich conducted in 2007 in the city of Riga, with Maksims Shentelevs, led participants to six locations: an abandoned apartment, a construction site, a former power station, an abandoned warehouse, an old military airport and a backyard. Each day the participants set out for one of these locations, occupying them for a brief period of time in an effort to develop methodologies of site-specific activity directed by acts of listening and sound making. Sensitivity for the auditory thus operated as a means to consider the locations and their given qualities, but importantly, it also provoked new types of behavior and inhabitation on the part of the participants. Their actions of improvising with found objects, and the material elements of the spaces, brought forward an array of "musical" and performative actions: scraping together found metals, resonating empty canisters, tapping and hitting objects, these gestures ultimately sensitized the participants to the environment, leading to states of collective listening and collective inhabitation. Sound, in other words, opened up an additional dimension to the given locations through which participants moved, paused, listened, and enacted a type of encounter, with each other, and with the materiality of the space, through gestures of sounding.

"Many abandoned sites offer an open space in which to work, where one has less of a chance to be disturbed."<sup>18</sup> Such a view forms a general ethos in Grzinich's working methods, articulated in an interest for less "defined spaces." The abandoned site, for Grzinich, ultimately affords more "open ended creative options." Yet, in following Grzinich's work, the abandoned site is revealed as extremely rich in sonic experience, and offers an extended material base for investigations into texture, resonance, and reverberation, as well as for spiriting expressions of collectivity and sound making. "I'm more interested in, let's say, processes at the generative end of the spectrum, where ideas can be freely explored, experimented with and expressed without certain constraints or conditions of time and space." This tends to lead Grzinich to sites that are rather "lost in the folds of history," for

instance in Riga, or elsewhere, such as an abandoned Soviet bunker in the countryside of Latvia.

Under the umbrella of his related Revenant project, which is an ongoing collective project focused on site-specific acoustic actions, the work *Zeltini* (released on CD by unfathomless, 2008) captures the acoustical identity of the former Soviet bunker. As Grzinich describes:

There were some “dark” elements surrounding this session. It was mid-November in the Baltics which meant that it was cold, gray and the sun goes down early. By the time we entered the bunker and set up to record there was no natural light left to see. Trying to find a shared experience through improvisation among a group that is not familiar is hard enough, trying to do this in the dark in an unfamiliar place is even harder. Knowing we would be without visual and sometimes auditory communication because of the multiple spaces available I suggested to do a recording experiment, to each use our own equipment yet synchronize the timing at the start. If we were to get “lost” or immersed in our own experiences, it would be interesting to reassemble them later as a shared “fictional” space. This is indeed what we ended up with. Using only my ears and a headlamp to guide my way, I foraged through that unknown space collecting objects and playing them on the varied surfaces I discovered. I remember the old rags, the dust, broken pieces of concrete, pipes coming out of the ground and how I searched for ways to animate the space and instigate interactions with the others. Whether it was the quest for new objects or the need to stay warm I constantly moved around and even ended up outside toward the end.<sup>19</sup>

The resulting work is an extremely evocative sonic experiment, full of surprising tonalities and textures, each punctuated by a vague yet concentrated compositional dynamic. A heightened intensity carries through the work, a palpable improvisational journey that locates us firmly within a space of detritus, as well as surprising beauty and nuance.

As Grzinich suggests, forgotten spaces offer opportunities for creativity, fully supported by what may be found on site, left behind by various forces, histories, and productions. The “fictional” element he further points to is suggestive of the subarchitectural: that what may lead us to such places may be a deep engagement with the found, as providing a raw stage for sounded actions, yet what results are *re-constructions* of such spaces. Someone scrapes something, while another drums something else, each action an element that *reimagines* what this place is.

The expandedness articulated by Sambolec, and the acoustical actions of Grzinich, may be seen and heard as methods of appropriation that force an additional dimension onto the architectural. This dimension can be further described by way of “minor architecture,” which Jill Stoner suggests proliferates within the excesses of the abandoned, or the unused, leading to a sense for the indeterminate. As Stoner describes, “Minor architectures operate in that mercurial, indeterminate state that is the passage from striated to smooth, from closed system to open space.”<sup>20</sup> The creative possibilities Grzinich finds in entering these forgotten

buildings and territories gives way to a dimension that is precisely the making of another form of inhabitation. The occupation and utilization of such abandoned architectures, however temporary, “reshapes space by transforming it”<sup>21</sup> into a collective zone of listening and sounding, an active search for ways of “animating the space.” These procedures and minor productions instantly violate and flex the material state of architecture, suspending the spatial delimitations of the building through acts that tunnel through structures and infrastructures, along surfaces and depths. As Sambolec’s work demonstrates, what may occur upon the line between interior and exterior, and by extension, between private and public spheres, can itself become a site for alternative meeting and sensing, as well as production.

Following Stoner, it’s important to capture the political current within minor architectures. As the *Zeltini* recording reveals, the reworking of the abandoned site gives expression to a radical appropriation, explicitly turning the hard edges of architecture (and in this case, an extremely politicized and powerful architecture) into an acoustical materiality that, as Stoner suggests, readily dislodges the certainty of fixed forms in favor of “collective desire and enunciation.” “Minor architectures operate from outside the major economy . . . outside these dominant cultural paradigms, but *inside* architecture’s physical body” to become a form of “*practiced space*.”<sup>22</sup> Central to this is a dynamic, dialogical impulse supported by an engagement with what is at hand, and with what may be done with limited resources—a minor economy enacted undercover within the operations of stratified markets. A giving *and* a taking that makes due precisely by ducking under the plane of appearances, of visibility, and the presentation of the imaged. Instead, an array of opportunities are discovered, carved out or scavenged—the minor architect radicalizes any object or material as a vibrational body, shifting matter into energetic sounding. “For architecture to approach a condition of minority, it must first become not visible . . .”<sup>23</sup>—it must become covert, parasitic, secret. Such invisibility is central to sounding practices, suggesting a correspondence between minor architecture and the ways in which sound artworks often develop through acts of appropriation; searching for secret openings, undiscovered channels, and hidden opportunities onto the spaces and environments around us, sound art gives expression to an embodied sense of freedom. As Grzinich demonstrates, recognizing the potentiality in what is found on site and enacted through sounded appropriations may form a radical material base—to “vibrate with intensities . . .” and to reform “the object *into a relation*.”<sup>24</sup>

Considering Stoner’s characterizations of a minor architecture, I may return to the question of subnature to suggest a further understanding, for minor architects are prominently concerned with peripheries, as well as marginalization. From abandoned buildings to the matters that introduce particular force and energy—those temporalities, ephemera, and dirty textures—these become intensities of vitality, as well as means for *practicing space*. Minor architecture tunes itself to the subnatural, and in the case of sound art, opens out toward an appreciation for auditory actions as strategies of resistance.

## Molecular Flux, Actant Particles, and Plant Life

It is my interest to focus on questions of subnature and subarchitecture by highlighting the ways in which an art of sound leads us into deeper engagement with the marginal, the peripheral, and by extension, the excluded. Vibratory energies, weather conditions, and abandoned environments incite sounding methodologies by which to unfold, disarray, and elaborate our sense of place and those relational intensities defining the *in-between*. Such approaches seem to also integrate a sense for the historical and political tensions that often territorialize a given location—what may lie underneath, to the side, or deep within the architectural form, or in the ground. Here, sound is participant within an energetic, disordering, improvisatory, and socially engaged action, supporting an appeal to the senses and the modalities by which we come to relate. This action, as I've tried to show, is found not only in grand gesture or formal narrative, but importantly, in the nuanced and sustained inhabitation and interaction with places, tracing over the textured details and background elements so as to tune ourselves to more complex engagement: a *presencing* that is equally a displacement of the powerful formalities of spatial ideologies.<sup>25</sup>

To consider this further, I'm interested to take a step closer, as well as deeper, to reflect upon these energies of sound as they reveal a *molecular* territory. The textured surfaces, the fluctuation of vibrations, and the waste found on the underside of architecture all come to suggest the movements of molecular activity—a layer of animation on the threshold of human presence and perception. Such molecularity, if one were to glimpse it, also suggests a level of listening that is certainly subnatural and subarchitectural, as well as *subliminal*. The *presencing* enacted by these auditory practices—vibrational amplifications, ambient dialogues, sonifications, sounding actions—define an additional focal point, instigating a deeper and more complicated meeting between the body and its place. We move into a space of listening that is never fully within the human order, but rather is participant within an assemblage—a complex association of sonic force, spatial structures, elemental energies, animate forms, and the temporalities constantly at play. *My body is only a fraction of this event; my listening is one of many.*

A molecular territory resides within such assemblage, where every audible event must be heard (or imagined) as something that exceeds my perception: what I hear is already embedded within a greater field beyond my senses (as Morton's writing-listening suggests). What sound art registers is such deep relationality as one that is immediately *not only about me*. I might term this a "particle event"—a molecular flux, a frequency spectrum, an animal spirit, echoing what Pauline Oliveros refers to through the term "quantum listening," which she defines as "listening to more than one reality simultaneously."<sup>26</sup> Such a formulation also includes a reality manifested in the slightest of reverberations; that is present upon a surface in such a way as to suggest a hidden territory, in the skin or deep within matter—in short, realities beyond my seeing. It is my interest to map out this

deeper perspective, and to give further detail to sound art's subarchitectural practices and the dirty ontology of sound.

Jane Bennett expounds the issue of material culture by way of “vibrant matter,” unfolding a view onto objects, materials, and things that reminds us of the often-unseen influential force passing between our bodies and the surrounding world. Key to Bennett's argument is a concern for the “agency” beyond the human, an agency of foods, metals, electricity, furniture, etc., and which fully conditions human and worldly experience. Heeding to such seemingly “peripheral” elements, Bennett leads us into an extremely multi-faceted understanding of what constitutes “a body of force” and the powerful enactments exerted by them. It is imperative, for Bennett, that we “attend to the *it* as actant,” as one that may enrich not only a sense for worldly presence, but also the democratic project.<sup>27</sup> For instance, the author opens her analysis by considering the properties of our own bodies (skin, fluids, bone, etc.) as “actants”—lively, materially vital elements rather than “passive or mechanical means under the direction of something nonmaterial, that is, an active soul or mind.”<sup>28</sup> Such a view forces a greater, and more “ecological perspective,” in which “materiality” is often composed of ever-deeper, more complex assemblages, each element or part whose form equally consists of additional forces and matters. In this regard, often what we perceive as a “body”—a singularity—is fully supported and conditioned by an array of things or elements, each operating within their own constellation of forces and productions.

Bennett's vital materialism seeks to inspire a more sensitive approach to how we relate to our surroundings, as well as complicating or displacing the dominance of human-centrism. Accordingly, it becomes crucial to ask: how do I understand my body as *mine*? And in what way do my gestures and acts of agency dialogue (or not) with a greater field of animate life? What comes forward in following Bennett's analysis is an appreciation for how material bodies and related energies are not as sharply divided as we might imagine; energy and matter are rather different states of a given “thing,” or different “vitalities” that pass continuously through and against other vitalities, exchanging energies, shifting material conditions, growing or decaying, *transitioning*, and importantly, imparting effective influence. As a consequence, Bennett seeks to integrate such a sensitive assemblage of matters and energies, life-forms and forces, into understandings of “public life” and “public good”; in short, she questions whether acts of democratic governance and self-determination are to be seen as always susceptible to and in dialogue with a greater material and vital sphere of actants.

The ecological perspective, in support of an assemblage of life-forces, is certainly aligned with more holistic and integrated understanding, and one that we might also follow in relation to sound art. As an art of listening, the project of sound art is often one that occupies a complex aesthetical zone between material form and energetic force; a creative space between representational and performative practices, and populated by a range of bodies and their rustlings. In this regard, the subnatural and subarchitectural are experienced as acoustical spatializations of

the ecological, a manifestation of the minor that equally spirits the interweaving of vitalities and their thingness, their audibility, to force an assemblage in which objects and subjects cohabit.

The work of Chilean artist Juan Downey (1940–1993) accentuates this dynamic of integration, aiming to capture and extend the intensities of such ecological engagement. Throughout the late 1960s and early 70s the artist developed a complex series of works that sought to manifest the field of energies always already present within our environments. Though for Downey, such interests were expressive of a greater “cosmological” view in which invisible energies and particle oscillations bring into contact multiple realities and which integrate precisely what is beyond the purely physical. For Downey, it thus became increasingly important to create works that would involve visitors, explicitly bringing them into a space of active participation to ultimately “make people aware of the vast number of different kinds of energy within the universe.”<sup>29</sup>

His early electronic sculptures of the late 60s, for instance, integrate into their seemingly minimalist appearance live sensing elements, such as radio receivers, photocells, and Geiger counters, to create extended and experiential work. One such example, *Against Shadows* (1968) appears as a cubic floor sculpture, which is connected to a panel of light bulbs mounted on an adjacent wall. The shadows cast down onto the top surface of the floor sculpture by visitors are subsequently translated into light, as the bulbs are illuminated in corresponding patterns, thereby creating a positive image of the cast shadow. Or, in his work *Invisible Energy Dictates a Dance Concert* (1969), energies found within multiple locations are captured and transmitted using Geiger counters and walkie-talkies. These signals are subsequently interpreted by performers and musicians who are located in different rooms to form a networked weave of movements and sounds. In this regard, Downey was particularly interested in materializing the energies that circulate around us, harnessing their presence and using them to create a type of performative network, or what he called “invisible architecture.” He envisioned a dynamic experience that moved from an invisible, molecular flux through to the metaphysical channels that connect us to greater forces: collective memory, spirit presence, universal being. Energy thus becomes a metaphor for more transmitted conditions.<sup>30</sup>

One of his more elaborated works, *Plato Now* (1973), presented at the Everson Museum of Art, stages this expanded interest. Consisting of nine “meditators” captured using closed-circuit TV and shown on nine corresponding video monitors, *Plato Now* functions as a literal meditation on the nature of perception and being. While the participating meditators focused on reaching a level of alpha state, pre-recorded excerpts from Plato’s *Republic* and *Timaeus* were triggered, creating an auditory backdrop to the participants and their televised image. Again, Downey attempts to create a networked and participatory work, producing an aesthetic event where each element connects to form a dynamic, fluctuating space of electronic interaction and integration. As Valerie Smith describes, “Downey captured the invisible energy of the human mind, letting it circulate between the interlocking

systems of auditory suggestions, videotape recordings, and feedback, forming an elaborate electronic architecture to contain its collective power.”<sup>31</sup>

In this regard, Downey’s works move in and out of visibility to shift our attention toward that of the invisible and the energetic; from radio signals to the cellular activities of brain waves, Downey amplifies what is often only intuited: the energetic movements that shape our physical world. In doing so, the artist searches for a means of relational contact to overcome separation, and to unsettle the lines that alienate one body from another. In building out invisible architectures, Downey’s work leads us into greater recognition of that “quantum view” by which relationships expand into a form of radical inclusion, where an array of conscious states and energy fluctuations coalesce to form an altogether different view of the sensible.<sup>32</sup>

I want to further tune this perspective of the molecular, the vibrant, and the invisible by way of the bacterial, a life-form hidden within other life-forms and that imparts an essential, elemental force to living matter. The research projects developed by the artist group The House of Natural Fiber from Yogyakarta, Indonesia, lead us into this cellular dimension, where bacterial actants and biological processes are harnessed for social, sonic, and digital work. In particular, their project *Intelligent Bacteria – Saccharomyces cerevisiae* (2011) draws out this relation by addressing the question of the illegal production of alcohol by local residents. In response to religious and national prohibitions on consuming alcohol in Indonesia, as well as the introduction of increased taxes on its sale in 2010, many people ferment their own, which at times can be fatal. (The project was originally motivated by increased deaths after the introduction of the tax.) The illegal and often unsanitary alcohol production inspired the group to develop *Intelligent Bacteria*. The work takes the form of a “live laboratory” for the fermentation process of ethanol and integrates information on its safe production. Fitted with a set of large glass beakers and tubing, electronics and loudspeakers, the work displays as well as *amplifies* the bacterial culture. During the course of the installation, the group also presents the “Bacteria Orchestra,” which performs a live mix of the fermenting process. In this regard, the group makes a link between fermentation and sound mixing, cultures of cellular activity and sonic processing. I might speculate further, to pose the group’s parallel interest in bacteria and sound as indicating a potent correspondence, one that leads us right into the center of listening as means for delving into hidden depths to confront vital elements.

The work was initially developed in collaboration with microbiologists at Gadjah Mada University, and has at its center the sharing and dissemination of knowledge on methods of safe alcohol production (initiated as part of the group’s Education Focus Program). This is furthered in a more recent project, *Micro/Macro Nation*, which addresses the government’s proposed cuts to fuel subsidies in Indonesia. The new policy essentially would increase the difficulties around paying for fuel, and in response the HONF developed a research platform to consider new methods of fuel production. Indicative of the group’s approach, the project is part-education program and part-installation work, bringing together data on the

economies of fuel production and alternative means found in methods of recycling. The research finally led to the production of a prototype—an installation containing a fermentation machine showing how ethanol fuels can be generated from recycled hay, a computer grabbing data from across the world on issues of fuel and agriculture production, and finally, a visualization that shows how Indonesia may achieve fuel and energy independence. Central to the work, as with *Intelligent Bacteria*, is an extremely dynamic understanding of the relation between microscopic forces and macroscopic issues. Following Jane Bennett, such a perspective performs an important insight into how the molecular, or the bacterial, radically influence much of our daily lives, and how a material like hay can alter national infrastructures. As Oliveros’ “quantum philosophy” suggests, it is by recognizing the dynamic inter-connectedness passing between “multiple realities” that greater attention can be given to the contemporary urgencies threatening our environments. For Oliveros, and the HONF, listening may play a crucial role in fostering this expanded attention and criticality.

Attention, and its current politics, may in fact be central to these debates. Malcolm McCullough raises the issue of attention by specifically linking this to the ever-intensifying augmentation of our physical environments with that of digital presence.<sup>33</sup> Attention is captured within an increasingly complex “immaterial” economy, where digital screens, computational sensing, remote presence, and daily rituals interweave with the force of a global logistics; our attention is always already elsewhere within the age of digital capitalism, affording both new modalities of exchange as well as anxiety. Attention is under pressure, forced into a rather endless labyrinth of possibilities; as a consequence, information is no longer useful for certain ends, but rather exists as an oceanic flood that requires new modalities of navigation, orientation, and attentiveness.

This political economy of attention leads McCullough to a greater reflection on what he terms “ambient commons.” Ambient commons are emergent environmental territories formed by digital information and platforms, the increasingly present digital screen (in all its forms), and shaped by evermore “peripheral” signals—an informational capture that consistently pulls at my attention, at my body. Remoteness is thus paradoxically manifest as the proximate; in short, it is *already* close by. Ambient commons are explicitly found in such new dynamics, located *in-between* objects of attention and the tangible horizon of digital connection.

Ambient commons operate equally as a new formation of social relations and economic structures, one defined by the networked reach of digital activities. As a commons, they are exposed to both colonization *and* expressions of resistance. As the HONF demonstrate, the capacity to resist the hierarchical dictates of a state policy is bolstered by the possibilities generated through digital networks and articulated in forms of self-organization, networked information, and creative labor, and especially, through the dissemination of alternative models. Such productions appear by linking a range of peripheral and heterogeneous knowledges, and dramatically find support by reaching out through a global network. The group’s

focus on how bodies might find alternative means for sustaining new resistances exemplifies what is crucially at stake in ambient commons: the enactment of new modalities of public life. Here we might highlight this dimension to ambient commons through a notion of the “nanopolitical.” Echoing Michel Foucault’s theories of biopower, and the biopolitical configurations through which the modern subject is “produced” (while finding recourse to methods of resistance), the nanopolitical is concerned with the intensely powerful procedures by which biopower invades the body and its movements through the expanded spheres of the social. As such, it aims for a set of practices based upon “working with the sensitivities” of corporeality, and “the infinitely small operations that bring us together as bodies in movement, struggle, love, work and so forth.”<sup>34</sup> The “body” is thus posited not as a singularity, or as “a container of truth”; rather, it is something “we are and take part of, in sharing movements and sensations.” It is explicitly a molecular figure, shaped through processes of exchange, of finding ways of being vulnerable, of charting routes toward “ways of relating to one another beyond our specialised or personalised roles and habits.”<sup>35</sup>

The nanopolitical turns us toward the ambient commons defined by McCullough, locating our corporeal experiences within a proliferation of micro-political movements and augmented interactions in which the body is always in more than one place; importantly, this forms a new possibility for sharing, collective engagement, and for imagining new ways of caring for all types of bodies.

McCullough’s work, and the issue of the nanopolitical, provides an extremely suggestive perspective for approaching the subnatural, subarchitectural, molecular, and energetic forms and productions I’m tracking here, and accordingly I’m tempted to link the practices of sound art with features of ambient commons. The peripheral experiences and elements McCullough captures by way of ambient commons, and the territorial disputes central to the economy of attention today, may contribute to understanding the expanded perspectives that sound art constructs with such radical focus. There is certainly a politics of the senses alongside the politics of information, and increasingly it is not only a question of where to *put* our attention, but also how to negotiate the informational pressures and systems surrounding us. Ambient commons are precisely what link the new configurations and bodily forms inherent to digital culture, indicating a new potentiality for alliances and resistances (as well as markets). As McCullough concludes, “May the ambient invite tuning in instead of tuning out. May it do so with an emergent sense of a whole, or at least of continuum,” which may also deepen our sense for the linkages between microbes and codes, formal and informal cultures, bodies and places, and all that may be heard through quantum listening.<sup>36</sup> As the HONF suggests, sound art may function as a register of the embedded elements always already active, amplifying and sonifying so as to charge our attention against the continual distractions and capitalistic gains placed upon its sustained focus.

The House of Natural Fiber’s projects manifest a DIY ethos, generating propositions and prototypes for “democratizing energy” and bringing forward awareness

of current ecological conditions. I'm interested in their projects and how they underscore a view onto the "agency of the molecular," where legality is a question of bacterial cells, and sustainability can be managed through the fermentation of waste. Returning to Downey, the invisible architectures developed through his works may lurk not only in the perceptions and sensations of networked identity, but also within the bacterial matters below the skin, in the linings of the body, and elsewhere, in the infrastructures of digital exchange. These elements, in fact, participate in ambient commons by explicitly reminding of what we all share: the molecular particles that sustain as well as capture the energies that keep all things going.

The fascination with, as well as the questioning of, organic life is a central thread within practices that cross-over between the arts and sciences; and the spatial productions that integrate a sense for minor culture often accentuate a deeper, ecological view. From humming backgrounds, abandoned buildings, weather conditions, and ambient commons that support ways of being attentive, understandings of embodied life shift dramatically to the vibrancy Bennett outlines. The minor force of subnatures and their related practices lead to an incorporation of marginalized elements, and in doing so force a dissolution of the lines that circumscribe and distinguish what we understand as subjectivity. Instead, radical forms of integration and inclusion appear, to fill the *in-between* with deep promise as well as intensity and confrontation.

A further marginal and subnatural element often brought into the sphere of sound art, and lending to acts of minor production, can be found in plant life. Plants force into view a certain tension when it comes to questions of the built environment, not to mention that of natural landscapes and organic matters. They are clearly fundamental to our environments—to the idea of environment in general—and yet plants are often relegated to the peripheries of architectural work, as strictly beautifying elements (integrating a phobia of the weed), or objects that stand in the way of the act of building; they may function as metaphors within a spatial imaginary, while also intruding upon the abstraction of space central to architectural planning.<sup>37</sup> In this regard, plants occupy an ambivalent threshold between formal and informal spaces, human culture and natural force, providing material for experimental and subnatural practices.

There are many projects that pay attention to plants, specifically as entities full of hidden animate and cellular force, as well as offering sounding or compositional potential, as expressed in Mamoru Fujieda's *Patterns of Plants* (1997).<sup>38</sup> A collection of compositions based on data gathered digitally from plants, *Patterns of Plants* presents music full of melodic experimentation. Using a digital interface developed by botanist Yuji Dogane, the resulting compositions are hybrid constructions, fusing botany and musical technology, as well as diverse tuning systems, instrumentation, and appropriated melodies. From harpsichord and viola to Japanese mouth organ, *sho*, and koto, the composer relishes the intermixing of tonalities and structures, forming a rich and extremely subtle music that seems to locate us within the deep and seemingly silent presence of plants.

The life of plants is further considered by media artist Leslie Garcia in her project *Pulsu(m) Plantae* (2011). Using a variety of stimuli, from lighting to water to sound and touch, Garcia focuses on how plants react, capturing these rather unseen responses in amplified sound. Her project acts as a workshop aimed at developing not only the means for hearing the sounds of plants, but also for considering the plant as an animate presence. The focus on such vital energies is equally found in the work of Scenocosme and their project *Akousmaflore*. Developed by the artists Grégory Lasserre and Anais met den Ancxt in 2007, the work appears as a hanging garden in which each plant is turned into a live sensing interface. As the artists state: “Scenocosme uses the plants like sensors. With interactive technology, plants become instrumented, and their senses are augmented. The sensing approach used in this technology treats plants and humans as a biological interface. Plants and humans become living sensors.”<sup>39</sup>

As in Garcia’s work, the Scenocosme project attempts to create a heightened interactive experience, and in viewing video documentation of the installation what becomes so clear is the degree to which such interaction enlivens not only our listening, but the tactile sense as well. Acts of touching, caressing, fondling, and even embracing reveal an extremely sensitive “instrument”; the plants respond to the slightest of contacts, which immediately intensifies a feeling for our own sensate bodies and the plants as life-forms, materializing in the emanations of amplified sounds, or what the artists define as “the voice” of the plants.<sup>40</sup>

Central to the works I’ve been exploring here is a great dedication to *becomingsensitive* to our surroundings and the elemental energies that configure and inflect much of our experiences, and the experiences of others. Vibrant matters, invisible architectures, bacterial cells, and the sonified expressions of plants, these form a constellation of references and productions that energize the ways in which we come into contact with *other materialities*, *other collectivities*. Sound art is a field of practices drawing focus onto such matters. In doing so, it leads by way of the ear toward an intensification of microscopic and cellular encounters and occurrences—the sensations arising in that point of contact; what exists within the molecular, and that informs and infects the very breath we take, is articulated, mobilized, sonified, and transmitted so as to not only accentuate the power of the sensed, but also to intensify the relational parameters of common life.

### Phantom Memory, Secrecy, and the All Too Real

In considering these qualities of subnature, and the subsequent minor or subarchitectures built from sonic events, I’ve been led into marginal, molecular, and hidden regions and spaces, each conditioned by energetic elements and atmospheres, where listening must strain itself, to lean forward into a constellation of agitated molecules. As part of this, a deep sense for the intimate and the proximate appears, specifically in relation to what may live and breathe under our skin, or within the cells of other organic matter close at hand. In this way, sound art occupies

a complex space between research and aesthetic production, between documentary capture and fictional telling; often what we hear is an amplification of what is already there so as to deepen our listening sense. Thus a type of oscillation occurs, one that weaves together an auditory imaginary with the tangibility of the real, forming what I may refer to as the *all too real*.

What I find striking is the degree to which sound art is able to engage with the real, the tangible, and the concrete, while always maintaining a palpable and investigative connection to the imaginary, the intuited, and the ephemeral. I take this as an indication of sound's own inherent potentiality and behavior, as one that offers a dynamic interaction between multiple fields of experience and sensing. The *presencing* enacted by sound art is precisely one that allows us to be extremely sensate, able to pay attention to what is around us, and deep within, while relating this toward a broader imaginative arena—of emotions and the ineffable, of spirits and the sensed, the invisible or the disappeared. I may suggest that sound art operates according to faith in sound as a path for unsettling the dichotomous view that emphasizes the real and the imaginary, subject and object, as stable and distinguishably separate territories; a hyper-experimental platform by which ideas and materials collapse into frequencies of the *all too real*, which are riddled with the unnamable and the unspeakable, and thus are communicative of the complex drive of the body which always mixes things up.

Focusing on what I'm calling the "all too real," I'm interested to insert a final coordinate within this appendix with a view toward the psychological, or the psychoacoustic, to highlight this as an additional question within these zones of sonic subnature. The artist and writer Budhaditya Chattopadhyay investigates the question of presence, and how sound suggests another understanding of perceptual experience. For him, sound and listening are intensely "associative," never singular but always already superimposed across multiple levels of presence and that easily stitch together present and past, now and then. As he suggests, "Knowledge about the locative source of sound becomes blurry in its juxtaposition with memory, contemplation, imagination and mood," which creates a rather "disorienting" experience.<sup>41</sup> This associative property of sound is, for Chattopadhyay, a central articulation of what he terms "nomadic listening"—a listening that wanders across thresholds of presence and absence, the immediate and the remembered to create all sorts of associations. Interestingly, the author further elaborates this by way of reflecting upon his own "migratory" status: "when I hear the distant sound of what may be a horn, it reminds me of numerous other horn-like sounds from different cities that I have heard ..."<sup>42</sup>

Chattopadhyay's view is extremely suggestive for understanding the ways in which sound provides a deep sense of presence, of *presencing*, that immediately links to what is also absent, momentarily forgotten or disappeared. The temporality of sound is fundamental to our experience as listeners, acting to prompt our feelings for places, of the here and now, and yet in such a way as to heighten our sense for what is already missing or passing: memories of previous experiences, possibly, as well as the energetic intensities that still reside within our auditory



Leif Elggren, *Under the Couch* (2011), Freud Museum, London. Photo courtesy of the artist.

unconscious. In this regard, a sound may loom to ultimately rivet together presence and absence, to open a door onto the all too real.

Considering these questions of presence and absence, sound and memory, the work of artist Leif Elggren can be appreciated as a continual expression of sound's potent ability to give way to the *all too real*, as a collapse of time and space, and the shuddering of subsequent reverberations. Elggren's works lead us into the uncertain territory of the associative listener, reminding of sound's ability to unhinge from a stable referent, object or body, and to draw out sudden associations, memories, phantasms, and also repressions.

For his work *Under the Couch* (2011), produced for the Freud Museum in London, Elggren made an audio recording from under Freud's sofa. The sofa—in this case, the sofa where countless patients lain or sat upon, to recount their dreams, their worries and anxieties to the expectant analyst—functions as a type of vessel, or as Lucia Farinati, curator of the project poses, a “listening device.”<sup>43</sup> Elggren's recording seeks out not only the ghosts of the voices of patients, but equally the possibility of hearing *through* the sofa. The psychoanalytic sofa is highlighted as a particularly active place where listening itself has found a new point of registration: to hear not only what is spoken by the patient, but more so, the unconscious itself and the intensities of the fragmented self.

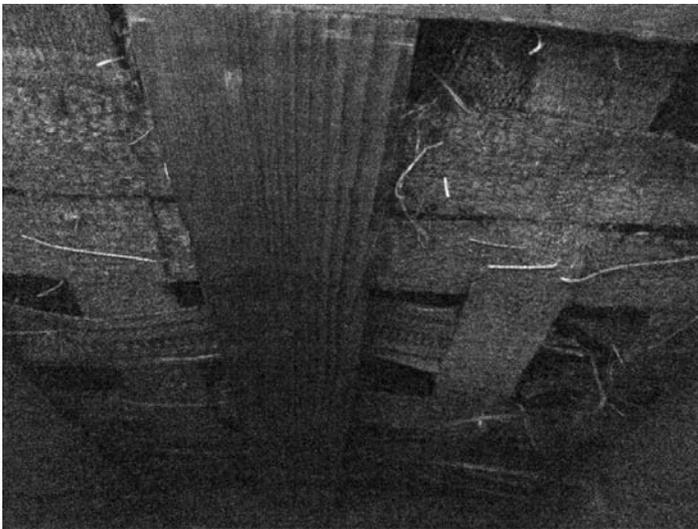
Elggren has continually sought the trembling conditions of the unconscious, the shadowy underneath of the body, and the ghosted territories of memory. His works give us an audible view onto the population of existential phantasms, and in doing so reveal the individual as not so much a body standing in the world, but rather a figure always already constituted by more than we can know. Particularly for Elggren, memories seem to continually *press in* to influence the expressions and

anxieties of subjectivity. For example, his work *Extraction* (2002) is a recording made from within the artist's mother's uterus. As Elggren states:

This basic sound material was recorded in my biological mother's uterus with my not yet developed teeth used as a fundamental and simple recording device a few days before my birth. This sound material was kept recorded and hidden until recently inside one of my wisdom teeth, but has now been brought to daylight and exposure. Digitally mastered, reproduced and sent out into the room which we all mutually share and which we usually call reality, the world. Sent out with the main purpose to change that room.<sup>44</sup>

The resulting work is an hour-long block of electrical sound, a complex drone that bristles with slight fluctuation; it is more a form of unleashed "energy" than composition with the purpose, as the artist suggests, of transforming the room in which listening occurs. To stir, and alter.

Elggren ceaselessly confronts primary wishes, memories, and fantasies, and his works are startling depictions and materializations of their lingering influence—movements toward what he calls "the magnificent center." The use of sound in his works thus operates as a literal channel for probing and delving into the peripheries of consciousness—to sound out an inner acoustic. Elggren harnesses particular sounds as vehicles for embodying what can no longer be recovered: the magnificent center can only ever be a dream, a fantasy, a phantom memory, and yet one that functions as a feverish base for production—to reanimate what may be buried, in his teeth, or under the sofa.



Leif Elggren, *Under the Couch* (2011), Freud Museum, London. Photo courtesy of the artist.

As *Under the Couch* reveals, the recording made under Freud's sofa is haunted by the traces of disappeared voices—all those that have spoken and uttered upon (or through) this listening device—as well as Elggren's own obsession with *going under*. As he states in the liner notes to the related CD release: "I can tell you that almost everywhere I have been, in an apartment or somewhere similar, I have crawled in under a bed and made some small drawings if I could. Excusing myself to go to the bathroom has many times been the perfect alibi to sneak in and make my actions in private, without being caught."<sup>45</sup>

This space *under the bed* is certainly a space connected to the unconscious and the drives of the body; it is a space underneath, hidden, and secretive—a psychoacoustic space echoing with what we may one day hear. This realm of the below is given poignant description by Gaston Bachelard in his *Poetics of Space*. Considering the space of the cellar, which is the ultimate territory of the below, he writes: "... to go down to the cellar is to dream, it is losing oneself in the distant corridors of an obscure etymology, looking for treasures that cannot be found in words."<sup>46</sup> Elggren returns to this darkened territory for his private activities of dreaming and drawing, listening and recording, amplifying precisely those "distant corridors."<sup>47</sup>

His practice results in a phantasmic aesthetic where any single object or identity is interrupted by an addition, whether in the form of a memory, of the below, or also, that of channeled voices. Elggren's ongoing engagement with the figure of Emmanuel Swedenborg further iterates the artist's concern for interrupted identity, for an identity always already haunted. *Angel Modulations*, a CD capturing a series of recording sessions Elggren undertook in 2007 while at the Swedenborg summerhouse in Stockholm, is an attempt to "carry" the voice of Swedenborg through the artist's own.<sup>48</sup> Elggren's interest is not so much in the content, but in the possibility of contact, a spectral communication whose sonic features are fully marked by *the beyond*. What we hear is a voice suddenly overwhelmed, or overtaken, by the pressures of an unseen force; it breaks, it multiplies, it is a voice drowning in noise.

Elggren's work contours the area of sound practices I've been exploring in this appendix with a pressure found not in structural vibrations, or weather conditions; the subarchitectures of energy, and the micro-productions of organic matters, while extending the spatial and relational enactments of sound art toward that of the atmospheric, the vibratory, and the molecular, are also suggestive of unconscious life and the drives that fixate us on the unimaginable. As Elggren's sonic works testify, listening is prone to dynamic slippages and obsessions—a nomadism—to forge new links across time and space, and between present and absent bodies. Going under the bed to record the lost sounds existing below the line of audibility, Elggren tunes us to invisible presences that no doubt live as so many agents and actants, and that may drive us toward the ineffable.

The question of memory, the unconscious, and invisibility, in turn, is one that must be considered on a political level. As Bennett's work suggests, the agents of

change are fundamentally operating within the matters surrounding us, and often wield effective influence through an animate presence that is mostly peripheral to our attention. Bacterial flux, vibrational energies, and phantom memories are thus operating on the field of power, and are fully implicated within the political economies traversing the globe. As I've been interested to consider, sound, as that elemental material making tangible the *in-between* and spiriting a range of relational contacts, is extremely operative in terms of enabling practices that hinge together diverse bodies and materialities. The "dirty listening" that I'm mapping here is one that relishes such intersections and productions, such palpitations and sensations that pass between and through bodies and things. And that also lend to the force of our freedoms of expression.

I'd like to conclude with the question of freedom, and the power dynamics at play within this field of the unconscious, as well as in acts of *secrecy*. The territories of the below, as well as that of the ambient and the molecular, must also be understood to overlap with the more nefarious operations of surveillance, a *listening in*, and the forensic apparatuses that increasingly relate the body and the social to the level of microscopic information. These function within a system whose increasing capabilities render us susceptible to all sorts of biopolitical invasion. The nanopolitics of contemporary forensics is indicative of a greater sweep, one that invades and catalogues the molecular as so much coded information.

The works of Rainer Krause, an artist originally from Germany and working in Chile for many years, often focus on issues that consider the politics of listening, drawing out the tensions between social conversation and apparatus' of policing. In particular, his project *Kleiner Lauschangriff* ("Small attack listener"), initially presented at the Museum of Solidarity, Santiago de Chile in 2011, is based on the



Rainer Krause, *Kleiner Lauschangriff* (2011), Museum of Solidarity, Santiago. Photo courtesy of the artist.



**Rainer Krause, *Kleiner Lauschangriff* (2011–2012).** For the course of one year, the artist made daily recordings of conversations with people. Photo courtesy of the artist.

artist recording conversations with people. Such a seemingly simple undertaking though is explicitly shaped by references to histories of surveillance and their continuation within today's environment.

For the work's presentation, Krause intentionally located his work in the basement room of the Museum, which was specifically used by the secret police under the dictatorship of General Pinochet for tapping phone conversations. Presented within this underground chamber, the artist placed a white customized vest on the back of a chair embroidered with the statement: "Fellows: for better care every conversation with me can be recorded." The work thus articulates a somewhat ironic view onto acts of recording to draw out the uncertainties and ambivalences that may exist between the archive and its more covert motivations. While we may support a notion of historical record, at the same time recordings participate within all types of spying and incriminations. Recordings, in fact, have become central to our contemporary cultures, where data is endlessly stored, copied, and transferred across innumerable digital channels. Krause additionally addresses this question in the second exhibition of the work, exactly a year after its first installment. Following the presentation at the Museum of Solidarity, the artist decided to continue the work: for one year he attempted to make recordings each day, throughout his usual routines and experiences. Whenever leaving the house, Krause would wear the customized vest (this time, a black one), thereby announcing his intentions to the general public. From conversations at the shopping mall to interactions with students, Krause developed an audio archive of conversations over the course of the year. This process though had a set limit: he decided not to exceed one terabyte of data. This digital material was subsequently stored on a single hard disk and exhibited at Sala Juan Egenau, University of Chile, along with

a list detailing all the places where the recordings were taken. The hard disk was presented within a transparent acrylic box and locked with a “secret key,” rendering it inaccessible to visitors.

Krause’s work emphasizes the possible appropriation of every conversation, reminding that words, and their circulation, by wielding great force and freedom may also prompt governmental offices and authoritarian states to monitor and appropriate their ongoing articulations for certain ends. Secrecy and freedom of expression, covert listening and social interaction come to interlock, held within a suggestive project of appropriation and symbolized not only by the final hard disk, but initially by this territory of the Museum’s basement, a space of covert intensity and hidden intentions, and in this case, one marked by brutal history and the hushed silences that contain its reverberations.

Leif Elggren’s occupation and obsession with the territory of the below, and all related unconscious phantasms, can be understood equally as a space of terrible monitoring: a zone additionally shaped by acts of policing and surveying, and processes that instill fear within the populace. As Elggren acutely shows, what may lurk below can haunt—or as Krause’s work further suggests, *terrorize*—the imagination. The invisible and the hidden are thus always marked by the dynamics of power.

The project of Rainer Krause leads us to an expression of “presence” located within the subarchitectural, though one that manifests in the form of a figure in the dark listening in, a voice trapped in silence, a sound archive full of political uncertainty, and the pressures that circle in and around its muted audibility. Krause’s project is one that unsettles the spatial and aural imagination with what is so present and yet absent at the same moment; the hidden mechanisms of surveillance always pose the threat of physical abduction and the silencing of others. Acts of *presencing* thus may be understood as processes that enhance or amplify invisible and secret energies, whether in the form of phantom memories or that of surveillance apparatuses, unsettling the demarcations that keep space in place so as to highlight the below, the hidden or the seemingly empty room as full of particular force.

### Concluding: Nanopolitics, Peripheral Publics, and Cohabitation

I’m interested in sound art as a field of practices that nurtures ever-broadening relations to places and things, bodies and materials, people and creatures, and that initiates an array of related productions often aimed at intensifying levels of attention. By considering such aspects I’ve been led to ideas of subarchitecture and the minor practices of space, which, in occupying the peripheral zones of the weathered and the abandoned, carve out rich forms of expression and inhabitation, specifically within those regions most often discarded or overlooked. Through such work, new modalities of relating to the found, the trashed, the transient, and the marginal come to spirit a new materialism—a crafting of “the instrument” from

fragments and shards, as well as from the forces of weather, vibrations, and the ambient. Such aspects support a deepening of the senses, leading to expressions of agency and the actant based on radical attention, processes of *attending to*; placing one's attention upon peripheral subnatures may broaden the experiences of contact and dialogue, even to the point of intense multiplicity and diffusion. This materiality is continually unsettled and displaced by an obsessive concern for all that may elude our grasp; the molecular and the hidden are continually foregrounded in projects that amplify and sonify the animate particles under surfaces, within the textures of things, and that importantly connect embodiment to that of the energetic. Here, attention may also be directed *at us*. Subsequently, matter *and* energy, perception *and* sensation are brought into a deep complicated weave. This may be further understood as an oscillation specifically between the acoustic *and* the acousmatic—that is, between the spatialities of the real and the tremors of the imaginary. Sound art pivots upon this unsteady and generative point, hinging together the immediacy of the everyday with the intuited worlds contained therein. *Our listening is located within multiple realities*, which may enfold us within greater relations, and which may equally intensify the fragmentations central to existence.

Sound art eloquently stages such dirty intensities, leading to productions that disrupt and unsettle hierarchies with horizons, subjects with all types of animate presences, ideas with their material counterparts, their embodied *drives*. These productions bring us under the surface, and accordingly set the scene for a psychology of the below, a psychoacoustics in which abandoned spaces, secrecy, and the hidden all come to act as triggers and coordinates within a sonic act, a deep listening. In this way, sound art puts into question the limits placed upon the body, teasing its edges with the pressures of what Gaston Bachelard calls “the instant”—the time of the event.<sup>49</sup> Is not sound art often requesting a deeper engagement with the *all too real*, as that which diffuses my body, unsettles myself, tuning all particles to a starker, richer, and more complex orchestration? A temporality edged by so many memories, durations, and futurities?

I want to conclude this appendix with a number of threads of speculative thinking, which twine themselves around notions of public life, cohabitation, and the creative ways in which critical questions may be asked. Might sound art be heard to initiate forms of practice in support of new expressions of agency? Is there a way in which the construction of deep attention spirits greater sensitivity to our own bodies, as well as those of others? To the silences so full? If sound art is essentially a careful configuration of molecules, a sculpting of the air, a base for aesthetical listening, can we follow it as a proposition for a nanopolitics, that is, a platform for challenging precisely what is always already at work, those discourses, technologies, and social systems that impress themselves upon, within, and around *my body*? As well as the groups we find ourselves in?

I may elaborate such questions by considering the work of Peter Cusack, and his “sonic journalism” of dangerous environments, *Sounds from Dangerous Places* (2013). Traveling to the exclusion zones of Chernobyl and the Caspian Oil Fields, as

well as along the Tigris and Euphrates rivers in Eastern Turkey where controversial dam projects are planned, among others, Cusack records the sounds, things, people, and experiences found there. Such work locates us as listeners within spaces of contention and contestation, as well as surprising beauty and intimacy; pollution and social injustice, decay and disaster are counter-balanced by the voices of those Cusack meets, as well as the textures and technologies on-site, resulting in captured atmospheres riddled with complexity. The recordings are a journalistic survey, as well as a diary of what happens when our attention turns to the difficulties of others.

When faced with irresolvable issues on this scale, how can an individual artist, or any concerned citizen, respond? My answer has been to inform myself as far as is possible, but also to listen to the small voices, to the environment itself, to those whose personal knowledge of the area goes back generations, to those on the front line and to those whose lives have been changed forever by events over which they had no control.<sup>50</sup>

I appreciate Cusack's example and how it points toward a heightened concern for interaction, of moving from the major channels of information to more minor exchanges, where knowledge is grounded in direct meeting, as well as by sensing what may be found within the detritus. In this regard, the project of listening is certainly a relational activity, one that affords face-to-face meeting and caring, but also one that supports the coming into being of "a public." Here I use the term "public" to suggest a form of association, however temporary, weak or unspoken, and which by nature contains the possibility of future solidarity. We move *away* from ourselves when we listen, to return more fully, and it is just such a circulation that enables a sharing of space, an association with what surrounds me. I may suggest that sound art, in seeking out peripheral zones of contact, and by bringing our attention toward the territories between human and non-human, bodies and things, energies and expenditures, incites the formation of publics *at the periphery*. These "peripheral publics" I would characterize as existing below the line of an articulated "public sphere," as an instant of meeting found not in the articulation of debate, or even the fullness of conversation, but in the associations gained from drift and daydream, chance encounters and secret missions, improvisation and attunement, intense listening and sounding, journeys that move around the obligations and expectations of appearance, of a full singularity. In this way, sound art expands and disrupts an understanding of agency and public life, to incite recognition of what has always quietly been there, and brought into proximity through an instant of attention, care, sounded collectivity, and which may not necessarily require any particular form of vocal address. Rather, within this territory of peripheral publics, affiliations are made according to what Michael Warner terms "the visceral" experience of publicness: the pressures and pleasures, the urgencies and joys of cohabitation.<sup>51</sup>

Sound art is an experimental project aiming for connection, whether across or through architectures and spaces, between species, within locations of certain silences or even through the interrupting force of explicit noise, and finally, by tuning into the sonorities of subnatural ambiences and the energetic presences that disturb subjectivity. As Gissen suggests, subnatures are important precisely because they challenge what has come to occupy the center of our spatial realities (and which greatly condition what a “public” can be) to ultimately support productions of inclusion—practices that contend with what has been left behind. As Cusack reveals, there is much to be found within zones of exclusion. Peripheral publics exist as formations around such practices, specifically through acts of attention that seek out affiliation with marginal elements. In the case of sound art, this may be on the basis of hearing *more than can be imagined*.

It is my argument that something potently influential resides within the trajectory and trembling of any sound, something that unsettles the stability of our material surroundings and which doesn't stop at the edge of the body, but travels inward, and through, to ultimately force us out. I hope by recognizing this body as a “relational body” fully wed to organic and inorganic matters, I might give further detail to these intensities of the auditory, following particular artistic works that lead the way to another type of listening: the event of radical association formed by agitated molecules.

## Notes

1. The notion of “dirty listening” is something I've been pursuing for some time, and which appears under different guises in past work, for instance, what I also describe in *Acoustic Territories* as the “promiscuous” nature of sound. See *Acoustic Territories: Sound Culture and Everyday Life* (New York: Continuum, 2010).

2. Timothy Morton, *Realist Magic: Objects, Ontology, Causality* (Open Humanities Press, 2013), 110–111.

3. *Ibid.*

4. *Ibid.*

5. I'd like to make reference to a recent doctoral work by Ruth Hawkins *The Smooth Space of Field Recording* delivered at Goldsmiths' College, University of London, 2013. Hawkins gives a rich analysis of the practice of field recording, specifically challenging many of its conventions of both production and especially, reception (listening habits); in contrast, she developed four projects that aim to disrupt and unsettle these normalized patterns around the practice, offering complex and conceptual works that from my perspective lead precisely to a dirty listening.

6. David Gissen, *Subnature: Architecture's Other Environments* (New York: Princeton Architectural Press, 2009), 22.

7. *Ibid.*, 25.

8. Jean-Paul Thibaud, “The Three Dynamics of Urban Ambiances”, in *Site of Sound: Of Architecture and the Ear, Vol. II* (Berlin: Errant Bodies Press), 43.

9. See Édouard Glissant, *Poetics of Relation* (Ann Arbor: The University of Michigan Press, 2010).

10. Mark Bain's *Bug* work is permanently located at Brunnenstrasse 9, Berlin, and was developed in collaboration with Tuned City, a festival and research platform focusing on sound and the city.

11. I particularly value Barry Truax's examination of "acoustic communications" and how sound acts as a temporal and spatial medium for environmental information. He also highlights how vibration can resonate cavities within the body, to cause "tension" and stress. See Barry Truax, *Acoustic Communication* (Norwood, NJ: Ablex Publishing Corporation, 1994).

12. See Shelley Trower, *Senses of Vibration: A History of the Pleasure and Pain of Sound* (New York: Continuum, 2010).

13. See artist website <http://raaf.org/>

14. *Ibid.*, 89.

15. Tao G. Vrhovec Sambolec, *Manual for the construction of a sound as a device to elaborate social connection* (Berlin: Errant Bodies Press, 2010), 88.

16. See Luis Fernández-Galiano, *Fire and Memory: On Architecture and Energy* (Cambridge, MA: The MIT Press, 2000).

17. Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses* (Chichester: Wiley-Academy, 2007), 32.

18. John Grzinich, from an interview in ear room (2009): <http://earroom.wordpress.com/2009/10/01/john-grzinich/>

19. John Grzinich, text from liner notes, *Zeltini* CD (Belgium: unfathomless, 2005).

20. Jill Stoner, *Toward a Minor Architecture* (Cambridge, MA: The MIT Press, 2012), 7.

21. *Ibid.*, 10.

22. *Ibid.*, 15–16.

23. *Ibid.*, 62.

24. *Ibid.*, 64.

25. My view here certainly favors a rather "optimistic" perspective on sound's ability to circumvent the formalized structures of "power" through more subtle and sensual actions. This is not to overlook the ways in which sound is continually incorporated into methods of crowd control; the use of sound weapons specifically relies upon the porosity and vulnerability of our ears to reinforce state power. As I tried to consider in my book *Acoustic Territories*, sound as a medium is appropriated and re-appropriated specifically through acts of "territorialization" as well as "deterritorialization," producing cultures and politics, as well as technologies, that shape public manifestations. In this regard, I would hold up sound art as a deterritorializing platform for the disruption of the functionality of state logistics and all such militarized applications.

26. Pauline Oliveros, "Quantum Listening: From Practice to Theory (to Practice Practice)," *MusicWorks*, No. 76 (Spring 2000), 37.

27. Jane Bennett, *Vibrant Matters* (Duke University Press, 2010), 3. (my emphasis)

28. *Ibid.*, 10.

29. *Ibid.*, 25.

30. For more on the question of energy and the arts, see Douglas Kahn, *Earth Sound Earth Signal: Energies and Earth Magnitude in the Arts* (Berkeley: University of California Press, 2013).

31. Valerie Smith, “Juan Downey: The Invisible Architect”, in *Juan Downey: The Invisible Architect* (Cambridge, MA: MIT List Visual Arts Center, 2011), 28.

32. The notion of “radical inclusion” I’m pursuing here, as an echo of Oliveros’ “quantum listening,” is supported by her statement: “Music is no longer merely human notation, machine calculations, or even merely vibrations and sensations of sound”; instead, it is a “fluctuating totality” in which sounds, composer and listener are inexplicably connected. JoAnne C. Juett, “Pauline Oliveros and Quantum Sound”, in *Liminalities: A Journal of Performance Studies*, Vol. 6, No. 2, October 2010: p. 5. I’d like to also draw attention to the work of Carl Michael von Hausswolff, in particular his interest in the infective and influential potential of sonic particles. He often intervenes through sound works that charge the air with subliminal force, implementing drones, radio signals, and sonic frequencies. See in particular his work for the Istanbul Biennial (1997), which was presented inside the Atatürk Airport, and subsequently released on CD. Carl Michael von Hausswolff, *Perhaps I Arrive—music for Atatürk Airport, Istanbul* CD (Cologne: aufabwegen, 2008).

33. Malcolm McCullough, *Ambient Commons: Attention in the Age of Embodied Information* (Cambridge, MA: The MIT Press, 2012).

34. The Nanopolitics Group, *Nanopolitics Handbook*, edited by Paolo Plotegher, Manuela Zechner and Bue Rübner Hansen (Wivenhoe/New York/Port Watson: Minor Compositions, 2013), 24.

35. *Ibid.*, 26.

36. *Ibid.*, 20.

37. One brief example in support of this view can be found in the work of Yona Friedman. A renowned experimental architect and urban thinker, Friedman throughout the 1960s, and to the present, developed a highly socially engaged practice; often integrating forms of participation, and a sense for malleable form, Friedman nonetheless depicts architecture as an intensely urban sprawl: modular forms hover above the city, and render human subjects as players within this spatial utopia. I’m at a loss to find any plants within his architectural vision—one must wonder: where have they gone within this moment of humanistic space? See Yona Friedman, *Toward a Scientific Architecture* (Cambridge, MA: The MIT Press, 1975).

38. Mamoru Fujieda, *Patterns of Plants* CD (New York: Tzadik, 1997).

39. Quotations and information found on the group’s website [http://www.scenocosme.com/akousmafloren\\_en.htm](http://www.scenocosme.com/akousmafloren_en.htm)

40. *Ibid.*

41. Budhaditya Chattopadhyay, “Auditory Situations: Notes from Nowhere”, in *Journal of Sonic Studies*, Vol. 4, No. 1 (2013). Found at: <http://journal.sonicstudies.org/vol04/nr01/a06>

42. *Ibid.*

43. Lucia Farinati, *Under the Couch* CD (Stockholm: Firework Edition Records, 2012).

44. Leif Elggren, *Extraction* CD (Stockholm: Firework Edition Records, 2002).

45. Leif Elggren, liner notes, *Under the Couch*.

46. Gaston Bachelard, *Poetics of Space* (Boston: Beacon Press, 1984), 147.

47. The bed as a zone of primary wishes and amplifications is also central to his audio work, *Pluralis majestatis*, in which Elggren utilizes a metal bedframe to extract “a certain ‘voice’ or a sound, and let it go.” Leif Elggren, *Pluralis majestatis* CD (Stockholm: Firework Edition Records, 1997).

48. Leif Elggren, *Angel Modulations* CD (Stockholm: Firework Edition Records, 2011).

49. See Gaston Bachelard, *Intuition of the Instant* (Evanston, IL: Northwestern University Press, 2013).

50. Peter Cusack, *Sounds from Dangerous Places* (Thornton Heath, Surrey: ReR Megacorp, 2012), 18.

51. See Michael Warner, *Publics and Counterpublics* (New York: Zone Books, 2002), 21–64.