THE BLOOMSBURY HANDBOOK OF

SOUND ART

EDITED BY SANNE KROGH GROTH & HOLGER SCHULZE

B L O O M S B U R Y

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Contents

Sound Art

The First 100 Years of an Aggressively Expanding Art Form

Sanne Krogh Groth and Holger Schulze

The voice I hear is strange. It is too intimate, too close, too alluring—and still it keeps an almost professional distance. I hear waves rushing in and fading away underneath sounds of various, unclear origin. I like to listen to this voice. Many people are listening these days to rather intimate or more vivid and invigorated voices on a daily basis. Voices from a lively conversation podcast, from a story or fiction podcast, in a more journalistic podcast format, or, returning to older formats, from an audiobook or a radio play, a *Hörspiel*. Right now, I return to the piece that is playing on my headphones. I hear the voice of Kaitlin Prest and I feel at home with this voice. She welcomes me to a new episode of her podcast *The Heart*, which I have been listening to for the last months on a regular basis; eagerly awaiting the announcement and the automated download of a new episode. Apparently, I crave her vocal performance and also how she performs an opening up vocally, narrating and unraveling her memories and sensibilities, certain maybe long-lost and quite intimate reflections or doubts, some buried hopes and forgotten desires, some carefully nourished sensibilities. Though I have never met this person and I probably never will, I can engage with her in an intimate conversation or confession that most people might only dare to start after a good number of alcoholic beverages, a night out dancing, or an unforeseen sexual encounter. I listen to her speaking intimately.

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Noise Fest in Surakarta (Solo), on the Indonesian island of Java. The event is delayed by four hours because of heavy rain, dinner, and prayers. The performances take place under a roof in the yard of the Indonesian Institute of the Arts, Surakarta (Solo). In the background, I hear a traditional gamelan ensemble rehearse. I experience around twenty different artists that evening, most of them playing "harsh noise" from custom-made guitar pedals, analogue synthesizers, small devices with contact microphones, and laptops. A few of the performers stand out from the others. The classically trained musician Musica Htet from Myanmar performs on a homemade electrified double bass. During his session, Theo Nugraha from Borneo's graphic scores are still laying on the ground from the previous performance, when, due to some vivid improvisation by his

co-performer, Javanese DIDIT, they fell from an electrified string they were attached to. Htet plays a continuous motif on the double bass accompanied by noisy sounds. A young, and rather intoxicated, man from the audience, gets up, grabs a microphone, and starts to recite, his voice close to a growl, in Indonesian. The organizer of the noise concert Betet leaves the performance area to come back on his motorcycle. The double bass player keeps on playing the same motif over and over again, meanwhile the noise and the smoke from the motorcycle blends into the space.

* * *

"Do you remember the last sound you heard before this question?"—"If you could hear any sound you want, what would it be?"—"What sound is most meaningful to you?" I perform these assignments; almost involuntarily, as soon as I read them. I do what these writings ask me to do. I try to remember—following the first question—the sound of my typing fingers on the keyboard I write these words right now. I ask myself—now responding to the second request—if a most calming sound, maybe a sound from a preferred location I love to travel to, is what I would now want to hear; or perhaps an official phone call from a funding institution, confirming their funding of a large research project of mine—or even a person whose love and intimacy I truly crave confessing her or his deepest love and desire to me right now? Finally, answering the third question: Would the aforementioned calming sound from a location I love to travel to be the most meaningful to me—or more a sound from some of the more fragile and beloved family members, or even sounds from a distant past, from a musical piece or a sound production that meant a lot to me in various instances of my life? I imagine, I sense, I think, I ruminate, and I evaluate; I am not so sure. I read these questions, this musical piece—and in this very instance I am already performing it. I am a performer of this sound art piece as soon as I read the assignments listed in this work by Pauline Oliveros: "Ear Piece" (Oliveros 1998). I cannot help it. I read, I retune my hearing perspective (Auinger and Odland 2007), I assume a slightly different listening position.

* * *

Jacob Kirkegaard presenting his artistic practice at the University of Copenhagen. I turn my head to catch the sound and after minor adjustments of my head it appears. It is not an omnipresent embracement as the sound from speaker systems that I experience. Instead the sound appears inside my ear. Kirkegaard explains during the lecture, that what I hear is a recording from a soundproof space of sounds generated by the artist's own ear. This was done by sending in two tones through tiny speakers, that could generate a third tone recorded though tiny microphones. During the lecture, Kirkegaard sends these recorded sounds out through the speaker in the classroom to create new tones in the ears of the participants. I am not sure if it was his explanation that made the experience. But the sound that appeared to me, was not only heard as a clear and pure tone, the resonance was also felt as a little pressure inside the inner ear. These "otoacoustic

emissions" are principles of a natural phenomenon, and are the core of Kirkegaard's piece "Labyrinthitis" (2007). In this work Kirkegaard frames "the real" as an artwork. He lifts out an existing phenomenon that is not perceivable and makes it so. So has he done with the singing sand of the Sahara desert, the silence of the abandoned spaces of the now clear power plant Chernobyl, as well as with his recordings of melting ice and calving icebergs in Greenland. Without having an explicit political voice I still experience his works as highly political. The artist forces me to pay attention to phenomena outside my immediate sphere, and outside the sphere of fine art: to the potentials of natural phenomena as if they were art, to the sounds of remote places I hardly ever think of, and to the sounds of the traces of the disasters occurring globally.

* * *

I remember entering the exhibition space. However, it was not an exhibition space, but an open area, around and inside the ruins of a sacred edifice, the Franziskaner Kirche zum Grauen Kloster in Berlin, incredibly close to Alexanderplatz. I heard the long, dense lines of cars passing by, too close for a sound installation, actually; but in this case, the rhythms and the dynamic, the masking quality of the fossil fuel motors were turned into the structuring and organizing principles, even the sonic substances, of this work. Sam Auinger and Hannes Strobl had placed five loudspeakers inside the ruins of the Kloster. These speakers added and played and composed the sounds oozing in from the main road next to it. The heavy traffic is not ignored. The urban environment is not artificially excluded to achieve a clean and untainted exhibition space for sound—but it becomes the general bass over which both artists and musicians build the web of sounds and sonic events that I then was drawn into. The sound installation "farben / berlin" (2006) alters the sensory and the listening space—in the contested center of a large European metropolis. The artists built an instrument, fueled with the sounds of traffic and urban activities—yet installed in the midst of the traffic. Their instrument became a temporary contributor and intrinsic element of this cityscape.

* * *

Entering the old 1950s broadcastings studios of Funkhaus Berlin Nalepastrasse in former East Berlin. The iconic building with labyrinthic hallways, shiny floors, and golden ornamentations invited to a near past that yet seems so distant. During the CMT 2013 festival the legendary radio studios were opened up for visitors, and together with talks and concerts in the concert hall formed an event with the title "A child of the golden age." The main character was the "subharchord"—a synthesizer constructed in 1950s East Berlin. This particular instrument opened a broad range of receptions and perceptions, and reached out toward historical, political, and aesthetic perspectives. The instrument was in the setting of the old radio house, clearly staged as a document of Cold War history, of the abandonment of avant-gardes within the German Democratic Republic (GDR) regime, and of how it, the instrument, was later supported—by the same regime—when its potential "science fiction

sounds" were brought into play. With its careful restoring the instrument was an also an example of practical media archaeology engaging with media history and the rewriting of Cold War history. Finally, it was a sounding instrument used in the performances of the historical piece "Zoologischer Garten" (1965) by Frederic Rzewski as well as in the newly composed pieces by Frank Bretschneider and Biosphere. The subharmonic sounds of the instrument were characteristic in their diffuse and analogue sound. They filled the space physically, and are even known for their ability to communicate with the unconscious. The instrument was an object, but it was clearly an object with agencies, that acted out political positions, historical dimensions, and aesthetic processes.

A Brief History of Sound Art

An Explorative Art Form

In the course of the twentieth century the role of the sound artist has evolved into one major alternative to that of the romantic artist. The idea of the romantic composer, dating back to early nineteenth century, is that the artist is a genius who has the gift to create art that is even more beautiful than the beauty that can be found in nature. The concept of the musical work is therefore based on music as an analogy to nature. It is then conceptualized and understood as an organic unit in which every little partial element—for example, a musical theme—of a piece is part of the greater whole, be it the specific work or music history as such. This biomimetic and organicist metaphor then goes even further: Just as a seed is both part of and can develop into a flower. "Basically, the music was thus regarded as a separate being with its own organizational principles beyond human control, something exalted, sublime and basically unimaginable" (Broman 2007, 84). In his book on 1950s electronic music in Sweden, the musicologist Per Olov Broman argues that in mid-twentieth-century electronic music we find a shift from the romantic work concept into a concept where music is defined as "organized sound," and not as a metaphysical organism in itself. With these new practices in the electronic music studio a new and more pervasive control over the sonic material and new insights followed. Meanwhile, new performative forms of expressions were also introduced by artists such as open formats, audience participation, happenings, instrumental theater, and aleatoric approaches: "The distancing from the analogical explanation between music and nature is, on a deeper, idealistic level one of the most important shifts in the field of music in the last 100 years" (Broman 2007, 187).

The sound artist hence finds interest in sound as a medium—not as a metaphor. To the sound artist, sound is not "beyond human control," it is neither a pure abstraction nor a metaphysical phenomenon, and it is not separated from phenomena outside the artistic work, the music culture or the art world. Most sound artists are interested in sound that is already given, that is, noise, electronic sine tones, sound waves, and natural phenomena, sound generated by musical instruments, from field recordings, or by human voices. Sound artists reconstruct and deconstruct such sounds, or simply bring them forward and present

them in a performance, installation, or recording in order to make the non-perceivable perceivable, or the unnoticed, noticed.

A quite comparable approach to sound can be traced in the late eighteenth and early nineteenth century's interest in sound as a physical phenomenon. German physicist Ernst Chladni's (1756–1827) entertaining presentations of sound circles resulting from experiments with sand on a plate drew attention in his time and still today relate to the performative and material effects of sounds: a violin bow made the plate vibrate and symmetrical patterns shaped the sand (Motte-Haber 2000, 76). Following Chladni, Danish physicist Hans Christian Ørsted articulated then a musical aesthetic in which the beauty of art and that of nature were considered to be the same. "On this account, Ørsted's aesthetic was quite an anachronism, when it became known in Germany [. . .] in 1851," Søren Møller Sørensen writes: "Ørsted's thoughts, which are continuing elements of a pythagorian-platonic understanding of music, have not been congruent to the Hegelian work concept [and the Romantic] paradigm" (Sørensen 2003, 20). The relationship between the beauty of nature and the beauty of art was in this case not an analogical one, but was considered as representing the very same phenomenon. It was only the physicist with his tools and techniques who could reveal this factual identity.

Connections, collaborations, and cohabitations between the artist and the scientist are then recurrently to be found in the characterizations of sound artists in the twentieth and twenty-first century. In the mid-twentieth century, for instance, there was an especially explicit collaboration within the new and advanced experimental studios of electronic music (e.g. Decroupet 2002; Ungeheuer 1992), mostly funded by and based in the hegemonic national public radio stations. Meanwhile, in the twenty-first century, this cohabitation has shifted and intensified in the now new academic contexts of artistic research and of practical engagements within cultural theory and sound studies. For the sound artist, a presentation that is physically illustrative and experimentally challenging is also a presentation of an aesthetic concept and of an ongoing artistic exploration. Chladni performed his arguments in a public setting—not in the academy—and so do most sound artists. Institutional framings, instrumentality, and technology, as well as the setting itself, are generally inseparable from the work and an ongoing issue for reflection, critique, and refinement in sound art—and so are the ideas, ideologies, and processes that generate a piece of sound art. Through these practices of critique and presentation, many sound artists include, question, transform, and counter various discourses and existing paradigms, for example, about the perception of sound, ideologies of art, politics, and postcolonial and environmental issues. Sound art is explicitly entangled and engaged in phenomena, physicalities, and sociocultural aspects present at the time when the work is made.

Hence, the history of sound art can be said to happen in parallel, though often in contrast, to that of the (romantic) composer's or fine artist's, where art is recognized teleologically and autonomous. Sound artists are concerned and engage with matters where technology and materiality, performativity, and social and critical awareness become critical and seemingly require daring next steps. This handbook seeks to introduce its readers to all of these aspects of sound art in the twenty-first century. Whereas this goal in

itself can only be achieved with a representative, diverse, and critical overview, we—the two editors of this book—are as particular and limited in our experience, backgrounds, and research biographies as you would expect: being born in Denmark and in Germany, working now in Sweden and in Denmark—yet, luckily, being in constant exchange with fellow researchers, sound artists, curators, and publishers on various continents. From this limited starting point, though, our research for this book began to drive us into territories, into aesthetics, into artistic groups that, strangely enough, still seem to be aliens, outlaws, freaks, and marginal figures in the historiography as well as in the theories of sound art. We intend to alter this imbalance.

A brief history of sound art is, in a nutshell, a history of sonic forms of expression that throughout the twentieth century can be traced within music, the visual arts, and contemporary dance, as well as in performance art, conceptual art, and media art. Attempts to capture sound art as a detached and isolated art form or artistic phenomenon have been made, but this is definitely not the approach of this handbook. On the contrary, we conceptualize sound art as a persistent and expanding art form, that is entangled with a broad diversity of genres and cultural phenomena—through its sound practices. Sound art today both stimulates and builds, challenges and destructs, reinvents and subverts institutions. It is concrete and physical, material and corporeal— calling for reflection, speculation, and abstraction to surprisingly excessive degrees. Sound art is rooted in a longer history and culture, but incessantly seeks a critical politicizing, decolonializing, and rethinking of the same. A history of sound art can, of course, be shaped in various ways depending on the argument or approach one wishes to frame. In order to support our argument we stress a canon of works and approaches that consider technology, performativity, social and political awareness, and utopia and dystopia. These are, in our understanding the main reasons why today it still holds true to claim: Sound art is generative.

Technological Entanglements

The futuristic experiments of the early twentieth century have become iconic for probably one main reason: they embraced the myriad of new possibilities regarding technology and, at the same time, combined them with the then-contemporary ideologies and aesthetics—as if there were no limits. Russian avant-garde artist Arseny Avraamov's (1886–1944) *Symphony of the Sirens* (1919–1923) combined fog horns, steam locomotives, sounds of marching regiments, artillery batteries, and hydroplanes with those of whistles and factory sirens, and it has therefore become an often referenced piece to explicate the history of sound and noise art (e.g. Kahn and Whitehead 1994; Motte-Haber 2000; Goddard, Halligan, and Spelman 2013; Thompson 2017a). Avraamov's musical ideas were not solely anchored in an embracement of modernity, but also in a wider disseminated knowledge of acoustics and further readings of the works of Hermann von Helmholtz among others. Avraamov's visions of future instruments and new aesthetics, as declared in his 1916 article "Upcoming Science of Music and the New Era in the History of Music,"

can even be regarded as a founding moment for the contemporary enmeshments of the sciences and the arts: after the publication of this article, in 1917, the Leonardo da Vinci Society was founded. Together with the mathematician and musicologist Sergei Dianin, Avraamov aimed at revolutionizing "music theory and techniques based on the cross-connection of the arts and sciences" (Smirnov 2013, 39) with a strong belief "in the power of science, and aspiration to objective knowledge of the 'mysterious' laws." These ideas and practices were not only based on some revolutionary theoretical urge, but also on the contemporary political processes toward revolution. Therefore, the *Symphony of the Sirens* was performed on the occasion of the fifth anniversary of the October Revolution. The founding manifesto of futurism though is undoubtedly Tomaso Marinetti's (1876–1944) *Manifeste du futurisme* (1909), his recorded readings of *Definizione di Futurismo* (1924), and *La Battaglia di Adrianopoli*. Marinetti's texts are highly performative in their use of graphic typesetting and onomatopoeia; the step to perform them live, and to do recordings of them is truly encouraged by Marinetti's writing itself. *The Art of Noises: A Futurist Manifesto*, Luigi Russolo's 1913 manifesto, was written while including "Marinetti's poetic emulations of militaristic noises" (Thompson 2017a, 132). Therefore, we find a redefinition of music by incorporating noise as aesthetic material, and by attuning sounds to make them musically. The potential in what is usually experienced as unpleasant and overheard is being stressed and unfolded by Marinetti. He wishes

> to attune and regulate this tremendous variety of noises harmonically and rhythmically. To attune noises does not mean to detract from all their irregular movements and vibrations in time and intensity, but rather to give gradation and tone to the most strongly predominant of these vibrations . . . Every noise has a tone, and sometimes also a harmony that predominates over the body of its irregular vibrations. (Russolo 1913/2009)

This manifesto provoked immediate and far-reaching reactions from artists, writers, critics, and inventors. Some ideas in the manifesto were developed by Luigi Russolo himself, leading to the building of new noise instruments, such as the famous *Intonarumori*. The revolutionary drive of refining and materializing this new aesthetics can be found here as in Russian futurism, though in this case without a direct connection to science, unlike Russian futurism.

In the historical Dada movements, we also find comparable efforts to rethink the autonomy of music, for example in Dada's manifestos, in sound poetry, performances, and the manifold new genres and inventions in the visual arts. Through the early twentieth-century Dada movements in Europe between the Cabaret Voltaire in Zürich 1916 and in Dada Berlin 1918, as well as New York Dada in the United States, were all being united under the label Dada; they were nevertheless, as stated by dadaist Hans Richter in 1964, also contradictory movements: "Dada invited, or rather defied, the world to misunderstand it, and fostered every kind of confusion . . . However this confusion was only a facade. [. . .] Our real motive force was not rowdiness for its own sake, or contradiction and revolt in themselves, but the question (basic then, as it is now), 'Where next?'" (Richter 1964, 9). As with futurism, Dadaism is a movement situated in a specific time, a time influenced by (post)-World War I politics, traumas, and destabilization. In the attempt to move on, a

redefinition of the arts seemed a major necessity. For dadaists this is often seen in the resolution of language's semantic matter, its affective and physical matter.

As noted by Richter the positions within the movement were many. In his 1918 manifesto Tristan Tzara, in opposition to the thoughts of Avraamov, stressed the non-scientific and anarchistic traits of the movement: "Science disgusts me as soon as it becomes a speculative system, loses its character of utility that is so useless but is at least individual [. . .] I am against systems, the most acceptable system is on principle to have none" (Tzara 1918). In a search for the non-semantic, Zürich-, and later Cologne-based artist, Jean Arp brings in "nature," as an attempt to avoid an aesthetic that is not infected by history: "Dada is the ground from which all art springs. Dada stands for art without sense. This does not mean nonsense. Dada is without a meaning, as Nature is" (Arp, cited in Richter 1964, 37). Arp strives after the concrete and the material in the arts, avoiding the metaphysical, symbolic, and the overly aestheticized. The aim here is actually even less "aestheticizing" than Russolo argued for with the attunement of noise. According to the political positioning, it has also been stated that "The Dadaists, however, were anti-war and by rejecting certain aspects of urbanism, positioned themselves antithetically to the Futurists" (Tham 2013, 259). What they do have in common though, is the insistence on sound as a non-semantic material, its affectfull-ness and the rethinking of sounds and their potential as aesthetic material.

Institutional Anchor Points

During the twentieth century the increasing possibilities with technology continued to determine the further experiments within sound art. Postwar establishments of electronic music studios were part of public radio stations in, for example, Cologne, Paris, Milan, Warsaw, Tokyo, London, and Stockholm (Ungeheuer 1992; Balkir 2018; Novati and Dack 2012; Crowley et al. 2019; Groth 2014); or at universities, for example, Columbia/ Princeton and the University of Illinois (Manning 2004); or at independent laboratories, such as the Dutch STEIM studio as part of Phillips Research Laboratory, the Bell Laboratories, Billy Klüver's group Experiments in Art and Technology (Klüver 2004), or the Centro Latinoamericano de Altos Estudios Musicales in Buenos Aires (Collins and d'Escriván 2007; Alonso-Minutti, Herrera, and Madrid 2018). These institutions have been important anchor points in the production of sound art pieces, and as reference points and positions in the reception and the writings of the histories of sound art. This increasing institutionalization of the activities resulted in less revolutionary manifestos, to be replaced by extensive writings of project descriptions, applications, and reports. All these documents have later become a rich source of information when it comes to technical, economical, and intentional aesthetic descriptions. Even though they are written in bureaucratic formats, they are still to be read as political statements with the intention of positioning an institution's choices of aesthetics and technology against others'. What most of the institutions have in common, and what they have in common with the rhetoric of futurism and Dadaism, is that they are pointing toward future imaginaries of sound, music, and technology. Differing from earlier, these progressive thoughts were rarely formulated in the

same harsh tone in opposition to existing regimes, but more in order to be supported and developed from the inside of the institutions—or by establishing new. The postwar sonic experiments were subversive and less explicitly political than what we see in the traces left from the futurists and dadaist movements. Even science was, in some circumstances, an instrumentalized and political tool in the fight for gaining position and money. In parallel with these institutions, several individual artists worked with independent projects with their own equipment or in private studios. Following these, one will find incongruent narrations and micro-histories that include countermovements, amateurism, alternative technologies, and a wider spectrum in geography exceeding a focus on Western countries.

Post-Digital Situatedness

Traces left behind from these postwar sonic experiments are sound pieces and experiments stored on magnetic tape, and, just as importantly, the machinery that had generated them. In the twenty-first century an interest in such postwar analogue equipment has gained growing attention from artists as well as researchers. From the artists' standpoint, the return to analogue formats (though, most often, in combination with digital tools) has been explained as a way of slowing down the otherwise fast digital working processes and as a way of getting closer to the materiality of sound. Many artists started releasing their work on tape or vinyl, which, beside the specific aesthetic qualities, has also been a way of gaining control over distribution. DIY practices, such as hacking, building, and rebuilding old and new equipment, as a manner of obtaining independence from the commercial media industry, is also frequently seen; and, meanwhile, some electronic music studios have regained a relevance and site-specificity by restoring the old equipment and offering it to artists to work with.

In parallel, and in dialogue, with these practices, the theory field of media archaeology (e.g. Kittler 1990; Ernst 2003; Parikka 2012; Riis 2016) has offered new and alternative grand narratives by digging out old machinery and embracing cultures of mistakes and flaws, with the aim of rethinking and renarrating the history of media and digitization—outside the assumed phantasma of perfection. Recently, the notion of "big data" also entered the academic discourse, and several scholars have taken the rewriting of media and science history a crucial step further into speculative realism, as a philosophical mind-set to grasp the increasing abstractions within digital media. As a mind-set, speculative realism also embodies thoughts on utopia and dystopia and is hence welcomed when dealing with the disasters of today (Morton 2013). Such concern is also found in sound art, which consistently and explicitly addresses current and historical political and social situations (Groth and Samson 2017). One example is Brandon LaBelle, who, both in his writings and in his artistic works, stresses sound art's performative qualities (LaBelle 2006) as well as its "sonic agency" placing a "particular emphasis on the social experiences and productions of sound and audition, and how a sonic sensibility may inform emancipatory practices" (LaBelle 2018, 2).

With the wider distribution of audio technology and with digital sound processing becoming somewhat ubiquitous, reflection on the more specific effects of sonic experiences

became a legitimate foundation for theory and philosophy in the twenty-first century: sonic experiences with sound art are described as a non representational, yet material sonic flux (Cox 2018), certain sonic ontologies of materialism (Schrimshaw 2017; Cobussen, Meelberg, and Schulze 2013; Voegelin 2012) are criticized and deconstructed for representing a racialized white aurality (Thompson 2017b) and drawing yet another sonic color line (Stoever 2016); a critical reading of the notion of noise and the introduction of the cultural ear (Thompson 2017a) and of sonic materialism even makes it possible to outline a sonic persona (Schulze 2018) as an anthropological concept. These developments carried the discourse around sound and the arts into the post-digital (Cramer 2013) condition of the early twenty-first century.

Is This Sound Art?

A Contested Term

The term sound art is one that has been contested since its first usage. Scholars undoubtedly desire one irrefutable definition all stakeholders in sounding arts can agree upon; artists and designers, obviously, desire to open up such definitions, once they are defined, in order to find their flaws and contemporary expansions, as well as original perspectives onto sound art; and a wider public projects incessantly onto these two feeble words and throws in all sorts of cultural artifacts they consider to be an inherent part of sound art. It is, actually, a vivid and dynamic discourse, contradicting positions are in constant and possibly irreconcilable conflict whereas the practices of curating sound art exhibitions, presenting site-specific sound art installations, online streaming-sites with recorded sound artworks, and sound art critiques in magazines, academic journals, and online platforms continue, and seemingly accelerate from year to year. This is a discourse in full swing: its participants definitely do not agree upon the concepts used—but they do agree upon the bare necessity of an ongoing discussion about the concepts used. At the same time, as part of this discourse, there have been numerous, almost endless additional concepts proposed that should have served as better alternatives to the term sound art, which was often accused as being too vague and too undefined: *musique concrète* (Schaeffer 1966), *elektroakustische Musik* (Meyer-Eppler 1949; Eimert 1953), *ars acustica* (WDR 1969; Schöning 2011), *musique acousmatique* (1974, Bayle 1993), soundscape composition (Schafer 1977; Truax 2008), *Klangkunst* (Motte-Haber 1999), sound-based music (Landy 2011, 2012), and non-cochlear art (Kim-Cohen 2009). Each of these listed terms claims to represent the aesthetic essence and the most ambitious and rigorous approach to all sounding arts with a strong normative gesture; yet they all actually and historically represent mainly one specific aspect of artistic production and their aesthetics in this new field of artistic practice. More recently, new terms have been added to this list such as: aural architecture (Blesser and Salter 2007), sonic art (Wishart 1996), and sounding art (Cobussen, Meelberg, and Truax 2017). They again intend to further develop and unfold

aspects of sound in artistic practices that might have been overlooked earlier, and they again proposed to include other cultural artifacts of artistic origin into the field of sound art. When looking over this discourse, it seems that the term sound art may be too broad, but it is actually a good umbrella term for: anything artistically and aesthetically done with sound, which can still be called "a work" but not any longer "music" or "a composition." Though, indeed, some sound artworks are actually compositions, they present music, and very often they are not a work at all in the traditional sense, before Umberto Eco's concept of the Opera Aperta, the open work was introduced. The concept of sound art, therefore becomes from day to day an even more complicated, intrinsically paradoxical, absurdly undefined, yet constantly attractive one—useful and productive for all sorts of artists, performers, designers, critics, collectors, aficionados, and researchers.

An Effort for Definition

Sound art is, from its beginning, mainly an academic term. It is not a term that was invented by artists or artists' movements. They had their own, much more alluring and imaginative brand names for the products of their artistic collectives, be it Poésie Sonore, ars acustica, or soundscape composition. From this, if you will, the original sin of academia was to superimpose an academic term on a non-academic field of practice, with all sorts of nitpicking quarrels, power struggles, and open conflicts about who has the sovereign interpretative power over this field, arising and still being actively fought out. One very strong defining position regarding the concept of sound art is still held by musicologist Helga de la Motte-Haber in the early twenty-first century. Since the 1990s she has argued for a concept of, in German, *Klangkunst*, that was mainly connected to two trends in German post war art history: on the one side, her definition of Klangkunst sought to connect the new and daring avant-garde of artists working with sounds, audio technology, site-specific installations, and ephemeral performances to earlier traditions of prewar and interbellum avant-gardes in the arts and in composition, such as Kurt Schwitters, Edgard Varèse, Paul Klee, Filippo T. Marinetti, Bruno Taut, and Wassily Kandinsky, as well as to the long tradition of transgressive artistic experiments and discourses on aesthetics before the twentieth century, from Richard Wagner or Aleksandr Skrjabin back to Philipp Otto Runge or Friedrich W. J. Schelling. With this idea Motte-Haber successfully argued for a rereading and reinterpretation of art history interwoven with music history, science history, and the history of everyday practices. It cannot be stressed enough at this point what an achievement this was, and still is, for a female scholar in what was then at least (and still is today) a largely patriarchally and dynastically structured field of expertise and merit in postwar West Germany. Helga de la Motte-Haber, coming from music history and so-called *Systematische Musikwissenschaft*, reinterpreted the history of the arts in her concept of a "Kunstsynthese," transcending the paragone, the struggle between the art forms. In 1996 Motte-Haber wrote for the catalog of the highly influential sound art exhibition *Sonambiente* in Berlin, under the title "klangkunst—eine neue gattung?" ("sound art—a new genre?"), all in the lower case of a minimalist avant-garde typography:

> "Klangkunst" oder "Soundart" zwingen in einem Begriff zusammen, was einmal getrennten Kunstgattungen zugehörte: der Musik und der bildenden Kunst. (Motte-Haber 1996, 12)

"Klangkunst" or "sound art" force together in one single term what once belonged to separate artistic genres: to music and to visual art. From this amalgamation of art forms, Motte-Haber argues, all sorts of transformations regarding sound art, regarding everyday life, and regarding artistic and aesthetic practices were effected. She claims that, with the emergence of a sounding art form in the twentieth century that transcended musical composition and all the discourses, practices, and dispositives of musical performances and conservatoire culture, a number of transformations for the arts in general and the discourse of aesthetics had taken place. These transformations are that: "Art was produced that wanted to be seen and heard at the same time"; "Sound sensitizes you to a new view of your everyday environment"; "No more vis-à-vis the recipient, but a dialogical relationship"; "The world seems conceivable differently than it is"; "It sat down aside the established genres being its own art form" (Motte-Haber 1996, 16f.; translated by Holger Schulze).

> Es entstand Kunst, die gleichzeitig gesehen und gehört werden wollte.
>
> Klang sensibilisiert für eine neue Sicht auf die alltägliche Umgebung.
>
> Kein Vis-à-vis zum Rezipienten mehr, sondern ein dialogisches Verhältnis.
>
> Die Welt scheint anders denkbar als sie ist.
>
> Sie hat sich neben die herkömmlichen Gattungen als eine eigene Kunstform gesetzt. (Motte-Haber 1996, 16f.)

This approach to sound art has been influencing artists and researchers not only in Germany, but in Europe, in the United States, and virtually all over the globe. In its historical inventiveness and plausibility, its rigorous discussion of developments in aesthetics, and in its knowledge of detailed artistic practices, biographies, skills, and "Künstlertheorien" (Lehnerer 1994), artists' theories, today it is still probably the only consistent, historically deep, and globally relevant theory of sound art to be found. Dialectically though, this solitary position implies also a number of inherent flaws and inner contradictions of this theory.

Restrictions and Blind Spots

The main and probably most lasting flaw in this sound art theory is quite obviously the primarily Euro- if not Germano-centric approach of her analysis. Whereas such a focus surely was strategically crucial and productive in the struggle for recognition of sound art in German-speaking academia of the late twentieth century, it looks quite different as we approach the 2020s. At the present time, this restriction does actually do harm to the reach and the relevance of the theory in the globalized perspective on sound art's aesthetic practice. Related to this is a second aspect that seems odd when rereading these classic texts: The theory of Klangkunst consistently ignores the aesthetics, practices, and presence of vernacular sound practices in popular culture up to the point where a condescending and elitist tone enters the critical writings of the authors in this field. This second restriction of

the relevance and reach of this theory extends therefore to many practices and experiences of everyday life that should be, following Motte-Haber, viewed differently through sound art; but in actual critical practice they are factually ignored and repressed—they need to be excluded from the actual discourse, apparently. Probably also here strategic reasons can be found for positioning this theory in German academia, with its traditional aversion to and highly idiosyncratic, truly elitist rejection of research subjects too close to vernacular and popular culture.

The third restriction in Motte-Haber's theory is its primary focus on perceptual-psychological effects of the aesthetics of sound art. This focus is rooted in her personal academic biography as a psychologist and one of the modern founders of music psychology in West Germany. Whereas these aspects are obviously of relevance for sound art and the engagement with sonic artifacts in the arts, it is largely overstretched in her arguments for the impact and the relevance of sound art. This focus also results in the fourth and last major restriction in her theory, resulting in a bypassing or blurring of all political and discourse aspects in the sound artworks themselves. She stresses the specific historical and political situation where a focus on sound art was made possible, yet sound art as a means of political activism and political reflections in and through it seem strangely absent in her thoughts. Again, this might be an effect of the strategic position she intended to claim with her theory in an academic context that considered (and today still considers) a politically loaded interpretation of artistic works often a flaw and a case of category mistake.

These four flaws in the theory of Klangkunst are pointed out, attacked and questioned by other contemporary and historical approaches to sound art: Euro- and Germano-centrism, ignoring the vernacular sound practices of popular culture, overly focusing on the psychology of perception, and the depoliticization of sound art. These four flaws also constitute major research gaps in academic research on sound art, and therefore they motivated the two editors of this present handbook to bridge these gaps, to expand beyond these historical restrictions of discourse, and to represent in this handbook a more comprehensive account of contemporary sound art in the early twenty-first century.

Efforts for Non-Definition

Other more recent proposals to conceptualize sound art—for instance as sounding art (Cobussen, Meelberg, and Truax 2017) or as sonic art (Wishart 1996)—also try to meet this challenge of a research gap. In both cases they try, on the one hand, to still side with sound art in order to further continue its discourse tradition and to build upon its newly established art history; yet, on the other hand, these new definitions propose specific expansions into areas seemingly ignored by the current discourse on sound art. Vincent Meelberg thus defines *sounding art* as:

 human-made artistic and/or aesthetic applications of sound, be it in music, Muzak, sound art, games, jingles and commercials, multimedia events, and sound design. They are human expressions that use sound as material, medium and/or subject matter. These sonic applications are always active, vibrant, in the sense that they have the potential to affect

listeners, even if the sounding artwork is about the absence of sound. Hence the suffix "-ing" in *sounding arts*: it is always participating, influencing, teaching, confusing. (Cobussen, Meelberg, and Truax 2017, 2)

Marcel Cobussen, his co-editor, adds:

sounding art is always already exceeding the mere aesthetic realm: in all its diversity, it also addresses social, ethical, economic, religious, and environmental issues, to mention only a few. (Cobussen, Meelberg, and Truax 2017, 2)

This combined definition by Meelberg and Cobussen almost resembles a provocative non-definition. Their expansion includes truly almost every thinkable aesthetic performativity resulting in sounds or vibrating effects. A stricter connection to some specific discourse in aesthetic theory, the philosophy of art, or the psychology of aesthetic perception—that were so crucial in Motte-Haber's thinking—seems apparently discarded or irrelevant here. For the term *sonic art* a similar non-definition was given by Trevor Wishart in 1996:

We can begin by saying that sonic art includes music and electroacoustic music. At the same time, however, it will cross over into areas which have been categorised distinctly as text-sound and as sound-effects. Nevertheless, focus will be upon the structure and structuring of sounds themselves. I personally feel there is no longer any way to draw a clear distinction between these areas. This is why I have chosen the title On Sonic Art to encompass the arts of organising sound-events in time. This, however, is merely a convenient fiction for those who cannot bear to see the use of the word "music" extended. For me, all these areas fall within the category I call "music." (Wishart 1996, 4)

Seemingly, Wishart non-defines the whole of sonic artworks; yet his non-definition is tightly framed and limited by the definitions of electroacoustic music and their specifically reduced concepts of sound events in time and sound effects. These narrowly defined constituents of his definition of sonic art cut out all the possible richness, the vivid complexity of all vernacular art forms and practices working with the sonic (Wicke 2008), understood as a "culturalized acoustic matter" (Wicke 2016, 27), a cultural concept of sound if you will. Hence, Wishart aligns a potential opening and culturalized interpretation of artistic sound practices with the predominant discourse on electroacoustic music: a discourse that once intended to integrate a globalized and mediatized music culture—yet, nevertheless, restricted itself, unnecessarily I might add, to a largely technocentric and elitist approach of avant-garde music tied to hegemonic funding bodies and gatekeeping institutions (Born 1995). As a consequence, the complexity of artistic works with sounds that Cobussen and Meelberg can grasp with their concept of sounding art, becomes almost unthinkable in Wishart's conceptual framework for sonic art.

So, what can actually belong to sound art and what cannot? Shall one follow the radical expansion by Meelberg and Cobussen—or return to the narrower definitions proposed by Wishart or even Motte-Haber? In a radical series of conceptual distinctions one might even reject any exceptional role for sound art; one might then propose that almost every possible artwork one could think of under this name belongs actually either to the field of video, the field of busking, of spoken word, even of deskilled sound programming, or,

simply, music. Researcher and artist John Kannenberg sardonically proposed precisely this reduction in a diagram (Kannenberg 2018a): in a flowchart he combines the blank stare and the naive act of making distinctions in analytical philosophy with a joyful indulgence in apodictic arguments as they might appear in an online discussion. Yet, a few months later, Kannenberg posted online another graphic that seemingly and joyfully contradicted and destroyed this earlier flowchart with an elegant move. Under the label of his project "Museum of Portable Sound" (established 2015) he presented an image that used finely arranged and crafted typography, and was ready to be shared on social media. It stated:

> Sound art is art of any form that critically explores the cultural, political, scientific, and/or conceptual situations surrounding the act of listening. (Kannenberg 2018b)

This definition is largely an alignment with Meelberg and Cobussen's definition of sounding art: both in its radical expansion—and in its inclusion of aspects seemingly external to sound art (in a Motte-Haber/Wishart definition), namely "social, ethical, economic, religious, and environmental issues" (Cobussen, Meelberg, and Truax 2017, 2). With such an unburdening, wide, open, and inviting definition, Kannenberg, Meelberg, Cobussen, and many others are actually leaving the rather pietist and often solitarily shaped *Denkstil*, the thinking style behind many earlier sound art theories behind. The visitor, the listener, the art aficionado, the spectator, and also the artist, do not figure in these more recent definitions as one sole person, isolated, and expelled from everyday life and its minor common activities, errands, and trains of thought. They position sound art actually in
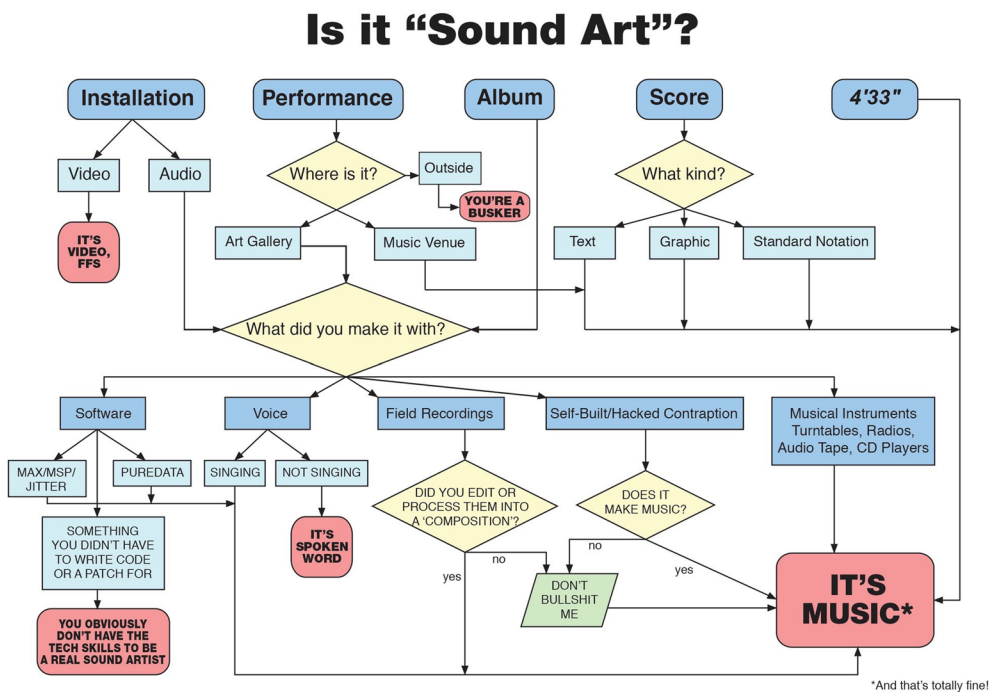
Figure 0.1 John Kannenberg: "Is it Sound Art?" Flowchart (2018).
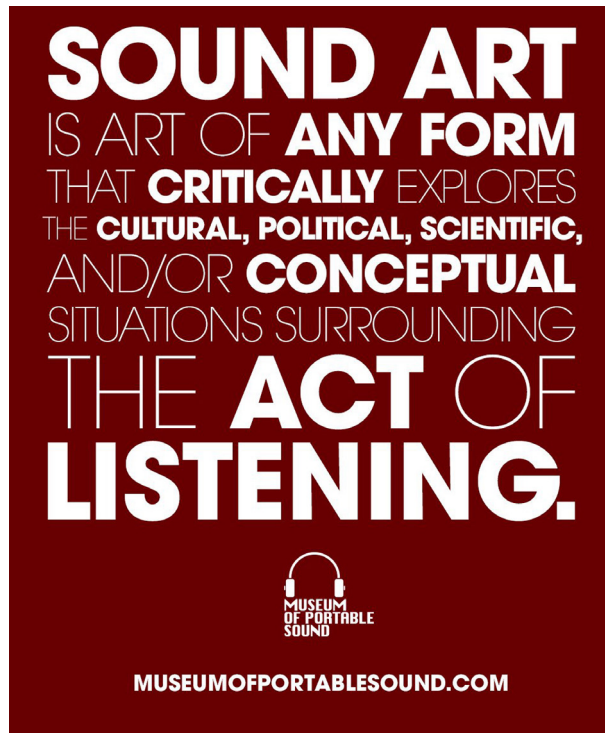
Figure 0.2 John Kannenberg: "Sound Art Definition Proposal" (2018).

this larger context of everyday life and its manifold issues of contemporaneity. Finally, the many factual practices of encountering, living with, reflecting upon, and crafting sound art must not anymore be legitimized by an extraordinary challenge of transcending all life and all art forms. Sound art is now a part of everyday life, its politics, its entertainment industry, its businesses, and its research. Sound art exists.

Six Battlegrounds of Sound Art

At the turn of the third decade of the twenty-first century, sound art is not a niche art form or an artistic practice in peril anymore. Sound art is present and it is a valid force toward a democratization and decolonization of participation: listening, performing, producing, curating, and analyzing are just some of its generative practices. For this handbook we detected six major battlegrounds on which artistic practices clashed and still clash with institutional, political, technological, and historical developments. The trajectories we observed here lead into what sound art might be developing into as we progress further into this century.

A sound artwork is not an organic unity, but an aesthetic constellation actively interacting with its surroundings. **After the Apocalypse** (Part I) considers how sound art uses strategies of activism, "the real" and situated aesthetics to engage in twenty-first-

century ecological, political, social, and technological challenges. Nonautonomous, nonorganic and/or shared authorship sound artworks effectively reveal the changing relationship of humanoid actors with nature (Vandsø, Chapter 1); design socialities and new collectivities (Woodruff, Chapter 2); attune to complex social and political matters (Oliveira, Chapter 3); and unfold contemporary dystopian and utopian imaginaries (Hasse, Chapter 4).

Journeys across the Grid (Part II) pays attention to sound art in and from the Global South. Such attention has until recently been missing in a number of previous overviews on sound art, which tended to solemnly stay with empirical works and theoretical discourses from the Northern hemisphere. The section addresses this as a "global turn" in sound art, examining postcolonial and decolonizing possibilities and traps in global exchanges of sound art (Groth, Chapter 5); postcolonial curation strategies (Hodkinson, Moltrecht, and Gerlach, Chapter 6); pays close attention through four positions focusing on sound art in and from Nigeria (Ogboh and Schulze, Chapter 7i), Egypt (Sørensen, Chapter 7ii), Hong Kong (Young, Chapter 7iii), and Indonesia (Edrian, Chapter 7iv); and an overview of more general structures and developments of sound art in East and Southeast Asia (Fermont and Faille, Chapter 8).

As a sort of parallel development, sound artists also decolonize the area of the sensibilities and the corporeal as they focus more and more on intimate encounters as a request to **Come Closer** (Part III) in intensely situated, corporeal, and pervasively mediated constellations. They explore often tabooed areas of the body (LaBelle, Chapter 9); they reflect, deconstruct, and reconstruct the gendered performativity of close encounters (Lane, Chapter 10); they develop further the new technologies to make encounters possible (Feisst and Paine, Chapter 11); and they try to come to grips with what intimate encounters actually require (Schulze, Chapter 12). Intimacy, it becomes clear, is not just a motif in sound art, but a major focus and goal in these artistic approaches.

Still, sound artists feel the need to contribute to a process to further **De-Institutionalize!** (Part IV) artistic activities; even at a time when the pervasive dismantling of funding bodies has become a major threat for nearly all art forms. Yet, institutions almost request by their mere existence their continuous reworking, their questioning, their deconstruction, and their reinventions. This can be motivated by following political and sensorial efforts (Stewart, Chapter 13), by artists desiring to retain aesthetic integrity (Lockwood, as well as Mendi and Keith Obadike and Schulze, Chapter 14; Zattra, Chapter 15) or just by a fundamental urge of artists to find their place and their aesthetic strategies no longer carried by institutions as such (Flügge, Chapter 16). By these strategies, sound artists incessantly and recurrently operate as founders and inventors; in each of these cases they provide the ground for future artists to operate in a reorganized artistic environment.

The theory practice of **Sonic Thinking** (Part V) has become a major form of artistic expression. Whereas comparable efforts previously had been condescendingly devalued as merely conceptual approaches or additional theoretical reflections, it now has risen to a core of artistic activity. Sonic thinking is a form of sound art. Here, where sonic fictions are carrying sonic figures of thought and sound practices alike (Holt, Chapter 17) and across outdated divisions of cultural spheres and genres, a female history of optophonetic sound

art (Kazlauskaite, Chapter 18) can be written. Artistic research of vibratory technologies and their disruptive qualities has become a dominant focus (Ikoniadou and Cameron, Chapter 19), and imagination and technology continuously co-emerge in the field of sound art (Ewé, Chapter 20). Sonic thinking is how sound art negotiates between the imaginary, the scientific, the idiosyncratic, and the material.

In almost all of these chapters we find implicit discussions touching upon production, instruments, and materiality. This aspect is further detailed in **Making Sound** (Part VI). Organology as the tradition of building musical instruments has been taken much further by sound art in all aspects. The purpose is not solely to design a specific sound for certain sonic expression; the whole visual design, the selection of materials, the political and historical context, and the performative matters of building and performing are becoming core strategies of sound art. These matters are explored through instrumental reworkings (Groth and Schmidt, Chapter 21); through the history and presence of technoscience (Salter and Saunier, Chapter 22); through the phonographic practices in creating new works (Großmann, Chapter 23); and through the material use, the experimenting with, and the bending and hacking of membranes (Papalexandri and Maier, Chapter 24i), of strings and pickups (Landman, Chapter 24ii), and, finally, of mechanics (Riis, Chapter 24iii).

With this handbook we hope therefore to provide a contemporary journey in postapocalyptic times across the grid of sensibilities, thinking, making, and institutionalizing that can serve artists, curators, activists, developers, inventors, listeners, researchers, and aficionados as well. May sound art further expand!

Part I

After the Apocalypse
The Desert of the Real as Sound Art

The Sonic Aftermath

The Anthropocene and Interdisciplinarity after the Apocalypse

Anette Vandsø

Introduction

After the Apocalypse

My eyes are slow to adjust to the low level of lighting, and I stumble into the small, darkened gallery space with my hands in front of me. Under my feet deep, rumbling, creaking vibrations flow from speakers mounted below the platform floor and blend together with a more recognizable, tinkling melody of melting water from the front speakers. The curatorial notes on the wall inform me that these sounds come from calving Arctic glaciers recorded above and below water by the Danish sound artist Jacob Kirkegaard on a field trip to Greenland. Although the installation, *Isfald,* is not directly a "comment on" climate change (Kirkegaard 2015), the precariousness of the declining Arctic ice, and our role in its disappearance, is an inevitable context as the audience literally hear and feel the ice disappearing around them. However, the fragile condition of the Arctic ice is also contrasted by this overwhelming vertical soundscape's display of "the flux of nature's inexorable forces," using the artist's own words (Kirkegaard 2015, 97).

Kirkegaard's piece is part of a larger movement of "eco sound art" (Gilmurray 2016), which since the turn of the millennium has been exploring materials and sites connected to the human-induced environmental degradations that are unfolding around us at an unprecedented rate. Not only are the current climate changes unmatched in previous decades and millennia (according to the UN Intergovernmental Panel on Climate Change, IPCC [Hoegh-Guldberg et al. 2018]), but also the extinction of species and local populations across the globe has led biologists to suggest that we are now living through the sixth major mass extinction in the Earth's history (Ceballos, Ehrlich, and Dirzo 2017). In addition, the foreign substances we produce, such as radioactive material, plastic, and gases, including

Figure 1.1 Jacob Kirkegaard recording the melting ice in Greenland. Documentary photo from the production of *Isfald*. Photo courtesy of Jacob Kirkegaard.

chlorofluorocarbons (CFC) and greenhouse gases, are not only polluting a small part of what we used to call nature, but also causing uncontrollable ecological upheavals with vertiginous effects on timescales reaching far beyond the few generations our imagination of the future normally includes (Steffen et al. 2015; Waters et al. 2016). These developments make it impossible for us to maintain the conventional distinction between us and nature, or culture and nature, and it seems that we are now part of an "ecology *without* nature" (Morton 2007) in a post-natural condition (Demos 2016).

In response to such data, in 2000 Nobel Prize winner and expert in the atmosphere's chemistry Paul Crutzen and biologist Eugene Stoermer (Crutzen and Stoermer 2000) suggested that Earth was entering a new geological epoch: the *Anthropocene* or "age of Man." The Anthropocene thesis, which was supported in 2016 by the Anthropocene Working Group (Waters et al. 2016), suggests that the human race has become a geological force capable of altering not only "nature," but also the Earth's physical and biological systems in substantial ways that will be evident in the Earth's strata forever (Crutzen 2002; Steffen et al. 2015).

The new Anthropocene world holds challenges for both science and society, writes Colin Waters et al. (2016), the head of the Anthropocene Working Group. But how does the Anthropocene resonate in the field of sound art? This is the key question in this chapter, which will explore the *sonic aftermath* to this seemingly apocalyptic deterioration of our environment.

The Sonic Aftermath

Environmental degradations have been a broad cultural concern and thus also a topic in the arts at least since the eco-art movements of the 1960s (Demos 2016, 38–45). The sense of the impact of human activity on the Earth was stressed when climate change started to become

a topic of global concern in 1988; when the Kyoto Protocol was ratified in 1997; and, in particular, when the Anthropocene thesis gathered a large interdisciplinary field of scientists, environmental scholars from the humanities, thinkers, cultural institutions and artists in many exhibitions, symposia, publications, and artworks, including *Haus der Kulturen der Welt*'s engagement in the Anthropocene theme (2013–). Sound artists and institutions are part of this much larger "swarm work," as the French anthropologist and philosopher of science Bruno Latour (Thorsen and Vandsø 2017, 66) calls it, because the ecological issues are dealt with by many different disciplines at the same time, often in collaboration. For instance, the 2015 Dutch Sonic Acts Festival, *The Geologic Imagination*, brought together a group of high-profile sound artists, geologists, biologists, and philosophers to examine how art and science map and document the changes that occur at Earth magnitude and on a geological scale, as documented in the following publication by the same name (Altena, Belina, and Van der Velden 2015). Sonic Acts was also partner in the *Dark Ecology* research and commissioning project (2014–2016), which had Sonic Acts as a partner together with Kirkenes-based curator Hilde Meth. This project had a similar interdisciplinary approach and also included sound artists such as Jana Winderen, B.J. Nielsen, Esben Sommer, and Signe Lidén.

The *sonic aftermath* refers, in this context, to the many sound artists and institutions who have grappled in recent decades with what the American professor in humanities and the environment Rob Nixon (2013) calls the "slow violence" done to the Earth by humans. They explore these matters either directly by addressing topics such as sustainability, climate change, or even the Anthropocene thesis; or indirectly by exploring the new precarious ecologies of the Anthropocene, including the melting Arctic ice and the toxic landscapes around the former nuclear power plants in Chernobyl and Fukushima, the fragile biophony (Krause 2013) of the threatened rainforest ecology, or the intricate relationship between humankind and the CO_2-neutralizing plants and trees, with which we so obviously are entangled in this climate-changed world. Often these artworks represent their subject matter via an almost objective, scientific one-to-one presentation of field recordings, or sonification of data, or more laboratory set-ups.

While there may be some hope that technological solutions will solve these huge environmental problems, many prominent thinkers assert that we need art in order to survive on this damaged planet. We need art because the ecological upheavals are not only changing our environments, but also our relation to it. But what is the role of the sound artists in this interdisciplinary "swarm work"? Obviously, these eco-sound artworks draw attention to the grave problems that are already described scientifically. But aside from the mere deictic pointing toward the scientific fields of knowledge that are external to the art world, what is the epistemological potential of these artworks in themselves? Episteme means knowledge, and to claim that art has an epistemological potential is to claim that art does not merely refer to an already given knowledge or insight. Rather the artwork in itself produces new knowledge. When we ask about the epistemological potential, we ask what can we learn or gain from listening to these eco-sound artworks? What is at the core of this sonic aftermath?

These are the questions that this chapter will explore. The chapter falls in two parts. In this first part I will introduce different theories on how sound art can either express our disconnected relation to nature or offer a way of reconciliation. This part will draw mainly

on aesthetic theory and the thinking and practices of acoustic ecology from the 1970s and onward, as well as the more commercialized uses of field recordings. The analysis will draw attention to the ways in which field recordings, on the one hand, are regarded as an objective study of our sonic environment or, on the other hand, are culturally understood either as an expression of a pristine nature that now only exists as a fetishized commercial product or as a promise of reconciliation with nature, understood as a holistic unity we can connect with through listening. We see the latter in the tradition of acoustic ecology with its propensity toward *deep ecology* (Naess 1973).

Using this analysis as a theoretical backdrop, the second part of the chapter will investigate examples of current eco-sound art to explore how the seemingly objective, almost one-to-one presentation of a natural material in these artworks, both expresses our cultural and individual changing relation to nature and pushes the listener toward such changes. In this second part I will argue that both the commercial fetishization of nature as well as deep ecology's longing toward a reconciliation with our life world is challenged by a more complex constitution, similar to what the British-American eco-critic Timothy Morton calls *dark ecology* (Morton 2007). The examples of eco-sound art presented in this second part of the chapter have been chosen because, taken together, they raise the most important issues concerning this sonic aftermath. However, they are by no means representative of the entire field, which is vast and encompasses many different works, formats, and themes.

Historical Context: Commercialized Natural Sounds and Deep Ecology

Art and the Impossibility of a Reconciliation with Nature

The notion that art has a epistemological potential in relation to our problematic relation to nature is not new. One key example is the aesthetic theory of the German philosopher Theodor W. Adorno (1909–1969), as formulated in the posthumous publication of *Ästhetische Theorie* (*Aesthetic Theory*) in 1970. Here Adorno presents his ideas on how art can respond to what he refers to as "the violence done to the surface of the earth" (1997, 64). According to Adorno, our problematic relationship with nature is a result of "progress, deformed by utilitarianism" (64). As a result of the process we have experienced since the Enlightenment, rationalism has relegated nature to a "raw material" (66), and this inherent "rational fallacy" "assumes the attunement of even the extra-human to the human" (71). In consequence, the freedom the subject gained with the Enlightenment led to "the desiccation of everything not totally ruled by the subject," and in consequence to the unfreedom of the objectified other (62), for instance nature.

Adorno's thoughts resonate with more contemporary eco-critics who claim that the many ecological disasters prove that the progress that came with modernity also came

with a fundamentally problematic relationship between humankind and the world around us: we have simply colonized nature (Demos 2016) to the extent that it now constitutes a problem for us. Many contemporary thinkers conclude that the environmental crisis is, in turn, also a crisis in our basic understanding of the relationship between subject and that which is not the subject, including the relationship between human and animal (Haraway 2016), human and Earth (Spivak 2012), and human and environment (Morton 2007).

Against Mimesis

Even though Adorno regards art to be the antithesis to nature, it is also the place where society's alienation from (and exploitation of) nature can be realized—where humanity can become aware of that which "rationality has erased from memory" (Adorno 1997, 62). His prescriptive aesthetic theory reveals the way in which this epistemological potential is fulfilled. Art should, according to Adorno, most importantly, not pursue the image of nature, but rather strive for *natural beauty*. In Adorno's view, natural beauty is undefinable because its substance relies on an essential indeterminacy that is withdrawn from universal conceptuality (70). We cannot put natural beauty into words or into a formula. Adorno is in consequence skeptical of the mimesis we see in naturalistic art depicting nature. For instance, in Adorno's view the conventional representation of a beautiful landscape that became so popular in the nineteenth century is problematic because it fails to reveal that this landscape is also cultural, formed, and mediated—not intentionally by an artist, but by history. The hypocrisy is, Adorno explains, most obvious when the bourgeois taste condemns the torn-up industrial landscape that reveals a glimpse of our domination of nature as ugly. As a result, the reconciliation promised by naturalistic images merely cloaks and legitimizes our unreconciled relationship with nature, rendering both naturalistic artwork and visits to famous views or landmarks of natural beauty futile when it comes to realizing our problematic relationship with nature. Nature's eloquence is damaged by objectivation, to the extent where nature, and in particular its rare silence, has become a mere commodity (69).

I wish to connect Adorno's thinking to the practices of field recordings of nature in order to broaden the scope of his thinking and thus make it easier to connect it to the practices involved in sound art. Because another way in which nature has indeed been commodified is by recording it, publishing it, and distributing it as an antidote to stress or noise pollution, as we see it in the sound tracks often used for meditation, in new age music or noise machines. One early example of this is the iconic nature recordings of thunderstorms or quiet rain produced by the American field recordist Irv Teibel (1938–2010) in the 1970s, published in the *Environments* album series (1969–1979) and distributed with the *Reader's Digest Magazine*. The popular *Environments* series was marketed as an antidote to the noisy, stressful sounds of everyday urban life: a silence in the form of the sounds of nature. The alleged "superb realism and pastoral beauty" of these recordings aimed to "neutralize disturbing noises" (Syntonic Research Inc. 1969), as it says on the back cover notes authored by Teibel. This was also how they were perceived and used. For instance, in his feature

article on Teibel's recordings, journalist Jeff Burger wrote: "Yearning for the peaceful sounds of a country pasture or a deserted beach? They could be as near as your stereo rig!" (Burger 1974, 24). The cover notes show that such recordings both reflect and constitute more general cultural ideas about nature as a pristine Other—a sanctuary we should preserve and venerate (Michael 2011, 207).

Adorno rejects such commodification of nature. Instead, works of art should be autonomous, withdrawn from society, an "absolute monad" (Adorno 1997, 180ff.), referring only to their own internal unity, and not to any image of nature or anything outside themselves. One example is the composer Arnold Schönberg's (1874–1951) dodecaphonic compositions with their strict internal cohesions, which Adorno praises in his seminal book *The Philosophy of Music* (Adorno [1949] 2006). In this autonomous state the artwork becomes a *substitute* for nature, unfolding natural beauty, and thus taking on nature's role of otherness, while maintaining its withdrawn character. Herein lies the epistemological potential of a sounding art, according to Adorno.

Heterogeneous Practices in Contemporary Sound Art

Despite the many relevant themes in Adorno's philosophy, his prescriptive and media-specific aesthetics does not apply to current eco-sound art, which is anything but autonomous. By definition these artworks are engaged in larger societal issues, and occasionally they even intervene directly in a public sphere with specific intent to influence the audience. For instance, in 2004 the American sound artist Andrea Polli invited the citizens of New York to listen to a projection of climate data in the installation *Heat and the Heartbeat of the City* in order to "reconnect the urban citizen" with "their natural environment" (Polli n.d., 00:45). This installation turns climate change into a local phenomenon directly related to the audience's everyday environment. The text accompanying the installation asks: "What will life in New York feel like if the number of days over 90 Fahrenheit double?" (Polli n.d.). Other sound art installations are gestures targeting a political context, for instance the Australian sound artist Leah Barclay's *Rainforest Listening*, which showcased sounds of the "rich biodiversity" of the precarious Amazon rainforest in order to "encourage global leaders to listen to nature and take climate action" (Barclay, home page, n.d.) during the United Nations Climate Change Conference, COP21, held in Paris in 2015.[1] Adorno's claim regarding media specificity means that artworks should only reflect their own art form—so music should not borrow from the visual arts, while contemporary eco-sound artworks are, by contrast, profoundly interdisciplinary. They involve a heterogeneous set of practices with methods, technologies, and set-ups taken from a broad range of all the arts—there is often a strong visual and textual component, as well as elements of design and natural sciences, including field recordings, laboratory-like installations, and sonification of data. Some artists are trained scientists, including the Norwegian biologist Jana Winderen, who uses field recordings—including ultrasound or underwater recordings. For instance, in *Silencing of the Reefs* (2012) she explored the oceanic environment of the dying barrier

reef. Other artists refer to scientific explorations, for instance Jacob Kirkegaard in relation to *Isfald* (2015), the installation mentioned in the introduction to this chapter. Kirkegaard describes his travels in Greenland as being comparable to the mission of Knud Rasmussen (Kirkegaard 2015). Other artists collaborate with scientific institutions such as NASA— for instance Andrea Polli in her works on sonification of climate or weather data (Polli 2006). Finally, these pieces rely heavily on their reference to something outside themselves, often in a one-to-one presentation of materials and sounds from materials, places, and contexts followed by lengthy cover notes that explain what it is that we are listening to. It is therefore more natural to view the current field of eco-sound art in relation to other traditions, in particular the tradition of acoustic ecology from the 1970s, which, with its use of field recordings as a way to study our sonic environment, is already heterogenous in its practices. However, we will later return to Adorno to use his thinking as a tool for analyzing and differentiating between different ideological positions inherent in the sound art practices that might otherwise seem to be quite neutral or objective.

Acoustic Ecology and Deep Ecology

The tradition of acoustic ecology began in the 1970s with Murray R. Schafer's seminal book, *The Soundscape, Our Sonic Environment and the Tuning of the World* (1977), and the *World Soundscape Project* (1972–), which he founded with a group of colleagues to study contemporary soundscapes using field recordings and other techniques. This movement of sonic thinking and sonic practices had a corresponding awareness of our problematic relationship with the environment, in particular noise pollution, which is a key theme in Schafer's book. Noise pollution was a key theme in the acoustic ecology tradition, not only as seen in Schafer's book, but also a broader political concern of that era that gave citizens in the United States and parts of Europe the first noise regulation acts. While the main focus was the human environment, the anthropocentric environmental degradations that affected nonhuman habitats were also studied in acoustic ecology, in the tradition of bioacoustics. Disturbances in local ecologies could be heard as a change or a total silencing of animal voices,—called the "biophony" by field recordist and composer Bernie Krause (2012). Bernie Krause's lifelong recording practices document exactly this silencing of the biophonies of chosen ecologies (Krause 2012). Adorno would be skeptical about the aesthetic value of such recordings because they seem to reduce nature to an objective phenomenon—the rational raw material—which does not bring us any closer to understanding that which rationality has erased from memory" (1997, 62), namely the actual natural beauty.

However, the contribution of acoustic ecology to our ecological awareness not only involved the study or documentation of environmental decline, but also sought to bring about awareness through the very act of listening. This awareness was directed toward the specific acoustic designs of our everyday lives (Schafer 1977), and also at times had a deeper goal, as seen in Jim Cummings' label EarthEar (1998–) (Cummings n.d., "about"):

> The hope [. . .] is that we may discover a deeper appreciation for the rich variety and abundant unity of the voice of our planet. Perhaps these aural portraits and sonic essays can remind us

of ways that our voices may blend in more graciously, more respectfully, more receptively [. . .] As we grow back into this connectedness, modern humans in consort with our places, we might once again begin to hear—and know ourselves as a part of—the eternal story, told in its original language.

Whereas Teibel's *Environments* series subscribed to a dualism between nature and culture, this statement by Cummings expresses a hope that listening may help us to overcome the disconnecting dualism between nature and culture, and reconnect with nature as a fundamental inherent state around and within us. In this quotation nature is not merely fetishized as a picturesque scenery we can visit via sounds and use to outshout stressful urban life. Instead, the emphasis is placed on the act of listening as a way of reconnecting. As mentioned above, this holistic world view is often referred to as *deep ecology* (Naess 1973; Latour 1998, 20). The Norwegian philosopher Arne Naess suggests that *shallow* ecology is concerned with fighting pollution because of an interest in the health and affluence of people; whereas the *deep* ecology movement sees us not merely as being *in* an environment, but also as organisms that are knots in the much larger biospherical net [. . .] of intricate relations (Naess 1973, 95). In the tradition of acoustic ecology we find expressions of both what Naess calls shallow anthropocentric ecology concerned with our well-being, and deep ecology with its larger holistic ecocentric viewpoint.

Cummings writes that he established his label as an alternative to the more commercialized market for nature sound recordings—Teibel's *Environments* series mentioned above serves as an example—designed for "innocuous background listening and relaxation" (Cummings n.d., "about"). In the nature recordings designed for background listening, the problematic noises of our everyday lives were to be masked or concealed; whereas Cummings, in line with many other field recordists and sound artists, identified considerable potential in enhancing the aware act of listening as a way to overcome our separation from nature. Through listening we could become aware of our role in the larger ecosystem of life as such.

According to Adorno this idea of a reconciliation with nature is just as problematic as the commercial fetishization of it, because both ways conceal our problematic relationship with nature, which cannot be overcome. To summarize: where Adorno suggests that the artwork should take on this unreconciled character and remain withdrawn without catering to commercial interests, and also without reducing nature to a mere raw material and the province of science, the traditions of field recordings post other solutions. The commercial production of nature recordings fetishizes pristine nature and postpones a dualistic idea of nature, while the tradition of deep ecology promises that through listening we can again be reconnected to our surrounding world.

Dark Ecology

Adorno shares his normative notions with contemporary thinkers. In both Morton's and Latour's thinking, art that depicts "nature" stands in the way of an actual critical engagement with ecological issues (Morton 2007, 1; Latour in Thorsen and Vandsø 2017). Nature is not

useful for thinking about environmental issues, because it is too vague a concept: what is nature? Is it everything around us, for example, matter? Or the green plants? According to the Anthropocene thesis, we no longer have any nature that is not intertwined with us (our patterns of consumption, our technological advancements, etc.) In his writings on ecology, Morton therefore criticizes both the propensity to adopt a dualistic conceptualization of our relationship with nature, and the organic or holistic approach in acoustic ecology and deep ecology. Instead of trying to get rid of the subject-object dualism and seek what Morton calls a "false oneness," Morton argues in favor of a "dark ecology" that "dances with the subject-object duality" (Morton 2007, 185). In this context, "dark" is a reference not only to an emotional color, but also to the status of the object which remains in the dark, withdrawn into the "ontological shadows" (Morton 2013a).

There is a similarity between Morton and Adorno in the sense that they both subscribe to the idea that objects have a withdrawn quality: something that we cannot fully grasp or conceptualize. And they both prefer art that presents itself and its object in a manner that leaves the object withdrawn to some extent. But even though we can find similarities between their line of thinking, the type of sound art they prefer is very different: Morton favors the neo-avant-garde postwar scene that includes the American composers John Cage and Alvin Lucier. Morton finds that experimental avant-garde music is truly environmental, not in content, but in form, because of the way such pieces draw attention to their and our perceptual background without losing its indeterminate quality. In Cage's silent composition *4′33″* (1952), the instrumentalists do not play. Instead the audience are invited to listen to the natural occurring sounds of their environment. In this way they become aware of their perceptual background, but it still retains its quality as a background (Seel 2005). Morton asserts that aesthetics as well as ecology are about relations between subject and objects (2007, 144).[2] Following Morton's logic the situation we encounter in Cage's *4′33″* is somewhat similar to the current situation in which global warming requires that we look at and relate to what used to be the mere background of our existence—such as climate, or our environment in general (Morton 2013a). Indeed we have increasingly begun to experience warm weather as an expression of climate change, although "climate" is conventionally something that we cannot sense directly. In the Anthropocene, when humans are considered to be a geological force that influences the climate, there is no clear distinction between us and our environment. The distance between us and our environment becomes vague; but in Morton's view it does not disappear.

The experimental music of the postwar neo-avant-garde is also one of the key historical lineages to the contemporary field of sound art. For instance John Cage's *4′33″* is often enrolled into the history of sound art, although, at its first performance, it was clearly framed as a piece of compositional music. We also see direct references to this experimental music in the current field of eco-sound art. For instance in *4 Rooms* (2006)—a piece on the toxic landscapes around the former nuclear power plant in Chernobyl, Russia—the artist Jacob Kirkegaard explicitly reuses methods from the American composer Alvin Lucier's composition *I Am Sitting in a Room* (1970). The experimental neo-avant-garde and the art and technology movements that emerged in the postwar era were perceived as a direct contrast to the autonomous work concept and the media purism of high modernism

(Foster 1996), because this art appeared to be a direct intervention, not in the world of art, but in the actual social space of the audience. This art therefore made the relation between the artwork and the audience explicit, as something that could be recognized as a part of the artwork's composition. For instance, the lack of conventional musical sounds from an instrument in *4′33″* can be seen as an intervention in the social space of the concert call, that breaks with the conventional modes of playing and listening.

We can use Morton's idea that the subject-object relation is essential to both art and ecology as a way to summarize all the different positions we have analyzed above. From Adorno's viewpoint the ideal artwork should remain withdrawn, autonomous, in order to better express the natural beauty that we have lost sense of. In deep ecology the artwork can teach us to listen in depth and thus overcome the disconnection from the holistic unity we are embedded in, while the avant-garde artwork confronts the subject more directly and challenges the subject-object relation, without overcoming it. Finally the commercialized fetishization of pristine nature enhances the nature-culture dichotomy, but at the same time it turns this nature into a commercial object. All these positions thus claim that the sounding work of art is not merely referring to an already gained scientific knowledge. Rather it reflects, uses, establishes, or challenges the given relation the audience might have to nature or the environment. With these theoretical distinctions in mind, let us look at how the current field of eco-sound art operates within this complex to ask how these past concerns re-actualized in the current sonic aftermath.

Close Encounters with Precarious Ecologies

Let us return to Leah Barclay's *Rainforest Listening* (2015–). This site-specific installation is an interesting place to begin our analysis, because the field recordings of the rainforest that we hear in this installation are not very different from, say, one of Teibel's *Environments* releases, or any new age rainforest sound track. In Barclay's installation we hear a variety of chickadees chattering, and there is a depth and a variety in the soundscape and the biophony that is uniquely characteristic of the rainforest. On the home page of this artwork we can hear an excerpt that includes the distant sounds of chainsaws; but even if we focus solely on the sounds of animals, Barclay does not allow us to fetishize the rainforest, because she has *inserted* these sounds into the context of urban Paris in relation to the COP21 meeting. Keeping in mind how avant-garde artworks perform a social intervention, Barclay's installation intervenes in the city's public sphere and in the citizens' everyday lives in a similar way. The urban citizens, or the politicians on their way to negotiate the Paris agreement to reduce climate change, encountered the sounds in a context that clearly emphasized our agency in the precarious situation of the rainforest ecology. In total the piece demonstrates that it is not a representation of a pristine wild nature untouched by humans. Rather it is a post-nature piece that is inevitably and intimately entangled with us, with our patterns of consumption, production, transportation, and so forth. This entanglement and intertwinement cross disparate areas of knowledge and involve a heterogeneous set of actors: the COP meetings, the large oil companies, our system of food production, and endangered animal species. They are all involved in this small encounter between the

audience in Paris and the specific places of field recordings. The act of listening seems to make us think about and sense a broad spectrum of logics of agency that does not point back toward one unity, or one holistic ecosystem, as it would do in an ideology of *deep ecology*. Instead this piece seem to invite us to "ecologize," as Latour (1998) calls it, which means tracing the ways in which we are interconnected with the rainforest, and tracking the actants by asking: how are my actions, food production, the means of transport, the oil industry, and the increased CO_2 levels due to the burning of fossil fuels connected with the ecology of the rainforest and the specific small world I listen to?

One of the main problems of massive environmental degradation is that we, in particular the wealthy urban citizens of the Global North, do not experience the consequences of our actions, because they can only be felt and heard in places on the geographical periphery of our everyday lives. Furthermore, the people responsible for the environmental upheavals are not exactly you and me as individuals, but the "collective giant that, in terms of terawatts, has scaled up so much that it has become the main geological force shaping the Earth," as Latour puts it (2011, 3). This leads to a huge gap between "the scale of the phenomena we hear about and the tiny Umwelt inside which we witness, as if we were a fish inside its bowl, an ocean of catastrophes that are supposed to unfold," again in Latour's (2011, 2) words. If we take Latour's analysis as our point of departure, Barclay and the many other artists working with field recordings of precarious ecologies establish a close encounter between the small world that we experience here and now, and the small world of another place on the planet that is intimately linked to our world because of this "collective giant" of which we are part. In this way, Barclay's insertion of rainforest sounds in the midst of our urban ecology stresses a range of disconnects and disproportions, rather than bridging them.

This close encounter with precarious ecologies is also a theme in Norwegian sound artist Jana Winderen's underwater recordings, *Spring Bloom in the Marginal Ice Zone* (2018), which she performed at the Dutch Sonic Acts Festival in 2017. In this piece Winderen has recorded the "dynamic border between the open sea and the sea ice, which is ecologically extremely vulnerable" (Winderen 2018). The sounds we hear when listening to Winderen's recordings are definitely not a pastiche of nature comparable to the recordings of thunderstorms or whale song that we use for relaxation or comfort, or to other conventional representations of nature that we know, love, or understand. In contrast, the listener is situated here in a close encounter with strange sounds that we neither understand nor recognize. The explanatory title and the other framing paratexts, as well as the person being interviewed that we hear in the sonic tract, tell us that we are listening to phytoplankton, which produce half of the oxygen on the planet and that during spring this zone is the most important CO_2 sink in our biosphere (Winderen 2018). The sounds that at first appear to be insignificant noise now come across as "a voice in the current political debate concerning the official definition of the location of the ice edge" (Winderen 2018). Again the piece invites us to "ecologize," for instance by exploring the interconnectedness between our small world and the small world to which the piece introduces us. As we can see in Winderen's own interpretation, we are confronted with a string of actants, including the official definition of the location of the ice edge, as well as the distributed network of agents involved in climate change and melting Arctic ice.

Figure 1.2 Jana Winderen, recording with hydrophones 15 meters under the sea ice by the North Pole. Photo: Mamont Foundati.

In conclusion, instead of composing the sounds within the frames of the autonomous artwork, these pieces redistribute what can and cannot be heard and what can and cannot be recognized as significant sounds or even a voice in a political debate. Both pieces point toward the fact that our world is already based on a "distribution of the sensible" (Rancière 2004). It is the French philosopher Jacques Rancière who argues that the distribution of what can and cannot be heard and recognized is political (2004). He regards artistic practices as "ways of doing and making" that intervene in the general distribution of ways of doing and making as well as in the relationships they maintain to modes [. . .] of visibility (2004, 13)—and to the audible, we might add.

Giving a Sensory Body to Hyperobjects

There is another aspect to this question of what can and what cannot be heard, which has to do with the enormity of many of the phenomena encompassed under the term "Anthropocene." Not only are the consequences of our overconsumption, mainly noticeable in places that are on the geographical periphery of wealthy Northern countries, but in addition many of these phenomena, climate change in particular, are in fact impossible for us to sense directly. We may sense that it is a warm day, but we cannot possibly sense global warming. We only know that we are in the middle of climate change because we are able to analyze a large set of data. Timothy Morton calls global warming a hyperobject (2010, 1–3) because it is distributed in time and space in a way that is fundamentally different to our human sensory apparatus.

Polli's sonification climate data in *Heat and the Heartbeat of the City*, which can also be experienced online (n.d.) offers a sensory experience of global warming. The piece's sonification of actual and projected climate data from 1990 to 2080 reveal the maximum

daily temperatures for the summer of each year using the parameters of speed, loudness, and pitch (Polli 2006). By clicking on the visual timeline, listeners can travel forward and backward in time and sense the climate as a pulsating, hissing, vibrating drone of sounds that resemble a disturbed signal from an indeterminable source. Polli has added a noise filter to the days with a lower temperature "to create cleaner sounds" (Polli 2006, 44), and as we move toward the year 2080 the noise grows stronger, the rhythm more hectic, and the overall ambience darker.

In this example the hyperobject is given a specific but indefinable materiality with an unspecified tactile quality. Thus, the "object" in our ears is vague: it is more of a signal or a resonance with a transmissional quality than an actual object. The German thinker Martin Seel (2005) suggests that instead of the typical dichotomy between "things" and "how they appear to our senses," the aesthetic relationship is about the dynamic quality of *appearing*. In his writing on sonic resonance (Seel 2005, 139–58), he talks about appearing as an "occurrence without something occurring" (xiii), which seems to be a useful conceptualization in relation to *Heat and the Heartbeat of the City*, because this piece allows us to understand appearance as a process that does not necessarily end with the appearance of a distinct object or phenomenon. This matches Morton's (2013a) idea that the hyperobject (and indeed all objects) remain in "the dark," withdrawn, because of their distributed quality.

However, Polli's installation does not seem to bridge the fundamental disconnection between our small world and the vast temporo-spatial world of the hyperobject. Instead, the difference and disconnection between the specific place of Central Park "here and now" and the vast spatial and distribution of climate change, the hyperobject, is made explicit, I would argue, because the composition compresses a 90-year timescale of actual and projected climate data into an individual experience of minutes (Polli 2006). The "now" of the listening experience simply consists of a compressed temporality. Furthermore the temporal scale that combines the city's past and future is not related to the history of human lives, but to a strange, dark rhythm of a material development in the atmosphere.

In conclusion, Polli's installation does not solve the fundamental problem regarding the disproportionate scale between our everyday lives and the magnitude of the issues we have to deal with. Instead, she makes the disproportion that already exists in our climate-changed world more explicit.

Learning to Live Among the Ruins

One fundamental characteristic of ecological sound art is that it explores precarious ecologies—the entire planet is destabilized and precarious—and often this is expressed as an investigation of specific toxic or "dangerous places," as referred to by Peter Cusack (2012) with regard to his field recordings in the contaminated areas around the nuclear power plant in Chernobyl, which was closed after a major meltdown in 1986.

The American anthropologist Anna Tsing (2015) argues that precariousness is the main issue of our time. But to her the precarious ruined landscapes reveal that the general precariousness of our global situation is not a dramatic apocalyptic depletion without

hope, but a situation in which we have to learn to live in the "ruins of capitalism" (2015)—just like the frogs in Cusack's recordings, which, like the rest of the animals around Chernobyl, are thriving in the absence of humans. The flourishing nature can also be heard in Hill Kobayashi and Hiromo Kudo's *Fukushima Audio Census* (2017), which is a response to the nuclear disaster in Japan 2011. *Fukushima Audio Census* is an interactive live audio streaming from strategically placed microphones in the contaminated exclusion zone located 10 kilometers from the Daiichi nuclear power plant. It is an artwork, but it is also a design solution that was presented at the CHI Conference on Human Factors in Computing Systems in 2017. So this piece is in fact an actual design solution grappling with the issue of how we can learn to live in the ruins, to use Tsing's phrase.

According to Heather Davies and Etienne Turpin, the Anthropocene is also a sensory phenomenon connected to "the experience of living in an increasingly diminished and toxic world" (Davies and Turpin 2015, 3). However, as explained earlier, we rarely experience such toxic sites firsthand. So the sound art practices that enable us to listen to "dangerous places" are not merely mirroring an experience of living in a diminished toxic world, but also establishing such experiences for the audience. These artworks diminish our world by confronting us with foreign ecologies that are not merely exotic places we can go to (or not), but places with which we are already entangled. Furthermore, the flourishing wildlife of these contaminated areas confront our ideas about nature, wild nature in particular. Although these sealed-off areas have been extremely contaminated by humans, their biodiversity far exceeds most of the green spaces that urban citizens encounter in their everyday lives.

Learning to live in the ruins could also serve as a headline for the Japanese sound artist Soichiro Mihara's installation *Bell* (2015). In response to the Fukushima accident, Mihara redesigned the traditional Japanese wind chimes (*fūrin* 風鈴) used at temples to ward off evil. The glass bell in Mihara's work is connected to a radiation sensor, so it detects a different kind of evil. Mihara writes that "after the disaster I am conscious of listening to a presence that we cannot perceive," and then adds, "It is common sense that a concept of good and evil does not exist in nature or technology. So has evil been completely cleared

Figure 1.3 Soichiro Mihara, *Bell*, 2015, installation. Photo: Soichiro Mihara.

away now?" (Mihara 2014). The artwork gives no answer, but implies that the world described by science is never neutral, it is never mere raw material, but always something that is also social and ethical.[3]

More-Than-Human Ethics

Another example of Fukushima art that addresses the ability to "live in the ruins" with an emphasis on the ethical aspects of our technological advancements is the Japanese artist Yoji Dogane's "plantron" device, presented in the installation *Radio Active Plantron* (2012)—a system that "converts imperceptive biological information" into electrical signals and then into sounds (Dogane n.d.). This piece allows the audience to listen to sounds from plants that are being exposed to radioactivity. Dogane asks: "Mankind is not burdened with the ability to hear the voices of plants, but what if that were not the case? How would life have been different? Would we have constructed monstrous nuclear power plants that emit poisonous particles?" (Dogane, quoted in Spoon 2012).

When Winderen talks about a new nonhuman or more-than-human voice in the political debate in relation to her piece *Spring Bloom in the Marginal Ice Zone* (2017/2018), she challenges our ideas about what counts as a voice in a political debate. Dogane touches upon similar questions with his piece. Both pieces connect the issue of our sensory limits to questions of ethics: what we can and cannot hear is related to politics and ethics. The American professor emerita Donna Haraway has a Ph.D. in biology and has subsequently studied techno-philosophy and feminism with a view to questioning our relationship with the other species we co-inhabit this planet. She argues that the current environmental challenges require that we question the Darwinist narrative of survival of the fittest, and instead consider the idea that we co-depend on others—our "companion species." Anthropologist Natasha Myers (2017) makes a similar suggestion when she replaces the term "Anthropocene" with "Planthropocene," because climate change stresses our interdependence on plants that extract CO_2 from the atmosphere and transform it into breathable oxygen. On the one hand, Winderen's and Dogane's pieces question whether it is possible to recognize the voices of plants and plankton, because the audience cannot understand the sounds in the pieces. But on the other hand, the political reality is that we already have spokespersons that speak on behalf of plants, forests, lakes, animals, and the climate. Plants already have a voice in our political debate, and in that sense these artworks merely give sensory substance to a change that is already happening. The same can be seen in Céleste Boursier-Mougenot's sonification of moving, kinetic trees in the project *Rêvolutions* (2015), which is a wordplay on the words revolution and dream (*rêve* in French), in which he questions the right to free movement of plants.

Time as a Material Form

A final radioactive artwork that should be mentioned is the Danish composer Jacob Kirkegaard's *4 Rooms* (2006), which is based on recordings made in the zone of alienation

surrounding the former nuclear power plant in Chernobyl, Ukraine. His recordings are not field recordings like Cusack's. Instead, Kirkegaard has recorded room tones from the abandoned buildings in the now sealed-off city of Pripjat. In a reiteration of the recording practice of the American composer Alvin Lucier's iconic *I Am Sitting in a Room* (1970), Kirkegaard left the buildings, recorded the empty rooms and played the sounds back into the rooms while recording them again, repeating this procedure several times until he had made the otherwise inaudible places audible. The result is four tracks from different rooms with slowly moving microtonal networks of drones composed via this sonic compression of time.

According to author Svetlana Alexievich (2016), the Chernobyl accident changed our relationship with time more than anything else. Time assumed a material form in the decaying radioactive waste caused by this accident, and it stopped altogether in the dead territory. After Chernobyl the world had to think of the future in terms of a timescale shaped by other material processes than the lives of humans, and therefore also on a scale far exceeding the few generations that our conventional ideas of the future can comprehend. It is such temporal dimensions that echo Kirkegaard's sonic time-layering, which also creates both a temporal kaleidoscope and a sensation of time that stands still. Kirkegaard's piece is not a dramatic narrative expression of the local apocalypse. Rather it is a composition that, via its sonic time-layering, connects the temporal to the material the same way that the nuclear waste decay does it.

This change in our sensation of time is challenged not only by the vast temporal perspectives of nuclear waste, but also by climate change and indeed by the Anthropocene thesis as such, because this thesis suggests that humankind's historical time is entangled with Earth's deep geological time (Chakrabarty 2009). It is therefore often noted that the Anthropocene thesis is not merely a sequential addition to the existing geological timescale. Instead, it is a "rupture in time" (Hamilton 2017, 1) that throws our usual historical practices for visualizing time, past and future—times that are inaccessible to us personally—into deep "contradiction and confusion," as historian Dipesh Chakrabarty (2009, 212) concludes.

Such temporal aspects are also present in Chris Watson, Katie Paterson, and Kirkegaard's recordings (and live transmissions) of melting Arctic ice, simply because of the material—the ice—they engage with. Watson's recordings of the Icelandic glacier Vatnajökull released on the album *Weather Report* (2003) are described as "The 10,000 year climatic journey of ice formed deep within this Icelandic glacier and its lingering flow into the Norwegian Sea." In this field recording we hear a strange crackling, deep rumbling, almost mourning, sound of the melting glacier. The sound juxtaposes the now of the listening process with the deep time of the ice's history and the possibility of a future without ice, and perhaps even without "us" (Zalasiewicz 2008; Chakrabarty 2009). As Jackson concludes in his analysis of Watson's piece:

> The sonicity of the Anthropocene therefore makes us acutely aware, if we care, about temporal scales of change and acceleration that extend far beyond human beings and brings new rhythms into our everyday lives at paces that often feel as though we are just barely keeping up. (Jackson 2017, 57)

Another example of a piece that grapples with the new sense of time in the Anthropocene is Andrea Polli's *Heat and the Heartbeat of the City*, as my analysis above has already shown. These pieces reflect a new temporal sensibility that comes with climate change and the other vast environmental upheavals encompassed under the Anthropocene thesis.

The Post-Natural Condition: From Deep to Dark Ecology

Subtle Worlds

Most eco-sound artworks reveal what we, with György Kepes (Bauhaus teacher and founder of the Center for Advanced Visual Studies at MIT), could call the "subtle worlds" of energy-gathering and energy-distribution "revealed by our scientific instruments and devices" (quoted in Bijvoet 1997). The subtle worlds Kepes talks about were local in 1967, whereas they can now be observed at the planetary level as patterns of chemical exchange between the biosphere and the atmosphere, and also as patterns in big data collected by weather stations such as NASA or NORSAR, or simply as biological activity in biospheres to which we do not normally have access. In Katie Paterson's *Vatnakjöll (the sound of)*, the audience is asked to call a phone number and listen to a live transmission of melting ice from the Icelandic glacier Vatnakjöll. In this piece the ice is represented not as an object in these live transmissions, but as material in accordance with Tim Ingold's ideas of materials "as hives of activity, pulsing with the flows of materials that keep them alive." Ingold states that human beings are also "organisms, not blobs of solid matter with an added whiff of mentality or agency to liven them up. As such, they are born and grow within the current of materials, and participate from within in their further transformation" (Ingold 2007, 12).

The reason why we can hear these emissions of energy in Paterson's live transmission of melting ice (or in any transmissions of recordings) is because there is a transducer in the microphone that records the emissions as longitudinal pressure waves that mechanically push a membrane. Consequently, we should not merely perceive these artworks as a form of narrative, even though the narrative framing in the title and other paratexts is of utmost importance (Vandsø 2018). But at the level of the sound recording, what we are experiencing is not *discourse* but *histoire*, using the French linguist Émile Benveniste's classical distinction between two different registers of the speech act on the level of enunciation (Ernst 2013). *Histoire* is the speech act that conceals the act of enunciation by excluding deictic markers such as "I," "you," "here," and "now," which refer explicitly to the act of enunciation. The typical example of such a text is a history book. Discourse, on the other hand, marks the act of enunciation by including the deictic markers, as we typically would in a private journal. The distinction between *histoire* and *discourse* is not the same as the difference between objective and subjective language—the *histoire* in our history book may disguise its act of

enunciation, but nevertheless it is still a product of it. Media archaeologist Wolfgang Ernst (2013) therefore suggests that at the media/archaeology level a sound recording is an *histoire* with an *actual* absence of a narrator. It is not a narrative representation that conceals its act of enunciation, but a technological re-presencing (Ernst 2014) of the past. If we use this distinction in relation to our examples of eco-sound art, it becomes apparent that they are not merely a conceptual narrative about ecological issues, although the narrative component is definitely present in the cover notes and curatorial statements. Instead, these sounds are part of an exchange of energy, and thus a technological re-presencing of past energy emissions. Timothy Morton writes that "in an age of ecological awareness we will come again to think of art as a demonic force, carrying information from the beyond, from nonhuman entities such as global warming, wind, water, sunlight and radiation" (Morton 2013b, 22), and this force is palpable in many of the sound artworks mentioned above, including Kirkegaard's *Isfald*, with which I began this chapter.

The specific sounds we hear are not created only by the artist or composer or musician, but also by this nonhuman force. The affective potential of these pieces is linked, as I stated at the start of this chapter, to this dual character of the sounds: on the one hand they are an expression of precarious ecologies, but on the other they are also forceful, and beyond our control.

From Deep to Dark Ecology

When Timothy Morton suggests the term dark ecology instead of deep ecology, it is because of this withdrawn character of (hyper)objects, which means that they cannot be grasped in this unique aesthetic correlation between us and them. They cannot be reduced to a social function for us, nor are they mere material that can be described by science. They have a "demonic force," as Morton (2013b, 22) states. However, these sound art pieces also resist the idea that we can interpret everything as a resonating holistic unity of deep nature, because it is impossible to see the flourishing wildlife of Chernobyl, the melting Arctic ice, or any of these precarious ecologies without including human beings. Nor can we think of these phenomena as the "nature" described by science, because there are so many social factors involved. Melting Arctic ice, or the underwater environment that Winderen has recorded, are linked to climate change, and therefore to our patterns of consumption, our modes of transportation, and hence to the oil industry, the conflict in the Middle East, the COP meetings, the IPCC reports, etc.

Although all these pieces are clearly based on material that we would normally call "nature," the phenomena they present seem rather to be hybrids constituted by a collective, or a string of actors, human and nonhuman, like the way in which Latour describes the hole in the ozone layer (1993). One of the reasons why Latour criticizes the notion of *deep ecology* is that the term is insufficient in relation to these hybrid phenomena. Instead of trying to place these phenomena in a larger holistic ecosystem, we should "ecologize," Latour suggests (1998), that is, follow the network of quasi-objects and track down the distributed agencies in the heterogenic network in which we and the ecologies presented in

the pieces are interconnected. Thus the material we hear might be described as one phenomenon—for example, melting Arctic ice—but it encompasses a hybrid collective that transgresses conventional distinctions between fields or domains or disciplines.

Both Morton's dark ecology and Latour's actor-network theory challenge the idea of an autonomous subject isolated and distinct from their environment and/or the object they face. Both lines of thinking seem productive in relation to the contemporary field of sound art. However, what these artworks present is not mere abstract networks of distributed agency. Instead, each piece explains where on the planet the sounds come from, and they generate an awareness of our position in relation to the world to which we are listening. In most of the pieces the difference in place, but also the connection between us, the audience, and the sound sources is made explicit: most notably in Paterson's *Vatnakjöll (the sound of)* (2007–2008), where the audience can call a phone number and listen to the melting ice.

The pieces locate the material as well as us on the planet, and also place us in the context of the entire planetary system. The Indian philosopher Gayatari Chakravorty Spivak writes that it is imperative that we reimagine the planet. This reimagination means that we have to regard the subject as a "planetary accident," and ourselves, as planetary creatures (Spivak 2012, 336).

An Aesthetic of Concern

In conclusion, the critical potential of the sonic aftermath is constituted in the way these artworks operate in and reconfigure the way we experience ourselves in the world, in time, in relation to other species and plants, and in relation to the planet.

As a final conclusion I wish to return to the way these artworks use the objective one-to-one act of presentation of material, as though it was a mere fact: "here is some melting Arctic ice," or "here is some phytoplankton that produces half of the oxygen on the planet." This factual quality is contrasted by the sonic act of appearing in the listening experience. Here the audience is not presented with an actual definite object. Instead we seem to be listening to an activity, to something that is happening that is intimately linked to our actions, to us—if we perceive ourselves as an event, or a planetary accident.

Jacob Kirkegaard writes that *Isfald* works with "accounts of exploration, scientific investigations and pop cultural projections, continuously interweaving the real and the imaginary Arctic, the one never seen without the other" (Kirkegaard 2015). The site of the field recording is not something "out there," which the artist then documents. Instead, the Arctic is an interweaving of the real and the imaginary to which the artwork contributes. The same goes for all the other pieces mentioned above: their subject matter interweaves specific materials and cultural imaginations that exist in these specific zones on the planet, which have become a concern for us.

In this way the sonic aftermath transforms the objective representation of well-known scientific matters of fact into what Latour calls a *matter of concern* (2004, 131), which is to be understood quite literally as something that concerns us. Something that matters to us. A matter we gather around. A matter of concern can only exist if it matters to someone—it

has "to be populated" (Latour 2008, 48), to be "kept up, cared for, accompanied, restored, duplicated, saved, yes, saved" (49). This is what the pieces in this sonic aftermath do: they invite us to engage with these issues, to populate them, to care for something that we might otherwise merely perceive as a matter of fact. To gather around them, as the audience did in Paris when listening to Barclay's *Rainforest Listening* during the COP21 meeting.

The definition of an aftermath is the period immediately following a usually ruinous event (*Merriam-Webster*). However, the analysis I have unfolded above seems to suggest that the sonic aftermath in question is not an "after" epistemologically speaking. It is not an artistic response to an already given and scientifically described matter of fact. Instead, these artworks challenge our conventional modes of thinking about and imagining the world we live in. As such, these sonic practices are a vital part of the fundamental reorientations that the current environmental upheavals require. They transform scientifically described raw material from being a mere matter of fact into being a matter of concern: something that is social, that we are concerned about and gather around. And instead of promising that we can overcome our difficulties, this aesthetic invites us to "stay with the trouble" (Haraway 2016). To spend time listening to it.

2

Composing Sociality

Toward an Aesthetics of Transition Design

Jeremy Woodruff

Composing sociality is a group practice in which artwork functions in tandem with natural social systems. In this case the artist may attempt to resolve or extenuate the cognitive dissonance caused by agonistic and dissenting voices (the "noise," so to speak, within group negotiations) with the artwork they create (whether consciously or not). Even if it is not itself music, musical affect in soundscapes, tones of voice, and voicescapes will, through cooperation including art, function to reduce cognitive dissonance arising in group systems and help them work more smoothly. Composing sociality is a feedback loop: group irreconcilabilities reveal features of the artist's work that feed back once again into people's everyday lives. This is one core process imagined at the heart of the collective practice I call composing sociality. The sound artwork can be positioned anywhere socially, spatially, or temporally and may include any imaginable ways that sound and music help the organizational structures of a collectivity, financially, for morale, or otherwise. This may include the artist's imagined design structures, networking possibilities, or other social interfaces in which they are involved that include the use of sound and music. I find the idea of composing sociality symbolically meaningful politically, as a way sound could hopefully motivate progressive social change and transition corporations from destructive attitudes and policies to more responsible environmental practices.

First, I reframe the term "composition" in the light of sound studies and then I reevaluate the premises of experimental music and sound work as founded in the mid-twentieth century by John Cage and others in order to identify and isolate unhelpful biases that have enervated the broadening of sound aesthetics in the academy and still inhibit forms of sonic collectivity such as composing sociality. Thereafter, I consider aesthetic issues of authorship and control within a process of co-creation and how I have looked to transition design concepts as a guide in the seemingly contradictory scenario of art that deals with society as one of its materials. Then I describe one way the artist's imagination can

specifically and analytically engage to encompass an expanded field of social relations in sound art—"social tonality." Finally, I consider how sound and music may possibly function as a public contract in a gift economy, and, therefore, even as an alternative kind of currency, where mutual support and investigative listening can become a means toward group self-realization. Along the way I consider, by way of example, approaches to composing sociality by Brian Harnetty, Brandon LaBelle, Laura Mello, Carlos Sandoval, and Ultra-red among others. I conclude by contextualizing the concept of social composition further by describing a few of my own experimental sound works with urban gardens.

I imagine listening as a unit of value that allows a group greater self-sufficiency and identity. I can imagine a revised history where many unacknowledged works of sound art could be uncovered by studying community spaces in different times and places where composing sociality was fostered. The formation of such social compositions, can occur on a thorough, long-term scale, or a merely symbolic, short-term one. In what follows I discuss resultant aesthetic questions that arise when artists let go of control of the artwork to allow social composition to take place collectively.

Although artworks may have little or no direct effect on politics (or climate change), I simply find technical concepts and abstract formulations a lot less interesting and motivating than symbolically involving political questions in my work. Since it is the job of the artist to put all of their imagination into their art, though, it is logical that most scholarship focuses on the creation of the artist's self and subjective perceptions of that self, since "this extreme solipsism (in music), a strategy for keeping the world at bay, is paradoxically experienced as connectivity" (DeNora 2013, 232). If all analysis of artistic production, however, only reproduces this solipsism (similarly keeping political consideration of the world at bay) it risks collaboration with destructive attitudes toward the environment and ultimately society, as it perpetuates and justifies the exclusive focus and valuing of the human self as separate from nature, the myopia allowing many current human/natural disasters to take place. An artist's political conscience is not separate from their imagination. And the habitus of the artwork is certainly not immune to the effects of global crisis. For these reasons some artists participate in imagining an aesthetics of what Jason Moore calls the Post-Capitalocene (2013, 2016).

"Composition"

After what has been called the sonic turn (Drobnick 2004; Kelly 2011), a way of informing our thinking through sound, that has been absorbed into the arts and humanities, we can redefine musical composition. It is an art that transcends the medium of sound. A revised history of the field of musical composition places countless compositions by Cage, La Monte Young, Alvin Lucier, Pauline Oliveros, and R. Murray Schafer, for example, within a category that might better be considered "proto-sound art." The thinker-innovator composers in the twentieth century, who redefined and updated composition, did more than what is traditionally considered to be musical composition (e.g. notes on paper, or

musical improvisation) they also, through conceptual artworks, sought to change the imagined preconditions for our reception of sound (and to educate the listener).

By composition I am referring to a multiple concept, of, for example, composition as described by Jacques Attali, and simultaneously multimodal composition, and "urban composition," graphic composition, and social activism and organizing, and landscape composition. All of those things are, in different ways, part of composing sociality—why should musical composition restrict itself to sound, since the perception of sound is conditioned by all the senses? Since when did fine artists, for example, last restrict themselves to only the visual? We have a responsibility to reclaim the territory of composition as relevant within a larger field of ideas, a territory that has long since outgrown the concert hall or the music venue and also has the ability to transcend digital media.

Music is mediated by experience. If all experiences of music become accessible as digital content and/or prepackaged and pre-curated, our experience of it soon becomes what corporations and markets of knowledge require: a material commodity or class symbol. Finally, however, even if sound art had no political efficacy whatsoever, the imaginative structures employed in it would have symbolic value in social and political arenas through its strong polyvalent meanings and associations; in consideration of this fact, composing sociality, placing the emphasis on the collective instead of the artist, frees the work from becoming a tool of markets aggrandizing the human self as epitomized by iconic personalities, and instead brings the focus to larger social structures.

Some composers working on computer tools engage in a process of co-creation with software developers and media partners. As yet, however, for the vast majority, the design of these sound products by corporate entities, and the possibilities provided by the few media conglomerates, makes the live social interaction with computer-assisted and/or computer-composed sound heavily focused on the aesthetic of a market—the composer here is primarily a consumer in a marketplace of digital tools, loops, composing AI algorithms, and dizzyingly cheap human resources. On the other hand, the conventional academic concept of the composer is mostly confined to the perennially popular romantic-genius composer myth, the master, alone with his pure artistic ideas, such as Beethoven, or those few high priests of the marginal cultural industry still based around this classical archetype, such as John Adams, for example. Composers of sociality do more, and are also sound artists in this respect; they are sensitive to and work with the social relationships around the artwork to ultimately pose questions with sound and music, and to even reimagine society.

How can we become composers, then, in this larger sense—of the environmental, of memories, of ethics, of sociality, of ourselves? If we are to rise to the challenge of meaningfully composing after mid-century experimentalism, it means composers have to work within a transdisciplinary musical field of design, art, anthropological and ethnological fieldwork, spirituality, politics, horticulture, and more, in tandem with a network of social connections that are beyond one individual's control. Since music's reach into all areas of human endeavor has never known any bounds, neither does composing sociality. What type of tasks, responsibilities, and processes does such composition entail?

Here I take my cue further from Attali's concept of composition. To rise above "the crisis of repetition and commodification," he calls for two necessities—"tolerance and autonomy":

> The bulk of commodity *production* then shifts to the *production of tools* allowing people to create the conditions for taking pleasure in the act of composing. We can see—in the makeup of musical groups, in the creation of new instruments, in *the development of the imaginary through the planning of personal gardens* [italics mine], in production using rudimentary tools—an outline of what composition can mean: each person dreaming up his own criteria, and at the same time his way of conforming to them. (1985, 145)

Twice Attali refers in this passage to tools, and I would point out that actually the production of tools for sound and music belongs to the field of design. "Autonomy" I associate in this passage with independence from the heterogeneous commodification of the product for users, by which I mean the concept of co-creation; and "tolerance" I associate with a radical aesthetic openness and a real indeterminacy that social composition requires. I discuss both topics further in the following sections dealing with aesthetics.

In Stefan Helmreich's book, *Sounding the Limits of Life: Essays in the Anthropology of Biology and Beyond*, he writes,

> Answering the question What is life? may thus be akin to asking What is timbre? Both yield answers that, at their most hand-wavy, define their object by what it is *not* (not inanimate or dead, not loudness or pitch) and, at their more reflexive, point to life/timbre as an effect of how people model or inhabit, say, vitality or hearing as such. (2016, 178)

If, as Helmreich says, timbre is an effect of how people inhabit hearing, would we not do better as artists to consider how ways of life are composed in order to modulate our production and perception of sound, instead of considering how production and perception of sound is composed in the hope of modulating ways of life?

Douglas Barrett in his recent book, *After Sound*, much of which is a polemic against a certain detachment that he detects in the field of contemporary music and sound art, makes a similar assertion in his call for a new kind of composition that he calls "critical music," saying, "Critical music not only reinvents existing aesthetic forms, but also intervenes into the broader cultural, political, and social universe that surrounds them" (2016, 3). In other words, in order to compose what Barrett calls critical music the composer must intervene in the social universe, one part of what I call composing sociality.

The first thing composers of sociality do is exactly that which many usually think of last, if at all: Where do I put the music? Where does it go? Where does it happen? Usually, and tragically, in academic composition, those essential musical questions are often answered by default: for example, in a one-time concert of musicians who can't, and don't want to, play the composition, for an audience who probably can't understand it and would rather hear something else, in a hall built for classical music. There is hardly anything less meaningful than a composition for which the composer hasn't carefully considered the habitus of the music, hasn't considered where they would at best like that music to actually exist, and why. I agree with David Byrne (of Talking Heads) that music begins not in the composition of the music, but in the social composition of the spaces that contain it, "the

[music] venues—or the fields and woodlands, in the case of the birds—were not built to accommodate whatever egotistical or artistic urge the composers have. We and the birds adapt, and it's fine" (2012, 29).

Mid-Century Experimentalism: The New "Good Music" and the Act of Listening

The aesthetic of mid-twentieth-century experimental music through to roughly the end of the millennium was fixed within the boundaries of the genre of contemporary music stemming from Boulez and Schoenberg. The artistic decisions of mid-century experimentalists such as John Cage and others were determined (as they still are) within an aesthetic characterized by the tastes of an intellectual, almost exclusively white, male elite.[1] The famous quote from John Cage (who quotes Ananda K. Coomaraswammy) "one could do worse than imitate nature in its mode of operation" (1967, 31) is emblematic of the problematic attempt to use indeterminacy posing as nature, as a means of supposedly relinquishing control of the content of a piece (while nevertheless staying in strict control of the artistic end product). Actually it conflates "nature" in music, specifically with randomizing the pitches and also giving up some control over the rhythms.[2] It is rather like what Fukuoka says in *The One-Straw Revolution*: "Unable to know the whole of nature, people can do no better than to construct an incomplete model of it and then delude themselves into thinking that they have created something natural" (1978, 154).

However, the doctrine of Cage and others of "non-intentionality" (inspired by the teachings of Daisetz Suzuki) manifested in the compositional process of indeterminacy (i.e. determining parameters of the music via chance procedures and hence supposedly removing the personal will of the composer) does not in the case of these same composers leave the aesthetic at all to chance. In that sense, the claim to the removal of personal will is specious. Alvin Lucier came closer to Cage's dictum of removing his own tastes from the composition and imitating nature than Cage did; in fact, Lucier gets us to listen to filtered results of actual pure states of nature (such as amplified brain waves, the perceived beating that occurs between two frequencies smaller than the critical band or the natural resonances of a room). It is supreme process music: Lucier usually hardly does more than set the process or machinery into motion and let it run, but because of that, the aesthetic is even more austere than Cage's and in that respect also certainly not left to chance.

Experimental composer and pedagogue Adam Tinkle observes, "Pauline Oliveros [says] that, during the early UCSD period [as faculty there], her composition became focused on 'how to *direct attention*' a sort of meta-composition of the flows and trajectories of aurality itself" (2015, 150). The notion that an experimental composer is capable of, even responsible for, changing the listener's very conception of listening and the reception of sound, as found in the writings of Pauline Oliveros and Cage, for example, rightly points to the autonomy of the listener, and to the fact that there are infinite different "valid" ways to

listen to sound, not just the classical, academic concept of listening to so-called "good music" wherein the classics are the highest expression of humankind's musicality. The idea of "good music" was a recurring idea made popular and echoed in America by many prominent thinkers at different times, such as the famous music teacher Frances Elliot Clark, for example, who said in the 1920s "if America is ever to become a great nation musically . . . it must come through educating everybody to know and love good music" (Katz 2004, 50) or musicologist Karl Haas in his American radio broadcasts "Adventures in Good Music."[3]

The early experimental composers, however, still ignored the ultimate meaning of this autonomy of listening; even if we influence what is heard with some ideational apparatus contained in the form of a conceptual composition, the actual way people hear, and all the decisions they make around listening, conscious and subconscious, are still perpetually out of reach—free. Changing the conditions for the reception of sound with the conceptual (composing hearing itself, so to speak) is a perpetual process of co-creation with the listener. It is by no means a one-to-one process, and to what extent a composition is conceptually prefigured is, in this regard, perceptually indistinguishable and ultimately unimportant to the sonic experience: one prioritizes conceptual means above all else (it is highly discursive), the other doesn't—that's all. The listening process changes to some degree only if the discursive element reframes the experience for the listener, that is, if the listener accepts the precepts of the imperative of the composers' conceptual apparatus at face value. Even then, the power of the discursive over the sonic is quite limited.

There is no fundamental superiority of a conceptual aesthetic in music based on discursive ideas (even though inside the academy this quality is of course held in the highest possible esteem since it places discursive forms of knowledge above all others). The idea from mid-century experimentalists that the audience "must" listen differently to transcend their status quo, or reach a new understanding of music or sound, is merely an academic moral imperative transferred from a previous generation, once again reproduced and perpetuated by a group of white, college-educated composers; an idea that is more sophisticated, but hardly less strict in nature than that of the older generation who were the proponents of the idea of "good music" via the classics. Therefore the founding doctrines of experimental music were almost as exclusionary and moralizing in being biased toward a particular aesthetic of listening (albeit a very different aesthetic) than that which came a generation before it in white, academic, highbrow music. As Tinkle writes, "Despite the aesthetic gulf (and the sometime antipathy) between experimental musicians and the defenders of the Western canon, music appreciation and sound pedagogy [via Cage and others] actually share deep structural commonalities" (Tinkle 2015, 223).

The austerity of the mid-century experimentalist claims on "experimental" listening, compared to real autonomous listening, parallels the difference between conventional design philosophies and ecological, co-creational forms of design, respectively. Cage quoted Thoreau's way of listening to nature for example, as mirroring how he himself listened: "according to Cage, Thoreau did not dismiss any sound on the ground of not being 'musical'; he listened, undiscriminatingly [as Cage claimed he himself did also]" (Bock 2008, 56) But on closer examination Cage's mode of listening actually diverged sharply from that of

Thoreau's. Jeff Todd Titan writes that Thoreau "could discriminate among different birds singing simultaneously and had a knowledge of each one's song (that is, he could sing it back) and invented a mnemonic language for recording and remembering it" (2015, 147) and that he, Thoreau, recognized that "co-presence in the soundscape, with each species communicating freely in its acoustic niche, describes a soundscape commons, which is to say a shared acoustic resource" (2015, 150). Due to his transcendentalist philosophy Thoreau de-emphasized the human/nature dichotomy in his writings. Thoreau's way of attending to nature was closer, therefore, to that of Masanobu Fukuoka, who says in *The One-Straw Revolution*, "A child's ear catches the music. The murmuring of a stream, the sound of frogs croaking by the riverbank, the rustling of leaves in the forest, all these natural sounds are music—true music. But when a variety of disturbing noises enter and confuse the ear, the child's pure, direct appreciation of music degenerates" (1978, 16). Cage wanted to make us listen to everything (including nature) as music, to educate us in his form of concert listening; Thoreau and Fukuoka maintain nature *is* music as a lesson in truly unconditioned listening. Similarly a designer who imposes an artificial social situation from the top down, or an artist who puts forward an artwork (or musical composition) whose social mode (of listening) is constructed and imposed, are most likely to create what Elizabeth Bishop calls, like the title of her book, *Artificial Hells* (2012) rather than one who allows sociality and art to emerge of its own accord. The latter, by listening to their co-listeners (their audience), counter solipsistic models of the artist or designer as all-knowing and all-powerful.

If the experimentalist concept of the removal of the will of the composer and the removal of arbitrary personal individual aesthetic choice (e.g. through John Cage) was actually to be followed to its logical end point, would not a willingness to compose all music, and sound, regardless of its aesthetic, for its inherent goodness within its own cultural and temporal/spatial context, be the logical consequence? I would follow DeNora: "in attributing new and different musical things with value, we redefine aesthetic priorities and with them music itself. In redefining aesthetic priorities, we allow for social transformation— new ways of attending to the world" (2013, 130).

The Anti-Aesthetic of Relinquishing Control and Authorship in Composing Sociality

The artistic philosophy of the group Ultra-red, which puts the collective in the foreground over any particular member's work, was a key influence on my concept of composing sociality. As was their way of extending key elements of authorship and ownership of the work beyond the circle of its members (Ultra-red 2012b). Ultra-red is a sound art collective, started in Los Angeles, California, in the 1990s, who in their very early phase contributed importantly to the AIDS Coalition to Unleash Power (ACT UP) movement for AIDS consciousness. Since their beginnings they have evolved to include several more members, not only in the USA but in the UK and Germany as well. Ultra-red's concept of the object of listening and practices of recording as focused on understanding the

needs of a community, especially via the writings of Paulo Friere (Ultra-red 2008), is a major influence in the entire field of sound art and beyond; they have been practicing it unwaveringly for the last twenty years.

Brandon LaBelle's approach to sound through many of his writings is also a blueprint for composing sociality. In *Social Music*, LaBelle writes, "Social Music" aims to collapse music together with its larger context of social space "by adopting a direct relationship to the larger context expanding the frame to invite the random interplay of public interaction. What distinguishes 'Social Music' is that this relationship acts as a determining situation for the production of a music work" (2001, 46). In his latest book, *Sonic Agency: Sound and Emergent Forms of Resistance*, LaBelle asks "how to withstand the imperialistic tendencies of contemporary power that evict and expel while nurturing the vibrant assemblages that afford coalitional frameworks of resistance?" (2018a, 86). In answer LaBelle offers four micro-epistemologies (or overarching metaphors) that I view as vital potentials for forms of social composition, "The Invisible, the Overheard, the Transient and the Weak."

In composing sociality the aesthetic is less interesting for me as a composer than the forms of cooperation that can take place. In fact, since I have started to participate in composing sociality, if I actually like most of the music occurring around the work right away, I become suspicious. If I do, I feel I may be too close to my materials and it becomes more difficult for me to work further as imaginatively. Rancière (2010a, 2010b) and other writers essentially contend that the exceptional and autonomous aesthetic of the work is simultaneously the political priority or agency that it possesses. That is undoubtedly true, but it is not clear to what extent any particular aesthetic approach, or genre, is more political than any other in this respect. Therefore, mainstream, alternative, experimental genres, or any particular aesthetics, may be included or utilized in any way in a work without them losing the political priority of their aesthetic autonomy. To this extent, an aesthetic seems paradoxically not, in fact, to be what makes a work any more political specifically, but only political in a general sense. In any case, of course the political efficacy of an artwork isn't particularly interesting or germane to what makes it good. What makes a work good is its authenticity—its honesty and truthfulness, and therefore impact within the system of signs it is working, which then resonates with its social constituents.

While sociality is composed, the indeterminate decisions that occur through the interaction of a community is a natural process. This process decides what forms, and which aesthetics prevail in the group work. Participating in composing sociality includes the design of different tools, processes, and relationships (with sound) in which a group of people participate, of which the artist/composer is only one person involved, on an equal footing with the rest. So the composer should allow even aesthetics they deeply dislike to emerge in the collaboration with others without interference. Primarily in the process of composing sociality, therefore, the full evacuation of the author's control on others (including the aesthetic) foregrounds the collective, and, potentially, the nonhuman agency (versus individual "genius" and human agency). The artist/composer's individual ongoing work is positioned and channeled to be embodied and embedded in the larger natural systems as well as possible, even if they are hardly or not even heard, but simply function symbolically.

The aesthetic of a work is not of paramount importance in composing sociality because the individual will is not relevant in the larger chain of social events.[4] As Tia DeNora writes, "music itself did nothing but rather came to afford certain acts according to how it was connected to and disconnected from other things . . . the distinction between aesthetic value and functionality dissolves in the medium of lived experience and social action" (2013, 75). Single compositions are only units of energy or catalysts, how they are used in the system determines the social composition, which alone imparts meaning. In this sense I don't feel impelled to attach, or work within, one single aesthetic: one main purpose of aesthetic is as a commodity in marketplaces, either as a product within the mainstream economy, or as it is deemed superior, or unique, that is, as a valuable token of exchange within knowledge economies, or both. Dialectics between aesthetics are often simply a matter of the negotiations taking place between the different marketplaces. An aesthetic, founded on new research, discoveries, scientific theories, and knowledge, is usually highly valuable, but is not intrinsically any more musically astute, nor more musically impactful than any other kind.

The other purpose of aesthetic is as social focal point and forum. Here the dialectics between aesthetic differences can be involved with the process of detaching from symbolic violence (see below). The composer's own musical aesthetics are important insofar as they may be capable of interacting with the larger systems, but no one aesthetic holds this ability exclusively. Nevertheless aesthetics form the vital and personal core of what makes every artist's work, and one of the overriding memes of the feminist movement, "the personal is the political" (Hanisch 1970) is, for example, no less true here. Due to this, often an aesthetic becomes associated with a movement. But it needn't do so of necessity. Certainly, however, without being deeply involved with the aesthetic of one's own artistic work, the necessary essence of an artwork as all-important focal point disappears.

The collective artwork may be influenced by the system design, and/or the design structures that an artist proposes or introduces. And although my design(s) may fail in their entirety or in certain particulars, whatever happens thereafter is also okay; after all, with no author, no one person can definitively declare a work "finished"; defining the border—the beginning and ending of the group work is an exercise in agonistic pluralism even if no one has the final say. Even though my design may fail, the group work cannot— who is to say if it has failed? Also, the artist can choose to adapt their artwork retrospectively to the emergent work's systems so as to enhance or strengthen it iteratively and progressively.

Finally, the only problem with the co-creational anti-aesthetic of social composition is that sometimes people just don't want to share or compromise. And that's okay, no one should be made to do anything artistically they don't like or don't believe in aesthetically, purely on principle. But it might just open doors to try it. Even just, let's say, as an experiment, mightn't it? If one believes in experimentation (not just experimentalism) then there is no alternative to this radical openness, to this listening with tolerance. In order to truly experiment, it must be tried.

Associate Professor of Musicology Sanne Krogh Groth at Lund University and Associate Professor Kristine Samson at Roskilde University summarize the main points of composing sociality, as found in both my and Brandon LaBelle's work, with their term "sound art situations":

Summing up the discussion made on behalf of the two cases and the theoretical framework, we conclude that sound art situations:

- support publics, understood as social communities, and extend site-specificity and the public to encompass the inhabitants, practices of everyday life and the political and social dramas of a given site [. . .]
- work with temporal processes that reach beyond the presence, and the experienced timeframe of the artwork, as they are dependent on past and future temporalities.
- are unpredictable in the sense that the given situation, with its richness of social and cultural complexity, influences the work of art beyond the intentions of the artist. (2017, 110)

Co-Creation, Eco-Literate (Systems-Aware) Design, and AROI

I found my inspiration for appropriate models for composing alongside uncertainty and without self-will within recent ecological design concepts. Boehnert, 2018, says "the concept of wicked problems highlights indeterminacy (real indeterminacy, that is, not Cage's indeterminacy). Wicked problems stress the difficulty of formulating an exact problem and arriving at a definite solution." Wicked problems are defined by Buchanan as "a class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision-makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing" (1992, 15). The question of the survival of our ecosystem to sustain a living standard worthy of the dignity of human life for the majority of people in the future, consists of a set of wicked problems. Music and the aesthetic appreciation of sound could be a way our natural instincts help lead us to better appreciate our world, to substitute superfluous luxuries and products with cooperative social activity, to bridge scarcity, loss, and pain.

In fact, deciphering the impact of a work of art itself fulfills the criteria for a "wicked problem"; here the transition design model can help us gauge the impact of a work, by experimenting with how that work fits in to the social context of various people who interact with it. Composing sociality is a call to repurpose the artistic process toward cooperation, rather than personal gain and self-aggrandizement. It is a call for the artist to consider different forms of cooperation more than the marketplace or knowledge/status.

Group will, as represented by the vying interests of multiple individuals, tends to gravitate very quickly toward conventional aesthetics, consolidating, rather than questioning, the fundamental profit motive in society, because this motive is all-pervasive, and reaches even down to the cellular level of our bodies (Foucault 1978). The way this profit motive manifests itself is through "symbolic violence" (Bourdieu 2001). Symbolic violence together with corporate and institutional presences are aesthetics that become associated with, and reinforce and justify beliefs or ideologies that allow the perpetration

of systemic violence: racism, sexism, or classism in society. Social composition, as a process of co-creation wherein listening, sound, and music can accrue value autonomously (separate from aesthetics levied by individual egos in the commercial marketplace or as a carrier of status value) has therefore the ability to be both a powerful symbolic, as well as emotional, support to communities striving to be a model of a more sustainable future outside the powerful influence of symbolic violence.

Even where sound and music is utilized by systems of profit that are currently engaged in destroying our Earth's ecosystem, there is always a residual energy in music that can be used back against globalized corporate systems of control. As previously noted, purposiveness doesn't accrue to the structure of sound but rather to how it is used. Hence music that is used for symbolic violence can also be repurposed for social composition.

I don't propose to engage in binary thinking and base an entire artistic practice in contradistinction to hegemonic forces, or risk a fatal paranoia that ironically requires the presence of "the enemy" in order for that art to continue coming into being. In order to have a realistic understanding of the dynamics of power and avoid the instrumentalization of aesthetics, however, it is necessary to acknowledge how symbolic violence exists and permeates human life. Recent design thinking considers exactly how to deal with the kinds of problematic contradictions that wicked problems pose, by addressing and untangling vested interests,

> design has become so absorbed in industry, so familiar with the dreams of industry, that it is almost impossible to dream its own dreams, let alone social ones. We are interested in liberating this story making (not storytelling) potential, this dream-materializing ability, from purely commercial applications and redirecting it toward more social ends that address the citizen rather than the consumer. (Dunne and Raby 2013)

Transition design (Irvin et al. 2015) is engaged with social innovation via "system interventions" and "system leveraging," which create the possibility of sustainability at the level of lifestyle change[5] and bottom-up participation, for example, among a range of different "leverage points." Crucial for the process that transition design postulates is a cyclical development through "visions for transition" that result, through "new ways of designing" and/or "theories of change" in a "posture and mindset" reflecting a new ecological paradigm (Irwin et al. 2015). I suggest that by equipping these stages for transition of a community to sustainability with all of the five senses, especially including hearing, we can flesh them out more fully, and help our imaginations engage with them richly and virtually (see Figure 2.1).

Rather than compositions that move from point A to B, composed by an individual, social composition are works that can only arrive via a networked, circular system. A network of relationships is best for system resiliency: the artwork can take damage or scarcity and still function well—it features a high degree of self-organization, learning, and adaptation (Resilience Alliance 2017). Circular flows of energy recycling[6] are key for design systems aiming toward imitating nature's cyclic processes in which waste does not exist. A sound artwork that is circular in this respect is also self-renewing in the energy it requires to produce.

The Transition Framework

A vision for the transition to a sustainable society is needed. It calls for the reconception of entire lifestyles that are human scale, place-based but globally connected in their exchange of technology, information and culture. It calls for communities to be in a symbiotic relationship with their ecosystem.

New ways of designing will help realize the vision but will also change/evolve it. As the vision evolves, new ways of designing will continue to be developed.

Vision for Transition

The vision of the transition to a sustainable society will require new knowledge about natural, social and built/designed systems. This new knowledge will, in turn, evolve the vision.

+Social Composition

The transition to a sustainable society will require new ways of designing that are characterized by:

New Ways of Designing

Sensing for Transition
Listening for Transition

Theories of Change

+Social Tonality Analysis

Ideas, theories, & methodologies from many varied fields and disciplines inform a deep understanding of the dynamics of change in the natural and social worlds.

Changes in mindset, posture and temperament will give rise to new ways of designing. As new design approaches evolve, designers' temperments and posture will continue to change.

Tolerance - Autonomy

Posture & Mindset

A new theory of change will reshape designers' temperaments, mindsets and postures. And, these 'new ways of being' in the world will motivate the search for new, more relevant knowlege.

Living in & thru transitional times requires a mind-set and posture of openess, mindfulness, a willingness to collaborate, and 'optimistic grumpiness'

Diagram by: Professor Terry Irwin, Dr. Gideon Kossoff and Dr. Cameron Tonkinwise

Figure 2.1 An extension of Irwin et al. (2015). "Transition Design." The boxes are my own speculative additions for a sound art practice.

Energy return on investment (EROI) is "a means of measuring the quality of various fuels by calculating the ratio between the energy delivered by a particular fuel to society and energy invested in the capture and delivery of this energy" (Hall et al. 2013, 142). I would like to suggest an analogy to EROI for sound art: AROI, or artistic return on investment. Here we can measure the ratio between the motivation, inspiration, and health (both mental and physical) delivered by certain artistic activities to a community and the motivation, inspiration, and mental and physical energy that is required to produce it. I imagine an artistic version of "natural capital accounting" undertaken by The Economics of Ecosystems and Biodiversity Office of the United Nations Statistical Division (UNSD) and United Nations Environmental Programme (UNEP)[7] could be a productive study for the analysis of social composition. An analysis with a proportional measurement across the domains of real energy use (kilowatt hours or calories, for example) and artistic inspiration would also be useful, in both directions.[8] Notice how coproduction in a composition already boosts the likely AROI ratio into positive territory exponentially. I profile some different examples of social composition by different artists that obtain a high artistic return on investment in what follows.

Composer Brian Harnetty, currently a recent recipient of the A Blade of Grass fellowship for artists in the USA, composes sociality in relation to ecological questions in his work *Fracked Forest Listening Rooms* (see Figures 2.2 and 2.3). After 80 years of recovery, Ohio's Wayne National Forest (WNF) is once again under threat. New hydraulic fracturing (or, "fracking") leases are greatly expanding gas and oil extraction there. This project contends that listening to the forest's past and present can transform its future. *Fracked Forest Listening Rooms* invites local communities in the WNF to gather in outdoor spaces and critically listen

Figure 2.2 *Fracked Forest Listening Rooms 1*. Courtesy of artist.

to sounds of energy extraction, with the goal of ending fracking in the forest's public lands (Harnetty 2018).

The first event of the *Fracked Forest Listening Rooms* project happened on October 6, 2018. The suggested act of listening and a recorded ensuing discussion generates a circular system, in the piece. The old archival recordings were taken out into the field and played in the same or nearby places where they were originally recorded (for example, a miner recounting his work at a former mine that is now a public park undergoing fracking) and they are played for the participants. Then the new participants are recorded and those new recordings are folded into each new iteration of the *Listening Rooms*.

Harnetty writes, "the idea of 'co-authorship' with a group of local residents is something I have been slowly moving towards over many years." It started for him while working in the sound archives of Berea College in Kentucky. By asking a social network of people dealing with the archives about the recordings they listened to, or were fond of, Harnetty says "it made the archive a social space, one of shared discovery." Later, he took this practice

Figure 2.3 *Fracked Forest Listening Rooms 2.* Courtesy of artist.

outside the archive and into communities, seeking the input of residents. For Harnetty, Pablo Helgura's concept of different layers of participation (2011) was influential, that is, thinking along a spectrum from nominal (passive participation) to collaborative (where participants are playing an active role in making the work, often over long periods of time). Harnetty further states,

> I also think this process is informed by ethnography: where I have to force myself to be present and open in a place and with people, never knowing exactly what I am looking for. Marina Peterson always called this "deep hanging out." Now, for the *Fracked Forest Listening Rooms* project, I'm continuing this practice, and letting each "listening room" evolve throughout the year. Some are private, some public, and they are dependent on the participants to give them content and meaning. (Harnetty 2018)

Harnetty's work shows how composing sociality thrives through returning again and again to a community over a long period of time, with the commitment of an artist who maintains a presence, building trust over years, unlike the typical time frame of socially engaged artworks where an artist or collective moves in and then quickly out again. Harnetty is currently a Peace Corps worker in the region, Shawnee Ohio, the place on which much of his research and artistic output has been based.

A crucial aspect of *Fracked Forest Listening Rooms* is not only bringing together participants who are convinced of the need for protecting the forest from fracking, but, on the contrary, also bringing them together with people from the region who themselves depend for their livelihood on the fracking industry, or the economic buoyancy in the region that it brings. The piece also brings other groups from the area generally on the right-wing spectrum in the United States (such as hunters who, although they may hold mixed opinions about ecology, are friends of the forest because of their hunting) into a new, invented community, in which dialogue and contemplation take place. After the first session happened, it became more apparent than ever that the activities of walking through

the forest initially, being present there, hearing the archival voices and particular opening observations, in combination with the participants sharing life experiences, created an intimate situation that refocused the questions asked and transformed the listening, generating an energy whose potential was much larger than that just created by the hearing itself (high AROI).

In *Fracked Forest Listening Rooms*, the forest functions as a "mediator"—between participants, between recordings, and between individuals and their experiences. The simple act of listening can transform relationships, and with them the unconsciously perpetuated attitudes about the environment (Harnetty 2018). These attitudes are ones that keep us all from engaging on a serious level with the question of climate change and the destruction of our immediate environment—what Plumwood (2002) calls a "crisis of reason" including the psychological mechanisms of "backgrounding, remoteness, instrumentalization, disengagement," to which Bohnert adds "quantitative reasoning" (2018). Listening brings us viscerally out of rationalizing away systematic destruction and face-to-face with the impact and bond the natural environment has in our lives.

In Carlos Sandoval's piece, *Klavierstrasse*, he put a well-maintained piano under a specially designed stand in the Wrangelkiez neighborhood of Berlin for four months for anyone and everyone to come and play as they wished every Saturday and Sunday summer afternoon. The sound of the urban soundscape was often highly charged as the social sounds were inflected with music from all sorts of performers, and as groups of listeners came and went. Sandoval specifically invited eight guests over the course of the four months of the event to perform, but any uninvited participants could also "reserve" a time slot to come to play on the official program of the *Klavierstrasse* website (http://www.klavierstrasse.de). The event was held under the auspices of a local neighborhood center funded by the city hall. The director of the center eventually bought the piano and the piece from Sandoval
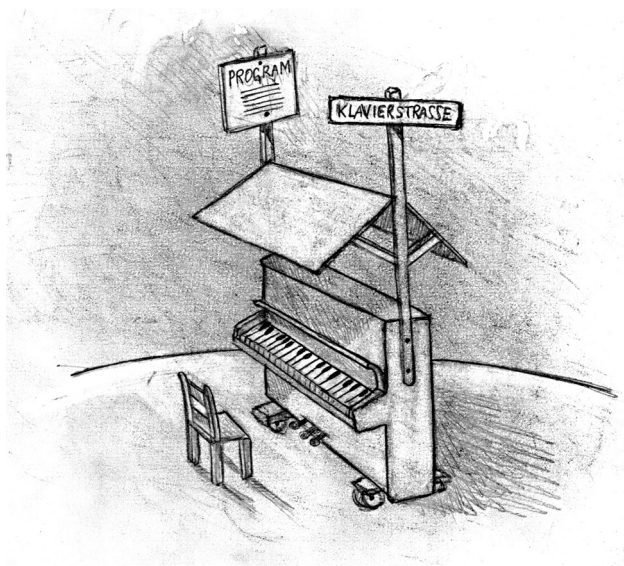
Figure 2.4 Klavierstrasse Plan. Drawing: Carlos Sandoval.

because he was so impressed by the results. Sandoval's piano repair, maintenance and resale shop is on the same block where *Klavierstrasse* took place, another example of embeddedness in composing sociality; although the shop was one of the main reasons behind the initiation of *Klavierstrasse*'s realization, the dynamics of the piece developed quickly due to composing sociality into a work that far exceeded the author's intentions (high AROI).

Sandoval said he felt that, in many respects, the piece not only enlivened but also "healed" the neighborhood, which is a site of many contestations—including gentrification, immigration, and poverty. The variety of music that was represented was unparalleled: rap, classical, jazz, experimental, soul, Middle Eastern, and other—indescribable music took place, blending with the urban sound- and voicescape. Even collaborative dance improvisation took place. The audience was made up of free-moving participants in the ongoing development of *Klavierstrasse*.

One well-known homeless man in the neighborhood, Michael, whose left hand had been paralyzed in an accident, played and sang for many hours and days in a row, songs about his life, and developed a very personal relationship with the instrument in a style that was highly original and experimental. *Klavierstrasse* became the stage for a therapeutic and contemporary "opera" over the course of an entire summer, which couldn't have otherwise come to light or into existence, demonstrating not only the tragedy but also the uniqueness and poignancy of Michael's life experiences in the current Berlin social conditions. Michael's presence was in this way acknowledged for its uniqueness and was ennobled by the piece (as were those of others in the neighborhood with similar, or other life traumas).

Sandoval likened musical objects (in this case a piano) placed for social interaction in the soundscape, to the "monolith" in Stanley Kubrick's film *2001: A Space Odyssey*: no one knows what kind of cosmic vibration it is, or the ultimate meaning of the power that emanates from this object, but the fact that it is a catalyst in human history, possessing some deep mystery that lies at the heart of life, is undeniable, and unpredictable things simply start happening around it. *Klavierstrasse*, with the simplest of gestures, activated an incredible energy that lay just beneath the surface of the Wrangelkiez in Kreuzberg, Berlin (Sandoval 2018).

Often traditional design, not of systems, but of physical structures, can make a big impact on social composition. In *Klavierstrasse* the addition of a few details made the piano much more visible and welcoming in the square, including a canopy that made the piano into a kind of stand, as a rain catcher, and a sign that imitated the style of street name signs in Berlin, suggesting the installation was like an object that belonged to the civic commons (see Figure 2.3).

The Auditory Environment, Politics, and Social Tonality

With the idea of bridging sound studies and music theory in mind I invented a methodology based on cognitive dissonance as a music theoretical category, considering that all sound, ambient, musical, and speech, can be analyzed by their musical parameters

to show continuity or rupture of how these forms effect each other within social and political contexts and group effects. One end result of this work on political sound was the realization that, although social tonality is crucial to the incitement of resistance and progressive political activism, it is also masterfully manipulated by fascist leaders and their systems of control, who wield the power over hierarchies and disseminate their values in society. The noise/freedom ratio as I have called it (Woodruff 2014a) can also turn into the noise/fascism ratio, although the latter is generally marked by a more male, straitjacketed, nationalistic, and authoritarian timbre (Woodruff 2017). We need not only to develop ways of thinking about social tonality to compose alternative communities, but also to develop ways of keeping these alternative spaces resilient—"under the radar," and therefore resistant to manipulation, instrumentalization, and forms of corporate control. Organizing is a more pertinent activity to social composition for this reason than is activism.[9]

It is possible to hear the strengthening of communal activities that mix with environmental sound, and how correspondences emphasize or nullify cognitive dissonances contained in messages and underlying themes present in the space through what I have called social tonality (Woodruff 2014a). It has been clinically proven that our cognitive processing of hearing music or speech differs (Patel 2008, 72). It has also been shown that listening to ambient environmental sound is to some extent a separate mode of cognition than listening to speech (Paretz 1993). We know that ambient environmental sound, however, can subsume music and speech, whereas the reverse is not true. Environmental noise always functions as a background to speech and music rather than being capable of being subsumed by either. In a composition that deals with all three domains simultaneously it is therefore logical to think of the auditory environment as the "ground" from which the other two types of sonic events ("voicescape" and "musicscape") can blend and/or emerge to differing degrees, causing the crucial ruptures and slippage between the understanding of these categories that can affect cognitive dissonance. And it is also possible to consider and compare affective inflections derived from the interaction of the tonal structures involved in these three various listening modes, as they relate to points of group consensus and individual concerns.

Between February and June 2016 Brandon LaBelle collaboratively developed the *Living School* project with a number of artists, community activists and residents on housing estates in London, continuing on from his artist residency at the South London Gallery in 2014 (see Figures 2.5 and 2.6). LaBelle said he worked to counter the challenge of the artwork exploiting the precarious living situation of people in "real crisis into the marketplace of creative capital . . . by expanding the frame of the project as much as possible; by involving a range of collaborators and partners through open dialogue as well as direct participation . . . interested in developing a social framework in which a range of voices and positions could be active" (LaBelle 2018b). This was a means LaBelle said he employed so as to "interrupt" the dominance of his own voice in the work. The social tonality of one of the events and its AROI bear out the success of LaBelle's tactic of polyvocality.

An event at the Elmington Estate as part of the *Living School* was "attended by a mix of artists, musicians, academics, and local residents, especially a group of local youth, as well as a resident who pulled his stereo out onto the lawn to provide a steady mix of reggae,

Figure 2.5 Elmington Housing Estate Event from *The Living School 1*. Courtesy of artist.

Figure 2.6 Elmington Housing Estate Event from *The Living School 2*. Courtesy of artist.

blending in with the drumming of Paul Abbott, a London-based musician who was invited to engage with event through improvisational playing" (LaBelle 2018b).

In a spectrogram of a segment of the event's sound (see Figure 2.7), you can see how the relatively sparse drumming of Abbott emphasizes the patterns of sporadic hammering and power drilling that punctuate the voicescape. The rhythms lift up the voices of the playing children and adults using a variety of dialects found in London, cockney slang, and Caribbean accents, among many others. A sparse shuffling of hi-hat reframes the constant drone of planes flying into Heathrow, as they streak the soundscape, and brings their momentum down to Earth for a moment in this London soundscape while answering the sputtering of a drill hitting a support beam. The yelling out of participants to each other asking for tools or speculating new building directions are sudden and sporadic bebop-like interjections over the constant dub of gossip, humor, and cheerful small talk at which
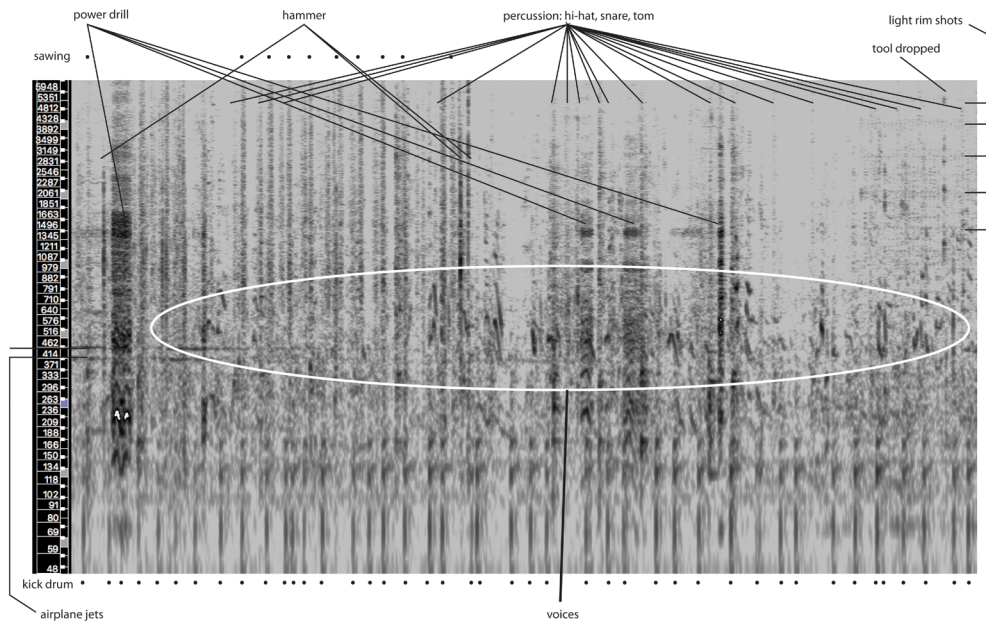
Figure 2.7 Spectrogram of Elmington Housing Estate Event.

Londoners excel, forming a counterpoint to the stereo's beats. The stereo's migration to different areas of the space at different times changes the whole impression of the audible scene at those times. In general, the percussive sound of work and drumming create a sonic structural housing by themselves, visible in the spectrogram literally as overarching beams and rectilinear frequencies in space, which support the life of the social voices that ricochet antiphonally around throughout.

Heard as separate musical wholes, the drumming, the building, the talking, yelling, music of the sound system, the ambient urban soundscape—each has priorities and meanings in the sociopolitical context that interrupt and may contradict each other. When the meanings of these wholes are interrupted, the producers of these sounds seek to reconnect and assert those meanings of one over the other by sonic overcompensations, by audible emphases. Are we building, talking, or listening? Is this an act of sociality, politics, or art? Each of the relationships between the sonic elements of the scene experiences high and low points, interruptions, and modulations, which form a virtuosic composition in which social affects and fun cause a coming together through competition and interruption, an emotional whole, the connective tissue of which is traceable through a tonal, musical analysis of where we fall apart.

Another example of social composition of a different kind is Laura Mello and Wolfgang Musil's *Living Radio 2018* from the Dystopie Sound Art Festival, Berlin, in 2018 (see Laura Mello's score for the work in Figure 2.8), in which four people investigate the square during a neighborhood market on Kollwitzplatz:

> Through wireless microphones they speak their observations, express their opinions, improvise song texts to what they are seeing, or make up new scenarios about what is happening at that very moment. Their voices are captured and directed to a central mixing

console where composers Laura Mello and Wolfgang Musil mix their voices with other sounds. The result was then broadcasted live on FM radio and Internet live-stream. (Dystopie Sound Art Festival Berlin 2018)

In the square normal residents and visitors to the Saturday market on the square might have been slightly surprised to see and hear dozens of participants all walking around with retro objects held to their ears: old handheld radio receivers. The sounds that these participants also made could actually be picked up by the microphones of the four main speaker/singers in the square so that the soundscape in which they found themselves was amplified on the radios they were carrying and mixed live with the speech and additional sound added by Mello and Musil. The handheld receivers, from time to time, also emitted blasts of radio static as the signal came in and out.

There was a feedback loop in this piece of the listeners/participants being the background of what was being described, while the ambient social sound they made was also being recorded, as they listened to the poetic description of the four main singers/speakers. The people who weren't directly participating in the work, but were in the marketplace, also witnessed and participated in the work indirectly and unintentionally. Some of them may have slowly realized that something unusual was happening around them. In this work, the concept of radio and broadcasting is symbolically put into the hands of a local community going about their daily life. The interruption by a live audience via a citywide radio broadcast of the sonic environment in which they themselves are active participants shifts the expectations that condition our perception of who controls sound and media in the city and creates the potential for ironies that variously and spontaneously emerge, "beautiful coincidences" as Mello calls them (Mello 2018). The confusion of media and place shifts the listeners' distinction between performance and reality and how the soundscape is witnessed versus composed.

Just as social tonality is the way tonal vocal inflections are heard within the context of the aural environment to confirm or negate shared cognitions, so too, as was remarked earlier, can an artist react to that social tonality, inventing specific compositional elements in the artwork that react to the kind of cognitive dissonance revealed or even aroused by it; their work may thereby further adapt to this social tonality and improve in iterations. In Laura Mello's piece, the four main singer/speakers (Lindy Annis, Korhan Erel, Fernanda Farah, and Natalia Pschenitschnikova), who are artists in their own right, reacted in this way, orchestrating the soundscape that was being filled with radio broadcasts of ambience and static and amplifying their utterances. Their vocal sounds were made according to their observations of how the participants were moving through the space with their radios, what areas they tended to visit, what they were doing and saying, and referred to their inner experience of the space, and the experience that this radical feedback loop of radio sound inspired.

The health of the emotional life of a community, be it in a marketplace, in an urban project, or within a group of musicians, directly affects its ability to adapt, connect profitably to the outside world, and grow, and is therefore crucial to its survival. Research on cognitive dissonance and music by Perlovsky describes an "infinity of 'continuous' emotions"

Figure 2.8 Excerpt from the score by Laura Mello: *Living Radio 2018*. Permission granted by artist.

including aesthetic emotions in the "prosody of voice . . . [that] are not peculiar to the perception of art; they are inseparable from every act of perception and cognition" (2017, 20). This insight is fundamental to my aesthetic analysis of sound in everyday interactions as the basis of composing sociality and the imaginable possibility of social composition contributing to lifestyle change for a sustainable future. The existence of these aesthetic emotions, which Perlovsky asserts, aroused by both everyday sounds and composed music, lends credence to the idea that an escape through the aesthetic appreciation of musical qualities of everyday life can improve wellness, just as music, Tia DeNora argues, can be a self-constructed shelter through difficulties to promote mental well-being and healing, "music is merely a stimulus that disturbs pain signals . . . music's formal conventions enable it to mimic emotion and embodied experience" (2013, 110). Social tonality offers a conceptual framework to analyze, in the political context, how the musical qualities of sound might function in this way.

Gift Economy, Urban Ritual, and Invented Myths

Indigenous cultures can provide alternative models as the inspiration for interventions to enable paradigm shifts away from the philosophy of capital, away from austerity (the constructed and imaginary crisis of "scarcity," which also feeds racism and xenophobia), and, instead, to what Harris and Wailewski term "the four R's of relationship, responsibility, reciprocity, and redistribution" (2004). Such shifts can occur not only on economic, but also on artistic, and personal levels.[10]

Music has the ability to free itself from commodity value (as Attali noted, this is one of its most politically subversive priorities) by functioning via payment, as in a gift economy. Gift economies, work trade, or other communal forms of revaluing were crucial to music in cultures of resistance that I've studied in American history, from the sit-down strikes of the Depression (Woodruff 2013), through the civil rights movement of the 1960s, through to the Occupy movement of 2011–2012 (Woodruff 2014a). After the end of these movements of protests, many activists in the US founded farms and urban gardens in an attempt to foster "tolerance and autonomy" (Attali's main ingredients for composing) in a sustainable community. Music or sound given as a gift is one way of achieving surprising results in sound art, circumventing aesthetic capture and commodification.

In the case of Indonesian gamelan music, the attention to cycles of time can reflect an economy in and differing ways of counting (including counting units of wealth) with its particular social flow and order. The more attuned we become to time as participants in music, the more we imbue our everyday lives with a particular sense of temporal experience and its various associated social and economic meanings (Becker 1979, 202). Indonesian gamelan comes from a musical culture that supports community cooperation at the same

time as it features a particular musical virtuosity resulting from it. As ethnomusicologist Henry Spiller observes,

> When each family farm times its own [irrigation system] needs to interlock with the needs of its neighbors, everybody profits; the yield is, once again, greater than the sum of its parts [greater EROI]. Given the great cultural rewards of reciprocity and cooperation in Southeast Asia, it is little wonder that Southeast Asian musicians, too, use interlocking parts to create a musical effect that is greater than the sum of its parts [greater AROI]. (Spiller 2004, 16)

Spiller further points out, "the relationship [of communities] is sustained by an interlocking pattern of giving and receiving. Both parties are 'rich' because they share each other's wealth" (Spiller 2004, 15).

Marcel Mauss was the first anthropologist to refer closely to an alternative type of economy when he studied the gift culture of the Maori people in New Zealand (featuring the *hau*, the "spirit of the gift"), he quoted one of his informants as follows:

> The *taonga* [gift] that I received for these *taonga* (which came from you) must be returned to you. It would not be fair on my part to keep these *taonga* for myself, whether they were desirable or undesirable. I must give them to you because they are a *hau* of the *taonga* that you gave me. If I kept this other *taonga* for myself, serious harm might befall me, even death. This is the nature of the *hau*, the *hau* of personal property, the *hau* of the *taonga*, the *hau* of the forest. (Mauss 1966, 27)

The recipient does not feel obligated to return the exact thing or monetary unit; rather, he or she feels they should reciprocate with the spirit (*hau*). The *hau*, thereby keeps people together through adversity. Similarly, the appreciation of sound and music is a kind of gift that can enrich a community, whether through live performances, listening protocols, or sharing recordings.

In their piece *Fatalismo mágico: ópera sobre el deseo y la nostalgia en cuatro actos* (Magical fatalism: opera on desire and nostalgia in four acts) composer Carlos Sandoval and artist Mariana Castillo Deball featured ways that a village can share resources and experiences, as a substrata gift economy of the village that is there for all, to enrich life for everyone through the variously shared distribution of food and labor. They recorded the sound of four characters,

> at once parallel and convergent: each one possesses a specific knowledge related to their environment, but at the same time they share an integrating approach, almost symbiotic with it. They can measure, cure, interpret, read . . . The piece consists of four characters that move on four routes. These characters are the morillero, the oracle of the tortillas, the sweeper and the yerbero. Each character travels his or her own landscape route. The interactions and encounters of each character on their route were recorded, and from this material four sound pieces were created, included in this [limited] double vinyl record edition. (Sandoval and Deball 2018)

The way in which the speech sound is recorded in the ambient soundscape makes it clear that the social composition and its relationship to the land is actually the featured work, to which the artists have added some special elements (their artwork) so as to bring out as

best as possible the unique dynamic of this beautiful community and its symbiotic, shared relationship to the land in a document.

The people in the village where it was recorded weren't aware of an artwork as such but just took the unusual goings-on (for example a street cleaner whose broom is also a flute, a tortilla seller who is telling the future according to how the tortilla is cooked) as a pleasurable and interesting change from their routine, but nothing seemingly more unusual or chaotic than many other various daily doings that might actually "normally" take place in the city. Composer Carlos Sandoval told me that he purposefully let go of control over the situation, "I wanted to leave [the life of the village] alone" (Sandoval 2018), and yet he and Deball played a crucial part for a short time, as the participants and artists composed sociality. The modes of existing in a deep relation to a place and a community featured in *Fatalismo mágico* suggest more humble possibilities of existence that are nevertheless rich in life's deep experiences and closely connected to the environment. Here structural design details of the piece were also crucial to the way that the public could experience and interact with it.

Figures 2.9, 2.10, 2.11, 2.12, and 2.13 show the way in which the flute-brooms and the cart-and-grill on which the oracle made the tortillas were integrated into their surroundings, to take on the look and feel of objects intimately familiar to the inhabitants as well as being made from organic, freely available materials.
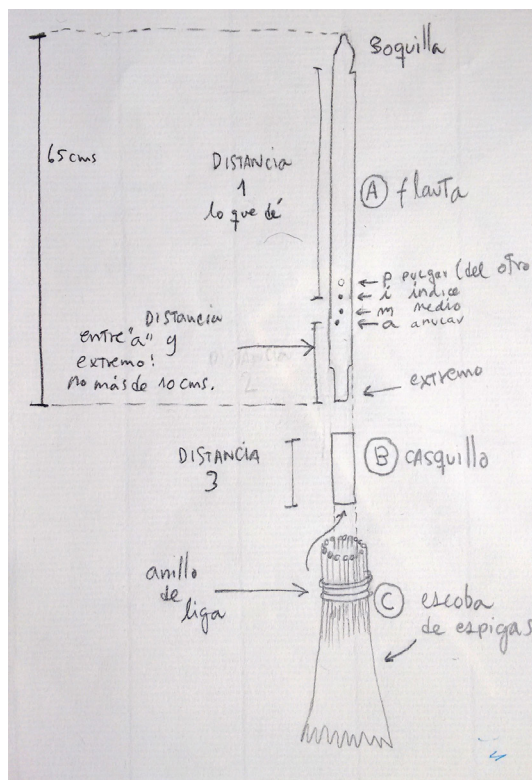
Figure 2.9 Plan for broom-flutes. Drawing: Carlos Sandoval.

Figure 2.10 Broom-flutes. Photo: Ernesto Méndez.
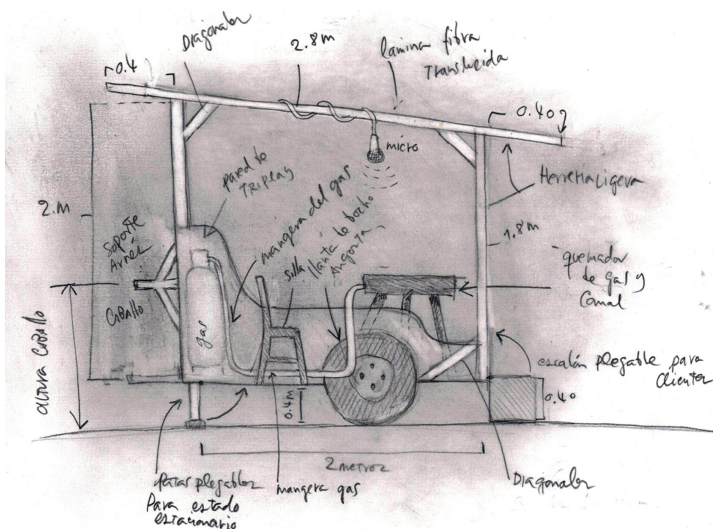
Figure 2.11 Plan for the oracle of the tortilla's carriage. Drawing: Carlos Sandoval.

The concept of a gift economy returns us to the idea of an artistic collectivity. In *Fatalismo mágico*, instead of selling the labor of the artwork, the artists returned it to the collective. A symbolic exchange of gifts happened between the artists (Sandoval and Deball) and the villagers. The village and its people provided the raw material to the artists for an artwork. The artists distilled and elaborated on this raw material, together with their nostalgic imagination, to give new experiences back to the village, wherein the people could reflect on the beauty of their lives from events wherein the process of their lives, and their descriptions of them, were recorded. The artwork is this exchange and also a document of it.

Figure 2.12 The carriage of the oracle of the tortillas. Photo: Felix Blume.

Figure 2.13 View inside the carriage of the oracle of the tortillas, oracle and guest. Photo: Felix Blume.

In an interview I made with Robert Sember of Ultra-red while hearing their piece *RE:ASSEMBLY* for the Serpentine Gallery in London, he explains how the artistic exchange of a collectivity can become the sustenance for a lifetime that only deep friendships based on that exchange can provide:

What does it mean to be part of a collectivity? First and foremost it's about the friendships— it's not that it's a club, but rather we've walked a road together for a long time. So we know each other and we know each other's lives. I've known [C] longer than his partner [D] has known him, and it was after [Ultra-red event] that they met. And now they have [a child] . . .

we went through a time where he was having difficulty with the dole office in the UK. He is one of the hardest working people I know—he does incredibly productive and meaningful labor but he is not selling his labor to an employer . . . and these are the terms of our struggle. And we've been through all of these things and this is what collectivity means—deep friendships. Witnessing each other's lives, doing things together, learning from and teaching each other, and in a certain sense in a constant, messy, wonderfully humorous and deeply sincere process of [sonic] investigation, so it never ends. (Ultra-red 2013)

Communal Sound Banks

What is "value extraction" in the case of listening? How do we convert what Jeff Todd Titan called Thoreau's "soundscape commons, which is to say a shared acoustic resource" (2015, 150) into real wealth? Crucial to the sustenance and survival of an autonomous community is separately and independently providing the functions of banking at a local level. Separating the functions of savings banks, commercial banks, credit insurers, and money changers and, instead, providing these four functions independently and locally, is key to freedom from being at the mercy of the centralized federal and global currencies and systems of monetization. Music can play a role in enhancing all of these financial functions and, separately, can also imitate these functions in various ways in the social world to create a parallel metaphorical gift economy of aesthetic listening. Savings banks preserve and use only the credit put in by its members for funding projects, while commercial banks typically loan four or five times as much money on the principal to drive economies forward. Credit insurers spread the risk of default on investment across a community to protect the commonwealth, while money changers convert units of exchange to create a fluidity of wealth. How can we create analogues to these functions using sound in both EROI and AROI?

The key to understanding communal banking and synthesizing ideas in the framework of sound art is realizing that all paper money is nothing more than a promissory note or credit; it is a social contract, like that which sound in society already fulfills in multiple ways. A gift economy of sound, however, implies a different kind of social contract, a more flexible social contract. Could we design a currency based on the act of listening, converting AROI into promissory notes? In various ways this is constantly happening—"money can be anything that people in a community will accept as carrying on its basic functions, which are to provide a unit of value, a medium of exchange, and a store of value" (Benello et al. 1997).

As only one example, the singer/songwriter Tatiana Moroz is making a successful career funding herself using a Bitcoin-backed currency she calls "Tatiana Coin." PRLog writes,

The funding campaign features a "gamified" donation system that varies the amount of "Tatiana Coin" rewarded to backers donating Bitcoin (BTC) or CounterParty (XCP) to Tatiana's Official Campaign Address. Each day, backers split the to-be-allocated pool of 100,000 "Tatiana Coins" based on their contribution compared to everyone else during the same day. This allows savvy backers to snipe low-traffic days to receive a bonus number of

"Tatiana Coin" from the daily allocation. "Tatiana Coin" can be redeemed for exclusive prizes which include autographed memorabilia, passes to backer oriented invite-only events, sponsorship opportunities, house concerts, and even specially crafted, personalized songs. Further fundraising supports a tour, video series, and even a crypto record label. (Moroz 2018, PRLog May 30, 2014)

Moroz's third studio album has just been completed and was "funded completely by the support of Tatiana Coin and cryptocurrency since the project's launch in June 2014" (Moroz 2018). Certainly other phenomena on the frontier of converting sound into an alternative unit of value or currency are happening all around us in multiple realms.

Social Composition with Permaculture and Urban Gardens

In my garden sound works I symbolically integrated ambient sound, music, and transition design (Irwin 2015). Inspired by Alan S. Weiss's suggestion that "Gardens constitute a primal *Gesamtkunstwerk*, the site of all sites, the ground of all the arts, the unstated nexus of heterogeneity in the system of fine arts" (Weiss 2008, 12), over the last six years I've created trial pieces with permaculture and ecological urban gardens in Pittsburgh, Copenhagen, Berlin, Bangalore, and Istanbul; places where sounds of the urban and man-made sound blend with nature, trying to dissolve the artificial conceptual division between them. While trying to connect my sound art practice to an imagined transition out of the Capitalocene, these works were my first attempts at composing sociality with the possibility of communal banking through sound.

In my piece, *Gongburgh: Steeltown Forests*, I experienced that by my simple act of bringing two gongs, a saron, and a suling from the University of Pittsburgh gamelan to the site of the Hazelwood Food Forest (a Pittsburgh permaculture urban gardening project), it gave the organizer a way of activating volunteer work from more members of the garden for a longer time than usually was possible. By being present, playing music on the instruments, and recording it in combination with the garden and the social life of the gardeners, new possibilities and energy were initiated in the space. A different mood than was usually present was created, and a far larger ratio of energy and inspiration was created than usual. The recording is sold online in return for donations to permaculture gardening projects.[11]

As inspired by the living archives in Brian Harnetty's projects, I initiated *Green Interactive Biofeedback Environments (GIBE)*, which took place at UrbanplanTen, an urban garden project at Copenhagen's Urbanplanen social housing area. Members of the urban garden project used private music collections and the recorded soundscape of the garden as fluid repackageable sound resources to investigate civic acoustic interaction. Members of the garden generated a "sound compost" for the project consisting of media they were ready to throw away. The sound compost contained music files owned by the members of the garden

as well as the results of field recordings that we collaboratively carried out at the garden. The imagination of urban sound made listening into a possible tool for the social cohesion, and thus survival of the garden, as the members coped with socioeconomic disadvantage and cultural conflict. The sound bank created out of the sound compost became a rich source of shared material that, if the project continued, could have become a means of finance and investment at various different levels of interaction with the garden, through both crowdfunding and other activities that took place on site.[12]

In my piece, *Sonic Permaculture: Resonances of the Urban Garden*, which premiered at the Errant Sound Project Space in Berlin, social composer Andrew Noble played a benefit concert outside on the sidewalk as "Performance for Action" for friends from social activist groups, including members of the "Break the Silence" initiative in Gedenken Oury Jalloh e.V.[13] Meanwhile, inside the project space, Andrew's voice and ukulele were mixed with field recordings of the urban garden Himmelbeet e.V., processed with electronics by composer Keith O'Brien, and dispersed through the room in four channels. The social composition simultaneously forms multiple kinds of event: solidarity concert, garden work, and sound artwork. If extended over a longer period of time (the installation was up for only one day), other interesting formations between these social systems (sound arts space, activist groups, and community garden) could be developed.

The flight to gardens in urban centers is a counterreaction to the decreasing wellness of the human soul as a result of stress caused by unbridled profit motives, wealth disproportion, increased competition in people's work, the unconscious suppression of knowledge about the deterioration of the world's environment (a primary source of cognitive dissonance), not to mention toxic food production methods. The hope embodied in our collective aesthetic enjoyment of the environment may not save future generations from ecological disaster, but it doesn't really matter when it can be so stimulating, so full of imagination, polemical and nutritious—generally inspiring.

Figure 2.14 Installation *Sonic Permaculture: Resonances of the Urban Garden*. Photo: Jeremy Woodruff.

Rather than seek to steer the output of a collective, or impose a preconstructed social model, my works were experiments in small-scale transition design and attempts at helping new collectivities form. I designed potential ways for the inputs and outputs of gardens, experimental music, and listening to enhance each other, as inspired by Holmgren and Mollison's "permaculture principles" and other concepts borrowed from ecological movements. Through meetings and discussions, interviews, communal teaching, and musical work, I investigate the possibilities of emergent sociality that could result from such sound art situations. In this way I hope to create artwork, through affinity with transition design concepts, influenced by non human agency, to the extent it is imaginably possible, free of symbolic violence.

Although I highly value the aesthetic of my own artwork, I can appropriately contextualize its importance. Our grandchildren's generation will undoubtedly hear a very different urban soundscape than we do now, along with whatever kind of music they listen to by then. It would be just as presumptuous for me to suggest I know what you should listen to, as it would for me to speak for them. What I care about the most, rather, is that, instead of hearing a soundscape of increasing poverty, illness, and war due to environmental catastrophe, my grandchildren's generation might one day hear the sounds resulting from a sustainable human society in harmony with nature. Co-creational design thinking and forms of interdisciplinary collectivity with community may be capable of giving sound art the qualities of being embedded and embodied to meaningfully contribute to this goal, or at least, symbolically counteract the soundtracks of profit and status that are unwittingly promoting the demise of life on the planet.

3

Dealing with Disaster

Notes toward a Decolonizing, Aesthetico-Relational Sound Art

Pedro J. S. Vieira de Oliveira

In this chapter, I argue for an understanding of sound art as a form of articulation that does not divorce sound from context and meaning, and in turn is attuned to the political and social matter of sonic events. By focusing on specific geopolitical urgencies of the field, I suggest here some possible pathways toward a decolonizing practice of sound art. In short, I propose a situating of sound art that places its main focus on the liminal spaces between the materiality of the sonic object and its *aesthetico-relational* qualities. Attending to the explicit political matter of sound art requires one to "deal with disaster" and, more specifically, to understand the notion of "disaster," not as a fixed turning point, but instead as an ongoing, historical process of dehumanization and negation of futures, delegated elsewhere.

The main line of argument taken by this chapter addresses the overall notion that certain modes of listening can, even if for a fleeting moment, "escape" an ontological or epistemic engagement with the materiality of sound. To do this, I propose a reading of sound art practices through a body of work stemming from decolonial and feminist theories, placing a strong focus on listening both *for and to* sound art as a situated practice that cannot be disconnected from the stories and narratives they stem from. Particularly when we center the debate on sound artworks that engage with acousmatic sounds—that is, removed from their sources and replaced (or misplaced) in the space of the work—it is exactly by attentively listening to the *situatedness* of sounds that processes of "finding how," instead of "finding what," take place (Henriques 2011, xxviii; Chattopadhyay 2017). An orientation toward both sound *and* source—the materiality of the very media it stems from, the processes of transposition, and the sonic artifacts thus generated—demands a *phonographic* approach to listening, in which the "vexed knots" engendered by the historical conditions at the source open up the possibility of artistic interventions in order to evince their liminality (Weheliye 2005, 74).

This proposition is, however, not to be taken as a postulate for "all" sound art as it were; my point is not to be mistaken for claiming an alleged "ontological immutability" of sound. On the contrary, it emphasizes that sound art should (and must) engage listeners in a process of Relation (with a capital R) (Glissant 1997) with the sonic object, allowing for the emergence of novel aesthetic experiences, while at the same time weaving aural imaginaries that are fundamentally connected with the sites and spaces of these sonic encounters. The emergence of embodied knowledges—which, according to Julian Henriques (2011, xxviii), challenge the notion that knowledge is only a product of the mind—takes place *not only* in the body of the listener of sound art; rather, I want to argue, it becomes a *border practice*, relating back-and-forth with the very spaces and other knowledges embedded in the sound object itself, but never fully inhabiting either.

The locus of my argument is situated within a specific event that takes the idea of "disaster" as a field of possibilities for understanding the back-and-forth relation of sound art and situated practices: the occupation of more than 200 public schools by students in Brazil in two moments in 2015 and 2016 respectively. Amongst modes of self-organization and self-management undertaken by the students during the occupations in São Paulo was a distinct and yet unprecedented articulation of sonic practices as a form of coded, multi-meaning, insubordinate, and non-hierarchical language. It is important to emphasize that their sounds and musics cannot be disassociated from the moment in which they were created, as well as from the material qualities engendered by not only the genre itself but also the media they employed to spread their message—Facebook live videos, YouTube channels, and WhatsApp messages. In making wide use of social media as a political platform, the occupations populated a timely, distributed, and yet non-organized online "archive" of their struggles. Special attention to this archive serves as a counter-hegemonic source for acquiring a contextual, broader-yet-specific understanding of how the students put forward their demands. The use of music and sound by these young students to directly intervene on the political depicts one of the many strategies used by marginal and border practices to "deal with disaster."

An artistic engagement with this "archive" is how I unravel the second part of this chapter. More specifically through an exegesis of *Tempos Verbais: The Volume of History and the Balance of Time* (2017), a sound installation based on recordings of the schools' occupations, developed by myself and multidisciplinary artist Lucas Odahara and exhibited at the Kestnergesellschaft in Hanover, Germany, from March to April 2017. By concentrating on the sonic qualities of this archive—albeit never attempting to divorce them from their political urgency—this work asked its visitors to attune themselves to finding, through listening, potential dissonances, textures, distortions, compressions of different stances of voicing demands and intervening on the political, and, in particular, the aural imaginaries opened up by the sonic practices found at the schools' occupations. As an ongoing body of work, *Tempos Verbais* helps us discuss the ethical and political implications of transposing the sounds of ongoing disasters in Brazil—and by extension from the Global South—onto the environment of a (European) gallery. I propose that *Tempos Verbais* is a cogent starting point for sound art as a *border practice*, discussing the possibilities opened up by encouraging a situated practice of listening oriented toward a reality that was and is, for most of the listeners of this artwork, far removed from their own.

In a Manner of Introduction: Situating Sonic Thinking

Let us begin with the proposition of thinking sound (and sound art) as a situated practice. In embracing what Argentine theorist Walter Mignolo (2000) names a "geopolitics of sensing and knowing," it is useful for the intents and purposes of this text to begin by locating myself in this text, that is, *where I am writing and sounding from.* My own body politics, as well as my experiences in my artistic and academic career thus far, directly inform how I locate this chapter in the overall composition of the book. In other words, my negotiation of interior, exterior (and ulterior) identities lays "the ground from which I speak" (Anzaldúa 2015, 182). In doing so, I deliberately set in motion a process that will conduct my thinking and my propositions throughout this chapter; my goal is for this writing to perform an endogenous and exogenous movement, looking inward and outward simultaneously in order to build up an argument that is, at its fundamental site, resultant from an entanglement both from my lived as well as from my acquired experiences.

Being a South American researcher based for the past decade or so in Europe, my encounters with sound art in both galleries and universities have been almost always underwhelming; discussions on the political dimension of sound and listening have been, for the most part, shifted to the realm of mindful abstraction rather than an embodied, lived reality. Particularly considering the predominance of Western, white male narratives establishing the "canon" of scholarship in and about sound (Stadler 2015; Goh 2017; Thompson 2017; Chattopadhyay 2018), these (numerous) occurrences have left me both hanging and longing for the possibility of thinking beyond or completely outside the notion of a "primacy" of sound. Thinking sound-in-itself, alluding to sound's "vibrational affects" (cf. Goodman 2010), or the possibility of an ontological "nature of the sonic" (Cox, cited in Thompson 2017) presumes the listening experience to inhabit a continuum that is fundamentally (and pragmatically) disentangled from the social, cultural, and political contexts in which these sounds are listened to. Sound, it is argued, possesses an inherent quality of engaging with and through bodies due to their vibrational quality, weaponized by governments and antiestablishment musicians alike to influence mood, generate bodily responses, perpetrate violence, and inflict pain (cf. Goodman 2010). That these qualities are inherent to sound, that they belong to sound's very *nature*, and that is how they affect bodies*, the propositions go on to say, directly appeal to the primacy of sonic perception by the body's own physical limits and limitations. Listening, they argue, *is what it is*, homogenous albeit malleable by the intricacies of vibrational affect.

These theories seek to demonstrate (or to prove de facto) how the listening, theory-formulating body of an ontological sonic affect fades out from its own point of enunciation, precisely by overemphasizing the distance between themselves and the listening objects they choose. The recent interest in the sonic dimension of "disaster" also reveals the political matter within which sound art's own "canon" operates. Disaster here being understood as a moment of crisis—for example, current debate on climate change—which

only surfaces when it reaches the privileged spaces of white, educated middle classes—and therefore becomes part of the discursive agenda of canonical sound art. Disaster, however, is to be understood here as the "crisis of crisis" (Fry 2011, 110), an ongoing process initiated by colonialism, but always delegated by colonial powers to their colonized others. The modern/colonial world is, in fact, sustained by an endless chain of disasters delegated elsewhere (Mignolo 2000; Vieira de Oliveira 2016).[1]

Yet engaging with the materiality of these sounds, or, in other words, attending to the choice of examples that address and demonstrate sound's vibrational affect, patterns emerge, and they elicit simple questions: Why do certain sounds inhabit certain spaces? Why are some of them not listened to while others are the site of sound theory and sound art's interest? Put simply: because they help fabricate a separation between "the knower and the known" (Mbembe 2015). So what are the politics of belonging at play with sound and listening experiences? Such modes of thinking and inquiry cannot be thought outside their political dimension; for in not attending to these matters inside their political unfoldings, the listening body is invisibilized from the assemblages of affect and lived experiences that contain and are contained in sounds in terms of how, why, where, and by whom they are listened to.

Here it is paramount to tend to word choice: making a listening body "invisible" refers to a process that has to be fundamentally distinguished from erasure; the former implies agency, which the latter cannot possess. An "invisible listening body" is the normative body of modernity, or what Veit Erlman calls "the Western aural self" (Erlman 2016, 164). This "aural self" of Western modernity finds himself (because it definitely is a "he") deeply entangled with the subject of modernity—male, white, cisgendered and heterosexual, "neutral," and "objective." An invisibilized body can only experience the power of sound as inhabiting "the" grand narrative of vibrational affect—one that is presumed to occupy space and be evenly distributed across "all" listening bodies. If the Western, white, male, and enlightened self profits from making himself unnoticed, to paraphrase Sara Ahmed, the invisible listening body is "a category of experience that disappears as a category through experience" (2007, 150). It cements the belief that the Western subject is the only possible protagonist and, by extension, in full control of histories of aurality, its techniques, practices, and subjective experiences—exactly because it perceives itself as the rightful owner of these experiences (Quijano 2000; Ahmed 2007; Thompson 2017).

An interrogation of the predominance of a colonial/modern and white-centered narrative in sound art is the subject of Budhaditya Chattopadhyay's (2017) investigation on "object-disoriented sound art." Opening up and broadening the question of whether or not "'sound' [can] be 'exhibited' as an artistic object within a gallery," his argument for a phenomenological shift toward the "resonating and affecting" character of sounds seeks to decouple a sound art practice from its Western constraints—and in doing so actively questions its white canon (Chattopadhyay 2017, 2018). His proposition advances a practice attuned to more "contemplative states" of listening, which may highlight the "immateriality, ephemerality and contingency embedded in sound art experience." Furthermore, Chattopadhyay proposes a shift toward practices that would "set aside epistemic and ontological issues of recognizing the source or 'object' of sound and focus instead on the

phenomenological, and inward-looking subjective perception of sound within 'selfhood' as the listener's mindful perception" (2017). Drawing both from Indian philosophy as well as his own artistic practice, Chattopadhyay's main thesis is that sound art must move "beyond the objecthood of sound," thus freeing the listener from "deciphering the immediate meaning of sound" and dissolving barriers between the work and the listener herself. He proposes a method in which the subjective nature of sound becomes the main focus of a cognitive apprehension of listening, embracing the aural imagination connecting sound and memory in the mind of the listener—what he terms a process of "auto-curation" (Chattopadhyay 2017).

I concur with Chattopadhyay's argument that a sound art practice more attuned to expanded modes of listening, focused on potential poetic dimensions of sound, can indeed unveil patterns, textures, rhythms, and fluidities that would not be possible to be grasped otherwise. However, assuming a primacy of sound *qua* sound, possessing affective qualities that are exterior to and therefore precede listening as a situated practice negates the possibility of agency that historically oppressed bodies may reclaim with regard to the production, articulation, negotiation, and reception of sonic realities. I argue that while encounters with the sonic always embed the "mindful perception" of the listener, regardless of their attentiveness to sonic materiality, relocating sonic events in an abstracted environment devoid of situated ground undermines the potential of sound to complicate the very sites, spaces, and narratives from which they originally emerge. In that regard, I believe that recentering our thinking with decolonial and feminist philosophies opens up a field of possibilities not only to challenge Western, male, white knowledge production, but also to assemble a cogent method for a decolonizing, situated practice in sound art.

Within sound studies scholarship, this has been advanced through the work of thinkers such as Marie Thompson and Annie Goh. Differently from Chattopadhyay—although sharing similar concerns—both Thompson and Goh argue that these encounters be experienced precisely in their point of contention between matter, context, and, most importantly, a listening body. Their work seeks to complicate the relation between subject/object that was "left undisturbed" by "the prevalence of sonic naturalism in sound studies" (Goh 2017, 288). Both authors, in different ways, argue that the experience of encountering sounds in a situation that might be transposed from somewhere else or abstracted in the space of a gallery or museum cannot divorce the sonic event from its political, social, and material entanglements. For Goh, "sounding situated knowledges" is a cogent manner of producing knowledge otherwise, by attending to other threads alongside different historical continua; Goh's proposition "follows an approach to tracing histories along different sensorial modes as tracing different maps to a territory" (2017, 290). Thompson, concomitantly, advances an interrogation of the predicaments of "white aurality," offering points of rupture with the idea of a primacy of sound that might be understood outside its racialized constructions, and therefore denied its own materiality. "I am not seeking to affirm that there can be no sound without a listening subject," Thompson maintains, "nor am I seeking to deny that sound has something to do with materiality and matter" (2017, 274). Drawing from Chino Amobi's sonically translated experiences of "walking while black" in airports, Thompson argues that focusing on the materiality of race is not to

dismiss an ontological perspective in sound art; on the contrary, she argues that a "resituated ontology," attending to sound art's "co-productive relations with the social world" does not decouple its "abstract materiality from lived sociality" (2017, 278).

Situating sound art practice and experience makes explicit that *who* listens matters, and that the listening act is simultaneously informed and co-constituted by the embodied realities of the listener and the materiality of the sonic work that is paramount for a decolonization of sound art's own canon. It is important to reiterate that the idea of a "listener" in sound art must move away from an abstracted (i.e. male, white, Western, cisgendered) figure toward a situated one. In that regard, my argument is in tune with the one advanced by Chattopadhyay, but more so with Goh and Thompson, for I am not so certain that the processes of "auto-curation" proposed by him can account for the entirety of the political (and aesthetic) experience of sound art. Rather, my proposition is that the experience of sound art must appeal to forms of (non-totalizing) sonic collectivism, taking into consideration the ebbs and flows of the contextual, political, embodied, and lived materiality of the sonic, particularly when dealing with field recordings or archives. This argument should not be confused with an insistence on an ontological immutability of recorded sound and its source; rather I argue that such a process takes place precisely at the borderlands—the liminal spaces—amongst sound, its histories, its reproducibility, and its recontextualization in the space of an artwork.

The Aesthetico-Relational Qualities of Sound Art

My interrogation of a "primacy" of sound seeks to place a stronger focus on sonic materiality. Even though sound is not scientifically understood as matter, the occurrence of sound depends on the matter through which it vibrates in order to propagate. Sound and matter co-constitute one another in that sense, for vibrations are only perceived by encountering matter that absorbs, changes, or shifts itself and, in turn, modifies the spaces and bodies with which it comes in contact. The materiality of sound, or the relationship that emerges from these encounters, is not abstracted from the space in which it takes place, or, in other words, *sound is living and lived phenomena*. Hence the subject of listening, that which encounters and is affected by vibration, can only become so within a given space, a given context, a given set of political, economic, cultural, social, material, spiritual, and ontological conditions. Listening is, thus, an experience that takes place within a process of relation.

Relation is, for Martiniquais philosopher Édouard Glissant, a process of convergence that manifests itself inward, while concomitantly always reaching outward. Glissant's philosophy-poetics mirror and convey his proposition for a theory of affective encounters, for they also make extensive use of the same circularity in form unraveled by him in content, to a point in which one cannot be understood outside of or separated from the other. His mode of writing obscures and reveals in the same way that he understands the

building of narratives as that in which historically colonized subjects are granted agency to rely on not revealing the entirety of their realities and subjectivities. Rather than assuming a colonial, Western impetus for establishing grand narratives and origin myths, crafting a "deciphered" world picture of what was previously "undiscovered" (thus subsuming cultures for their own narrative of triumph), Glissant's engagement with relation (with a capital R) demands the co-inhabiting and the mutual existence of different imaginaries.[2] Relation is "a product that in turn produces" (1997, 160) a fuzzy occurrence that is impossible to fathom in simplistic terms of *either-or*, or *here-there*, but instead dwells in the liminal spaces of this exchange. That these imaginaries co-exist does not immediately imply that their result is an amalgamation of their multiplicities, or a normalization of that which they share in common; nor is it that which stands out from a process of achieving a resulting "totality." Relation is not relative, but "a totality in evolution" (1997, 133) being formed, deformed, and reformed by the very process of entering it.

Relation demands an active engagement with how the world presents itself to us, but at the same time this presenting does not automatically require revealing or deciphering. Rather, the moment of Relation turns back to ourselves: *Who am I when the world presents itself in this manner and not another, and how much is it possible for my experience to relate to that which I am encountering?* Relation thus demands giving and taking, understanding and dwelling on doubt, noise and signal, obscurity and clarity. While this might imply that Relation sorts the world out in binary oppositions, Glissant turns this very assumption on its head by denying the immediate "bracketing" of Relation as a set of discrete processes, arguing instead that Relation "defines the elements at stake, and at the same time it affects (changes) them [. . .] Relation alone is relation" (Glissant 1997, 169–70). Relation is a liminal process that exists by and at the process of entering it, thus demanding that one eschews the desire to attain or to obtain a finished picture. This form of thinking the world, he argues, allows for a more generous form of "understanding in Relation," a process that he terms *donner-avec*, or "giving-on-and-with" (Wing, cited in Glissant 1997, 212n5).

Relation is thus a material phenomenon, because it is the encounter amongst different imaginaries. It demands, first and foremost, a generosity that reaches toward without a desire to reveal. Relation happens in the borders between imaginaries, similar to what Latina feminist philosopher Gloria Anzaldúa would term the borderland spaces of "*lo heredado [y] lo impuesto*," that is, the inherited and the imposed (2007 [1987], 104). The analogy of the border takes different shapes in Glissant and Anzaldúa; for the former, the border presents itself as fundamentally archipelagic—much like the Caribbean Islands— fragmented and multifaceted, all the while provisionally attainable (but not fully deciphered) from a distance. Conversely, Anzaldúa's borderlands are grounded on the materiality of the US-Mexico border and the stolen territories of Texas as a place of historical violence and perpetual conflict, the stage for the clashes amongst "insiders, outsiders, and other-siders" (2015, 71), of diverse, hybrid constitutions of knowledge systems and spiritualities. Still, both allude to similar shifts in the worldview if we seek to disentangle ourselves from the grand narratives of Western modernity and "resist assimilation" (2015, 64). Our attention must be oriented toward the lived experience of

inhabiting the borderland spaces of a world shaped by colonialism, and yet eager to make itself disappear as if "outside" its own logics. The border is that marginal space, the place in which one's invisibility becomes hypervisible, and silenced voices manifest themselves as perpetual (non-white) noise; bodies at the margin extend themselves to become liminal. They are those that cannot refrain from being categorized through experience, because their experience is always already defined in opposition to something else.

Border subjects—colonized bodies—bring their lived materiality to their philosophies and poetics, at the risk of being read as "too much," exactly by placing their own histories, once denied, erased and silenced, up front. Their artistic practice becomes "art that supersedes the pictorial," Anzaldúa reminds us, for it deals with "who tells the stories and what stories and histories are told" (Anzaldúa 2015, 62); it tells micro-narratives composing a totality-in-flux, "a kind of making history, of inventing our history from our experience and perspective through our art rather than accepting our history by the dominant culture" (Anzaldúa 2015). It does not try to invisibilize the enunciating body; quite the contrary: in emphasizing "the ground from which [they] speak" (Anzaldúa 2015, 182), it seeks "art forms that support [social, cultural, spiritual] transformation" (Anzaldúa 2015, 92), it makes explicit that the colonized body is, through a decolonizing aesthetics, reclaiming occupied space.

My proposition for an *aesthetico-relational* sound art relies on two overlapping ideas of poetic and artistic expression. The first is the necessity of shifting attention from seeking "grand narratives" of individual-yet-universalizing sonic primacy toward a process of Relation, of "giving-on-and-with" and understanding that listening experiences are as much about the listener as they are about how sounds reveal themselves in the space. They are about the way sounds propagate and vibrate, but, more importantly, the negotiation between their lived materiality—or the political conditions in which they exist or were taken from—and the listener's own. This proposition moves away from attending to the "ontological nature" of the sonic toward a form of mediated listening, or, in other words, to include the mediated artifacts engendered by recording and reproduction technologies in the framework of listening. The second idea unfolds by taking this proposition either in its literal form—that re/producing media already inform how the experience of listening takes place and therefore cannot happen in an abstracted space of sound (and here we can also consider air as a producing medium)—or by coupling it with what Anzaldúa tells us about the aesthetic particularities of a "*Border arte*," that is, the invention of new histories, the fragmentation of history into micro-narratives, rehistoricized from numerous perspectives of diverse, plural bodies.

That this process rewrites history from other perspectives implies that the bodies enunciating them must escape the constraints that create the conditions for "grand narratives" to emerge. The subject of the listening experience ceases to be easily identifiable; this is a key point for the need of attuning to the materiality of sound. According to Alexander Weheliye, "by focusing on the sonic [. . .], possibilities for thinking, hearing, seeing, apprehending the subject in a number of different arenas that do not insist on monocausality [open up]" (2005, 68). He goes on to argue that sound preserves that which does not want to be revealed, for its affective relationships "transmit intensities which

belong to the realm of expression rather than content," often escaping language altogether (2005, 69); sound "traces texture and not meaning" by distributing the subject of the listening experience across the grooves of reproduced sound. This is what he terms a "phonographic" approach to practices that relate to sound; that thinking *through* what sounds do, rather than thinking *about* sound (2005, 203) allows for the emergence of sound-as-relation, in which the liminal spaces between sound, source, and listener co-exist and create something new, albeit never fixed.

Such a phonographic approach is what conducts the narrative for the next sections of this chapter, in which I begin by "zooming in" on an event that signals the idea of "dealing with disaster" and explore its sonic potentialities to enact the *aesthetico-relational* qualities outlined in this section. I would like to argue that certain forms of participating in the political embrace these qualities, which expand and escape the boundaries of what "sound art" seeks to signify in a broader sense. Later I will discuss the transposition of an archive of sonic events to the space of a more "traditional" form of artistic sound work, thus emphasizing the impermanence of a decolonizing approach to sound art that is not constrained to either the space of the artistic work or the listening experience alone, but instead emerges from a "giving-on-and-with" at the moment of the sonic encounter.

The Struggle for Education in São Paulo: *Escolas de Luta*

At the end of September 2015, the government of São Paulo announced that a number of austerity measures would take place regarding the public school system of the state; the most important amongst these would be what they termed a "reorganization" of secondary students from ages fourteen to eighteen to other schools. This measure meant that more than a hundred schools would be effectively shut down by the end of the year, and that approximately one million students would be reallocated to other institutions in the vicinity of their homes. Given the already precarious conditions of public education in Brazil, this meant an increase in overcrowded schools, overworked and underpaid teachers and staff, and a complete readaptation for many youngsters in the process of finishing their secondary studies. The announcement, however, was never communicated directly to the students nor to their parents; many came to know about the so-called "reorganization" through hearsay on schools' corridors, WhatsApp groups, or via the televised announcement in late September. Some students, in fact, learned that they would not be continuing at their schools by the time they tried to enroll for the upcoming year (Campos, Medeiros, and Ribeiro 2016, 28). In the light of the news and the imminent, disastrous situation they were to face, between September and November 2015 students, parents, teachers, and activists of sixty cities in the state took to the streets in more than 160 protests against the governor and the "reorganization" program.

These protests were largely ignored by the government, who refused any direct dialogue with the concerned parties. In the meantime, resentment grew amongst students through

social media; in session meetings, students became aware of a translated version of a tactics handbook originally developed by Chilean students during the so-called "Penguin Revolution." This "manual," entitled *Como Ocupar uma Escola* ("How to occupy a school"), together with shared interests about the Zapatista movement and the Arab Spring, inspired a few students to occupy the first schools at the beginning of November in the metropolitan region of São Paulo. Fueled both by their own spreading of news in social networks as well as overall media concern, within three weeks the number of occupied schools had escalated to eighty-nine, and by December there were approximately 213 schools across the state fully overtaken by students (Rede Brasil Atual 2015; Campos, Medeiros, and Ribeiro 2016, 107).

The occupations lasted until the second week of December, after much contention and struggle. A leaked audio from a meeting held by the government a week prior had Fernando Padula, the chief of staff for then secretary of education Herman Voorwald, admit that the government should employ "guerrilla tactics" to "win the war" against the occupants.[3] What ensued was a series of unidentified (and oftentimes violent) attacks on the schools; infiltrated police agents and conservative group members posing as "concerned students" talking to the media; explicit police violence and violation of human rights; and legal pressure from the government upon directors, parents, and teachers. With the leaked audio, Voorwald stepped down from his post; later on, State Governor Geraldo Alckmin had to publicly suspend the "reorganization" for at least a year amidst much distrust from the occupants. The students slowly left the schools' buildings, and in the aftermath many suffered retaliation from the administration and/or were investigated by the military police.

Yet the seeds of a successful movement were already present in the public imaginary. Partly inspired by the countrywide uprisings of 2013, frustrated by the lack of continuity stemming from these mass movements as well as their co-option by conservative sectors of society against social policies, by January 2016, public schools in more than twenty states across the country were occupied by students, in a joint movement that came to be known as *Primavera Secundarista* (Secondary Students' Spring). Students were protesting state-specific and countrywide austerity measures, such as the freezing of investment in public education for the upcoming twenty years; a homophobic, conservative-led, pedagogical proposal criminalizing discussions about gender identity in schools (*Escola sem Partido*, or schools without political parties); the misappropriation of funds dedicated to providing school meals for underprivileged students (a scandal known as *Máfia da Merenda* or school lunch mafia); as well as the implementation of ultra-neoliberal curricula (Campos, Medeiros, and Ribeiro 2016; Catini and Mello 2016). Protests and occupations, spreading across multiple cities and leading a diverse range of demands, continued to occur well until the second semester of 2016, while, at the same time, Brazil saw a rise in conservative, middle-class mobilization calling for the impeachment of then president Dilma Vana Rousseff. Very often the occupations positioned themselves explicitly *abaixo e à esquerda* (below and to the left—a Zapatista saying), that is, in direct opposition to reactionary demands. In contrast, the *Primavera Secundarista* was marked by violence sanctioned by local governments with the full

support of the media and the middle class, including the decision by a federal judge from the state of Distrito Federal to deprive the occupants of food, water, electricity, and for the police to deploy "continuous sonic apparatuses" at the students (de Oliveira, cited in Coutinho 2016).

Rehearsing Futures: Sonic Insolence and Auditory Fabulation

Self-organized and horizontal, the occupations demonstrated to those within as well as the society "outside" the schools that they were concerned with the eliciting of different futures. Taking the narrative under their own command, bypassing the need for the dominant apparatuses of traditional, oligarchical media, their form of organization was a demand for a future they could shift their orientation toward, seize control of, and reclaim agency. In total, during the occupations of 2015 there were around fifty social media pages and more than four thousand posts reporting from within schools (Romancini and Castilho 2017, 100–1); the content spanned from the organization of everyday chores, cooking lessons, tutorials on using video to document police brutality, learning how to secure freedom of speech, and organizing, amongst others (Campos, Medeiros, and Ribeiro 2016, 123). Largely based on oral communication rather than writing manifestos, these videos put the teenagers' voices as the main narrators of their story, already challenging the hegemony of older, male-dominated, vocal timbre in reporting news, or surpassing altogether the commanding, authoritative voices of parents, teachers, or school staff.

These forms of oral communication, produced by their online content-creation, also relied heavily on musical expression. *Tamborzão* (the ubiquitous beat of *funk carioca*) patterns drummed in chairs, tables, walls, or clapped together, served as the main template for the adaptation of popular songs to situated lyrics by the students, or the composition of new *funks* altogether. These songs put forward many of the students' collective demands: better infrastructure for the schools, transparency on budget spending, secularity within the classroom space, criminalizing homo- and transphobia, and allowing transgender students to use the bathrooms aligned with their gender identity (Campos, Medeiros, and Ribeiro 2016, 145). One of the most widely distributed songs, written by student-MCs *Koka*, *Foinha*, *Marcelo*, and *Mina de Luta* from *Ocupação Paula Souza* in 2016, is documented across several videos in which students gather around the MCs and collectively sing:

> *Mãe, pai, tô na ocupação/E só pra tu saber eu luto pela educação*
> *Nas escolas do Estado / E nas etecs / A merenda tá faltando*
> *A gente espera a resposta / E o Geraldo se calando*
> *E pra lembrar:*
> *Não acabou / Tem que acabar*
> *Eu quero o fim / da Polícia Militar*
> *Eles são grandes / Eles são treinados e estão armados*

> *Mas eu sou secundarista / Vocês só entram com mandado.*
> *O meu pedido é pra que o Geraldo tire a tesoura da mão*
> *Pare de roubar merenda e investe na educacão.*[4]

The rhythmic makeup of the song makes use of call-and-response and pauses that are not so common to *funk carioca* compositions, yet it predominantly dwells in its syncopated beats to directly demand listening attention from the powers they are speaking to (Vieira de Oliveira 2018). The lyrics begin by reassuring their parents that they are safe, that they know what they are demanding, and that they are fighting for their futures; it follows with a call for the demilitarization of the police, all the while letting the police know that they cannot invade school grounds without a judicial order. Lastly, they explicitly name the governor—Geraldo [Alckmin]—and demand he stop "stealing [the money for] school lunches" and make the schools better for the students. Spreading the news about the growing number of occupations and praising the reach of their movement in the media are also present in many other videos featuring reworked *funk* songs, such as those created by *MC Foice* and *MC Martelo* (MC Sickle and MC Hammer). In their parody of MC Carol's "Bateu uma onda forte" ("I am so high right now"), they sing "*Ai caralho/bateu uma onda forte/tá tendo ocupação/da Zona Sul à Zona Norte*"[5] (Campos, Medeiros, and Ribeiro 2016, 107). Their later songs tackled other famous funks, with lyrics explicitly mocking the inability of the state governor to prevent the spreading of the occupations. By singing "*Na escola quem manda é nóis/ quero vê os hômi pegá/ porque aqui nóis dá risada e bota a escola pra ocupar*," or "*Ela é espetacular, molecada de luta/ Se o governo for fechar escola nóis ocupa*,"[6] they "emphasize[d] their desire for 'another' type of school" (Catini and Mello 2016, 1184), situating their movement together with the long history of students' uprisings from anti-dictatorship times to Chile's "Penguin Revolution" (Catini and Mello 2016, 1183).

In his groundbreaking study *Pedagogy of the Oppressed*, Brazilian educator Paulo Freire has argued for the need of "revolutionary futurit[ies]" as "prophetic [and] hopeful" educational measures (Freire 2000, 84). Freire talked extensively about the necessity of a "problem-posing" model of education rather than a "problem-solving" one, for the former invites questioning as a natural process while the latter focuses on learning schemas and prepackaged frameworks. Fostering an educational model that encourages the posing of problems instead of applying processes from an already given mind-set, Freire maintains, "affirms men and women as beings in the process of *becoming*—as unfinished, uncompleted beings in and with a likewise unfinished reality" (Freire 2000, original emphasis). He continues:

> Hence, it affirms women and men as beings who transcend themselves, who move forward and look ahead, for whom immobility represents a fatal threat, for whom looking at the past must only be a means of understanding more clearly what and who they are so that they can more wisely build the future. Hence, it identifies with the movement which engages people as beings aware of their incompletion—an historical movement which has its point of departure, its Subjects and its objective. (Freire 2000, 84)

Under the motto of "an education that teaches us how to think and not how to obey" (Campos, Medeiros, and Ribeiro 2016, 152), the school occupations can be regarded as a

proposition for a complete rupture with the consensual political order, carving pathways toward provisional, decolonizing realities. In dealing with their own, imminent disaster—made explicit by the series of orchestrated defunding strategies perpetrated by the state government of São Paulo and later by a coup-imposed president—and by making extensive use of sonic and listening practices, their sonic insolence becomes a form of auditory fabulation. By redirecting and repurposing popular *funk carioca* songs, the use of sound and music by the students functioned both as a site of production as well as a method for enunciating not uni-versal but pluri-versal futures. Rather than merely denouncing this disaster, such forms of sonic insolence and auditory fabulation rehearse the *aesthetico-relational* of sound and listening—they are ever incomplete with and within the *becoming* of the students and their unfinished reality. The occupations practice that which Achille Mbembe (2015, 6) has called a "pedagogy of presence," that is, "a logic of indictment [. . .], of self-affirmation, interruption and occupation"; it is about instrumentalizing loudness and hypervisibility for the effectiveness of a project of "de-privatization and rehabilitation of the public space" of the school (2015, 5). The students' sonic forms of articulation overcome the mere pictorial representation of the occupations; they are, instead, the very sonic materiality of the occupations—as lived and living reality.

Much like *funk carioca*—the rhythm they work with—the students' forms of artistic expression were also enunciated from the margins, from those neglected by the state and denied the right to have a future. As scholar Adriana Facina (2017, 180) argues on her engagement with *funk carioca*, marginal and border aesthetics "complicate the very idea of art in itself," because in being "constantly threatened and frequently destroyed," she continues, "the cultural manifestations at the margins of the State, in the context of a culture of survival, must invent their own forms of permanence" (2017, 183). In a similar fashion, the occupations and their protagonists—the students—in being co-constituted and produced by a perpetual condition of disaster, enunciate new, idiosyncratic, and contingent realities. Their actions and practices are rehearsals of revolutionary futurities.

"A Specific State of Time": *Tempos Verbais*

With the installation *Tempos Verbais: The Volume of History and the Balance of Time* (2017), multidisciplinary artist Lucas Odahara and I have set to explore and understand through artistic practice how significant political changes might be "captured" in the moment of the occupation of sonic space. We began by asking ourselves the role of archiving practices for the preservation of these fleeting moments of rupture; however our interest was not on narratives of archiving crafted by journalistic eyes or ears, but rather on those who "brush against the grain of history" (Benjamin, cited in Senol 2017). We were interested in lo-fi, abruptly cut, heavily distorted, self-made recordings for the sake of documentation, denunciation, and preservation, uploaded and shared on platforms such as Facebook or YouTube. Our research process was, of course, free from any pretense of neutrality:

Figure 3.1 and 3.2 The installation *Tempos Verbais: The Volume of History and the Balance of Time*, 2017, by Lucas Odahara and Pedro Oliveira. Photo: Lucas Odahara.

we chose to consciously ignore the interventions made by conservative and reactionary groups who would hijack protest language to advance their own agendas.

Delving into the apparent infinitude of such an archive, we decided to extract audio from these videos and mingle them with our own recordings from protests and demonstrations, in order for patterns to emerge that would guide our artistic endeavors. At a certain point we began gaining interest particularly on anti-austerity protests, in particular students' uprisings, anti-border activism, and indigenous reclaiming of stolen land—all taking place at, or in relation to, the Global South. Our archive grew, taking into consideration our own "geopolitics of sensing and knowing": this archive was a reflection not only of our own interests and desires, but also of our solidarity and political affinity with the movements we decided to focus on. There was never an interest in "listening to both sides" as a method for achieving "balance," despite the word being present in the title of the work itself.

This project was commissioned as part of the Vordemberge-Gildewart Stiftung award and was installed at the Kestnergesellschaft in Hanover, Germany, from March to April 2017. From our self-curated archive, we crafted a number of sound compositions that superimpose, mix, contrast, mute, distort, delay, compress, or loop these soundscapes of protest. Specifically for the exhibition, we chose to work with three so-called "movements," divided by thematic familiarity. The design of the installation featured two public address

(PA) loudspeakers placed on top of a table; the left speaker pointed upward, the right one downward (and was therefore muffled). The table lining had multiple definitions of the English term "simple present" scattered through a black-and-white composition and, on the wall nearby, we wrote the filenames we took from our archive to make the soundscapes with. An MP3 player with an amplifier sat at the left edge; visitors had the opportunity of playing with the "volume" and "balance" of the playing sounds so as to highlight, mute, or redistribute the sonic composition at will.

Schismatic Consonance

Dealing with a self-initiated archive presented us with many questions of representation, transposition, and manipulation, as well as the experience we were willing to convey with this work. With this installation, we asked ourselves to what extent can specific, revolutionary temporalities "materialize themselves in a different room" and whether or not it would be possible to grasp a "specific state of time within a revolutionary process" (Senol 2017, 22). At the end of each "movement," the installation played field recordings taken from the street right in front of the gallery; with that, we wanted to highlight the contingency of a protest's eruption, as if it could happen anytime, anywhere, at any given spatial condition. Yet the question perdured: would these spatial conditions be, in themselves, enough to elicit the eruption of a soundscape of dissent, particularly because of the sheer dissonance, social and sonic, of the political conditions of the recordings vis-à-vis the place they were transposed to?

This is one of the reasons why, at a later moment, we decided to focus mostly on students' uprisings and, in particular, the occupations of 2015–2016. This time, however, we also decided to take a "phonographic approach" (Weheliye 2005) of attending to the materiality of these sounds, and mixing the soundscapes from the occupations with their right-wing counterparts. These newer sounds were mostly sourced from recordings of *panelaços*, a reactionary hijacking of the *cacerolazos*, a popular Latin American protest technique that emerged in 1971 at anti-Allende protests in Chile (Lucena and Freire Bezerra 2016). The name stems from how demonstrators take to the streets and occupy public places by overwhelming the auditory space with banging pots and pans. We were interested in this hijacking because it evinced how the political significance of certain sounds are contingent on the context from which they emerge—and can often significantly shift within the spectrum of political action. In Brazil, fueled by broad mainstream media coverage as well as WhatsApp and Facebook calls to action by ultra-neoliberal, so-called "non-partisan" online groups, the *panelaços* had those who were against the rightful reelection of President Dilma Rousseff stand on the balconies of their apartments, banging wooden spoons and cutlery against pots and pans whenever Dilma or any other member of the Workers' Party (PT) spoke on national television. With the increased adoption of this protest form, soon enough pro-impeachment groups began taking to the streets in protests-turned-parties, featuring celebrities, aspiring politicians, and famous DJs playing atop massive sound trucks occupying the streets. We also

added to this archive a recording of the riot control police of São Paulo marching against a students' street protest during the occupations of 2016.

Our interest in these sounds came, on the one hand, from the distribution of the protesting soundscape from the street to the comfort of the middle-class domestic space and, later on, from the amplification power they wielded in contrast to grassroots movements, such as the occupations. As Severino Lucena and Juliana Freire Bezerra argue, these protests cannot be framed as "popular," for their "discourse and political strategies are aligned with conservative means to keep the *status quo*" (2016, 71, original emphasis). We believed that such an archive of reactionary, conservative and colonizing protests would "[contain] within itself the resources of its own refutation" (Mbembe 2015, 24). Mixing them, much like a DJ would, attending to the rhythms and pulses both for and against the "groove," our intent was for fruitful and novel connections, intersections, and dissonances to emerge from the act of thinking and listening to them together. Thus, in a later moment our soundscape compositions began to evince what I have called elsewhere a "schismatic consonance," that is, "an articulation of (musical) rhythm that conveys a desire for homogenous identification," which also contains its own means of disarticulation in "the distinct forms of political action that materialize from a direct rupture with them" (Vieira de Oliveira 2018, 287–8).

In that sense, the pulsating, monotonous beat of wooden spoons and clashes resonates in consonance with the marching and beating of batons by the riot police; both enforce assimilation in unison, for both seek to create a homogenous identity of the "good citizen," who trusts the military police and is concerned with the destruction of "traditional values" by left-wing activists, politicians, or dissenting students alike. They all march in unison against a threat that is unidimensional and therefore fabricated. Dissent, both political and sonic, is engulfed by the harmlessness of the pot-banging-baton-clashing-techno-beat soundscape. The effects of the predominance of these sounds in Brazilian protest language are not only perceived in the aural imagination at the space of the work, but have material consequences such as the coup of August 2016 and the advancement of austerity measures that have severely damaged students, workers, lesbian, gay, bisexual, transgender, and queer (LGBTQ) groups, and black and brown populations for decades to come (Vieira de Oliveira 2018). They stand in direct contrast with the vocal habits of *funk* as exercised by the students at the occupations. These habits differ significantly from the "traditional" political chanting of slogans because they embrace playfulness while being insolent, sarcastic, bold, and insubordinate. This juxtaposition of sounds, however, does not try to essentialize the idea of *on-beat* and *offbeat* as symbolizing hegemonic and counter-hegemonic relationships of power respectively; instead, it poses that the orderly beat of shields, sound trucks, and pots and pans is a situated, sonic manifestation of the status quo. It conveys, sonically, that which was normalized and is imposed in Brazilian society as "rightful values" of social performance and behavior, spanning from hetero-cisnormativity, to sonic and physical containment of youngsters, to the devaluing of marginal artistic practices as "not-belonging" to culture.

By listening to these compositions in a context in which these sounds were transposed both in time and space, hyper-condensed yet rhythmically distinct from one another,

Tempos Verbais sought to bring the *aesthetico-relational* qualities of the students' occupations, evincing both what was *already there* as well as what *emerges from this transposition*. Listening to the (often fleeting) materiality of the sounds *both* at their sources and their recontextualization as a phonographic entity, a work of sound art such as *Tempos Verbais* seeks to distribute the multiplicity of meanings across an aesthetic *and* geopolitical space of affect, in which different situations of listening yield different materialities, while remaining within the same political context. It is paramount to attend to sonic characteristics such as loudness, timbre, pitch, rhythm, and language, albeit never divorcing them from how they are manifested by political tensions, for example, the sheer violence of the military police, or the increasing popularity of right-wing ideals within the Brazilian middle class, or the emergence of ultra-neoliberal, US-financed think tanks in the country. In that, the dissonances between the places where the sounds were sourced and the spaces where they were listened to requires the listener to give-on-and-with the artwork.

In a Manner of Conclusion

"Disaster" is not to be seen as a novel qualitative modifier introduced to a politicized, sonic artistic practice, but instead a *leitmotiv of and for* the colonial construction of reality. For the colonized world, disaster dwells within a trajectory that moves (and pulses) otherwise. "Disaster" is that which begins with the invasion, pillage, and exploitation of other natures and other cultures. It inhabits the project of emptying indigenous natures and cultures of their signs and signifiers, together with the enforcement of a worldview that ultimately regards nature and culture as being distinct entities, and allows the colonizer to craft a visual, cultural, bodily, sonic portrait of the colonized as those whose subjectivities and idiosyncrasies are "closer to nature" (Quijano 2000; Mignolo 2000). Shifting our focus to sonic encounters happening outside the Northern axis—that is, Europe, the United Kingdom, the United States, and Canada—evinces the urgency for a situated practice of sound art that engages in a co-constitutive, context-dependent relationship amongst sound, source, and listener. This shift responds to a proposed "widening" of the field in geopolitical terms but also, most importantly, attends to the ongoing crisis of a postcolonial-yet-not-quite-decolonized world scheme.

It bears emphasizing that these colonial power relationships remain pretty much intact and still in place; colonialism as both an institution and a set of practices has mutated, but never disappeared. The paradigm shift seems to be that, in recent years, former colonial powers have been struck by the same disastrous processes they help set in motion elsewhere. This is one of the many reasons why the need for enunciating new futures, and an ongoing interest in pluriversal modes of existence has, in recent years, become so appeasing in Western[ized] societies while never ceasing to be an urgent matter for the colonized and the oppressed.[7] "Dealing with disaster," thus, is an indicator of both present and presence, rather than a movement in making. It is a cyclic, convoluted grammatical trick that stands for an ongoing, durational struggle.

Coming back to what a decolonizing practice of sound art might be and what it might do, I maintain that there must be a connection framed amongst what the listener does, what they can do, and how they may do it in relation to the conditions in which both sound art and listener co-inhabit the space of the work. My thinking in this chapter understands that attuning to the materiality of these sounds as living and lived phenomena has the power to complicate that relationship, and that complication is the site of an *aesthetico-relational* experience of sound art. What these sounds are, in the artists' own engagement with them, cannot be invisibilized or erased, but must instead enter into a process of Relation with the listener—an *aesthetico-relational* experience of sound art that requires the listener to "give-on-and-with" in order for them to dwell on the *borderland* spaces in which the sounds, their grainy and porous matter, and the listening body can engage in conversation. It asks for poetic responses more than it demands (or allows for) its own deciphering, but at the same time it does not delegate the entirety of these responses to the listener alone. Rather, it makes it evident that there is more than one listening body constantly negotiating sonic presence.

In short, my argument is that the *aesthetico-relational* approach offers an entry point to a decolonizing sound art, because it understands the poetic and artistic potentialities of sound at their source, rather than only existing as art when transferred to the gallery space. Sonic practices such as those heard at the schools' occupations, and their afterlife as counter-hegemonic archives are practices of decolonizing listening and sounding and rehearsals of decolonizing futures. By juxtaposing and mixing them together, listening to them in a different continuum of time—that of the permanence of the archive, and its transposition to a sound artwork—we "zoom into" their materiality. Listeners may experience specific particularities of their political demands that can only emerge and be pinpointed through an engagement with their sonic dimension. The (sonic) practices of those whose bodies and experiences are marked by *what they cannot do*—thus making their historical and material erasure hypervisible—(Ahmed 2007) are manifestations to which an idea of sound art seems thus far incomplete or unable to attend to. Yet they inhabit the liminal spaces of aesthetic practices and position themselves as art enunciated from the margins, as a matter of survival.

4

Vocalizing Dystopian and Utopian Impulses
The End of Eating Everything

Stina Marie Hasse Jørgensen

Introduction

How are dystopia and utopia vocalized in contemporary sound art? Dystopia and utopia have been important impulses for art to create future scenarios and imagining the world otherwise. Dystopia translates from Greek as "bad place" and is an undesirable imagined place. Characterized as a state of agony, dehumanization, and disaster, dystopia appears as an impulse in many artistic works. The word "utopia" translates from Greek as "not place." Five hundred years ago, Thomas More proposed a conceptualization of utopia as a non-place where an ideal form of human organization could exist (More 2016). Richard Noble, professor in art history, writes in the introduction to the anthology *Utopias*, from 2009, about how the notion of utopia has been depicted and reconceptualized in art throughout time. He argues that one can find utopian impulses in many artworks in that they both "direct our attention to the realm of the political," and are "oriented beyond existing conditions, sometimes to the future, sometimes to the past; it is art that asks us difficult questions about the conditions we live with and the potential we have to change them" (Noble 2009, 14). Noble's main concern is how these impulses can be seen in visual art but leaves out the ways in which sound in art makes them heard.

In the following, I will discuss utopian and dystopian impulses in contemporary artworks and argue that they are closely connected, as if two sides of a single coin, since both can arguably be places that are imagined but not realized, pointing to political issues as something that extends from the present to the future or to the past. Here, I will explore how sounds, specifically voices, in an interplay with the visual dimensions of different artworks, make utopian and dystopian impulses heard. I will focus on the performativity of voices as artistic media in artworks. Sound studies scholar Norie Neumark writes in "Doing Things with Voices: Performativity and Voice" that when voices work performatively,

they don't just describe or represent something or someone, but perform and activate, for example feelings of intimacy or intensity. She states; "performativity suggests something that doesn't just describe or represent but performs or activates—acting as "a material force to change something." Performative voices can "*provoke, invoke, evoke*, and *convoke*" (Neumark 2010, 96) feelings in the audience as a performative action that enacts through the material qualities of the sounding voice, which goes beyond what the voices semantically say. Neumark states that "rather than call or call forth an audience as interactors, voice can instead performatively interpolate them as players and/or performers who bring the works into existence" (Neumark 2010, 97).

I will discuss how three contemporary artworks made by female artists from different parts of the world vocalize dystopian and utopian impulses by different means. My focus will be on how the performativity of voices as artistic media in relation to the visuality of the artworks makes dystopian and utopian impulses heard, and how this can engage the audience in the complexity of political issues and create performative experiences that direct the audience's attention to imagine the world otherwise. The works are all unfolded through time and include vocal performances, yet in different ways, through different media, and with attention to different political issues that concern voices of the otherwise unheard—through screams, dialogues, or meditative recitation.

First, I will discuss how the animated video *The End of Eating Everything* from 2013 by the Kenyan-born artist Wangechi Mutu performatively uses a monstrous scream as an emblematic knot of synchronization in the interplay with the visual elements in the video in order to engage the audience. Then, I will account for the ways in which the play with shadows and voices in a poetic dialogue includes the visitor in the video/shadow play *Transgressions* from 2001 by Indian artist Nalini Malani. Lastly, I will examine how the meditative recitation by the Danish artist Nanna Lysholt Hansen in the speech performance *Dear Daughter/Anatomy of the Chthulucene #6* from 2018 is performatively playing with dubbing, playback, and loose synchronization of voices in relation to the naked body in the performance space, engaging the audience through a discomforting uncertainty about the connection between the naked body and the voices speaking. The three artworks presented map out different means by which the artworks make use of the performativity of voices in relation to the visual expressions involving the audience in the issues pointed at in the artworks.

The End of Eating Everything

The 8-minute video animation *The End of Eating Everything* was made by internationally acclaimed contemporary artist Wangechi Mutu (born 1972). Mutu is known for her paintings, sculpture, and videos exploring different aspects of the female body as subject in terms of gender constructs, cultural trauma, and environmental disaster. She has exhibited at museums worldwide, including Tate Modern in London, Centre Georges Pompidou in Paris, the Whitney Museum of American Art in New York, and the Museum of Contemporary Art in Los Angeles among others.

The End of Eating Everything was commissioned as part of the exhibition *Wangechi Mutu: A Fantastic Journey* at Nasher Museum of Art at Duke University, North Carolina in the United States. In the video animation, screaming birds fly in formation across the sky of a gray dystopian landscape. A close-up of a black woman's face (the musician Santigold) depicts her looking at the birds quietly, with glowing stones or dandruff in green, pink, and purple at her temples. As the camera zooms out it becomes visible that the woman has Medusa-like dreadlocks swirling around her face as if they were made of eel-like creatures with a life of their own. It is revealed, as the camera zooms even further out, that the Medusa-haired head is not attached to a human body, but to a floating earth-body. Arms, legs, and industrial wheels are sticking out of the floating earth-body, making the hybrid creature look like one of the figures found in Hieronymus Bosch's visions of hell from the triptych, *The Garden of Earthly Delights* (1490–1510), placed in an enchanted world that is both ancient and futuristic at the same time. Below the disturbing imagery of the hybrid Medusa creature a fragment of the textual narrative unfolding throughout the animated video reads "Hungry, alone and together" (Mutu 2013). The birds scream and the hybrid Medusa creature sniffs in the air as if smelling a meal in front of it. They are all hungry, alone, and together. A dissonant drone, which sounds like a time-stretched scream, hovers in the background, underlining the dystopian atmosphere. The hybrid Medusa creature pours out a powerful and horrific monstrous scream before she attacks the flock of screaming birds and eats them. In the air/water traces of blood from the birds are floating. Then, polluted fog rises from the hybrid Medusa creature, which causes it to implode into smaller pink-purple cell-like replicas of a hairless Medusa head, all smiling ecstatically.

The Scream of the Hybrid Medusa

In many ways, it seems as though Mutu's hybrid creature embodies the Medusa from Greek mythology, a chthonic monster full of female rage from an archaic world, with living snakes in place of her hair. In Mutu's work, however, the hybrid Medusa is not just operating in the archaic world, but is just as much a monster living out its female rage in a time that merges past, present, and future. The roaring scream of the hybrid Medusa captures the dystopian impulse materially in a horrifying moment. The monstrous scream also convokes, through the material qualities of the performative voice, the audience's experience of the merging of temporalities. The visual animation of the dramaturgy in the video supports this experience of the scream as performative; the narrative converges in the moment of the roaring scream and radiates from it. In this way, the scream is what the film theorist and composer Michel Chion has coined as a punch sound, which is "the audiovisual point toward which everything converges and out of which all radiates" (Chion 1994, 61). The punch sound is an emblematic knot of synchronization where the visual imagery and the sound converge, becoming at one and the same time separate. The scream is a punch sound in that it is, at one and the same time, converging and separating from the visual depiction of the hybrid Medusa. The horrific scream converges with the imagery

of the composite Medusa combining human and nonhuman elements. Yet, at the same time, it is separated from depiction of the hybrid Medusa, as it sounds like it comes solely from a human body, which creates a chilling ambivalence of the monstrous creature as an uncertain other—both human and nonhuman. It is in this conversion and separation between the voice and the imagery, which creates an unplaceable monstrous otherness, that there is a generative potential.

Listening to the Monstrous

Philosopher and contemporary art theorist, Bojana Kunst, writes in "Restaging the Monstrous" about how the monstrous has a generative potential. She argues that the monstrous is other than human, but also a symptom of rethinking the human. Kunst discusses the political preoccupation with the monstrous and finds that it is "in the ways in which the other (animal, slave, machine, woman, etc.) is continuously humanized to reflect back the face of 'our' own (white, western and male) humanity" (Kunst 2008, 215). Kunst further writes:

> the monstrous becomes the "ever present possibility to destroy the natural order of authority" not because it is some externalized other which has to be swept into the arms of regulating order, but because it is the constant production of otherness in the very *human* being, so that the human can recognize and define itself. (Kunst 2008, 215)

In *Postopera: Reinventing the Voice-Body*, the musicologist Jelena Novak links the generative potential of the monstrous as an otherness, as it is conceptualized by Kunst, to that of the monstrous voice, which has a "terrifying friction of inhuman noise" (Novak 2015, 67). Following Novak, the punch sound, which here is the performativity of the voice in relation to the visuality of the hybrid Medusa's body, creates a monstrous

Figure 4.1 Nalini Malani, *Transgressions*, 2001. Courtesy Stedelijk Museum, Amsterdam, Netherlands.

otherness, which has a generative potential. Said another way, the hybrid Medusa in the visual imagery arguably produces an otherness, but through the affective intensity of the monstrous voice, time-stretched to linger as a friction between inhuman noise and the performative human scream, this otherness is not external to the human, but instead creates an experience of the constant production of otherness in the human. This internalization of an otherness in the human enables the audience to recognize themselves in connection to the monstrous. Kunst writes that the monstrous is "materializing the very potential of hybridity to open up possibilities for a different world" (Kunst 2008, 220). The monstrous scream interpolates the audience and engages them in the artwork through their listening to the hybrid monstrous Medusa (as part human and part Earth) as an otherness that can destroy the existing the order of things, pointing at the need for a new moral compass that can change the behaviors and actions of humans (pointing at the audience). The performative punch sound is a material force, and a catalyst for the audience's reflection: Can the Earth become anything else than a monstrous Medusa full of rage in the age of eating everything? Is it possible to share and care for others, nonhuman as well as human, in the times of the Anthropocene, the period during which human activity has been impacting Earth's geology, climate, and environment?

There is a duality here connecting the dystopian and the utopian impulse in the audience's audiovisual experience of the video work; condensing the critique of the time of the Anthropocene and the consumption and exploitation of the Earth in the past, present, and potentially the future, as well as creating a space for the audience to reflect and imagine otherwise, other ways of consuming, eating, and caring for nonhumans as much as humans.

Transgressions

The video/shadow play *Transgressions* is made by the renowned contemporary Indian artist Nalini Malani (born 1946), who is considered a politically motivated artist bringing attention to issues of transnational politics and issues of gender and postcolonial history, using different media such as painting, theater, and installation projects. Malani has exhibited all over the world at places such as Kiran Nader Museum of Art in New Delhi, the New Museum of Contemporary Art in New York, and the Institute of Contemporary Art Indian Ocean in Mauritius.

Transgressions directs the audience's attention to the complexities of political issues through the use of performative voices and their interplay with the visual elements of the work, in a way that stretches—or transgresses as the title of the artwork suggests—beyond existing conditions, to the past and to the future, incorporating a duality of dystopian and utopian impulses, in a way that is similar to Mutu's video animation. *Transgressions* is like *The End of Eating Everything*, a work that unfolds over time, however the movements of the images are here animated mechanically by rotating motors onto video projection, and the voices operate both on a semantic level and a material, performative level. Although Malani's work is concerned with the complex issues of consumption, just as in *The End of*

Eating Everything, *Transgressions* connects it to the problems of the global economy and the history of imperialism.

In the following, I will point to the ways in which *Transgressions* engages audiences in these complex political issues through poetic conversations, which unfold as affective dialogical fragments entangled with the visual imagery in the video/shadow play. Neumark argues that the way voices performatively engage audiences is by evoking feelings in the audience through the material qualities of the sounding voice, for example through an aesthetics of intimacy and intensity. The voices, Neumark argues, can call the other into an intimate relationship. "This happens not by speaking of intimacy, but through vocal qualities and vocal performance—through the performativity of the voice" (Neumark 2010, 96). In my discussion of *Transgressions,* I will describe how the performativity of voices can be said to interpolate audiences through an aesthetics of intimacy and intensity. This performativity of voices lets otherwise unheard voices of women and children poetically embody current political issues of globalization and consumption. This enables audiences to reflect upon the problems of today and the future—mobilized through references to colonialism, ancient mythic characters, mobile phone companies, and linguistics.

"I Speak Orange"

Transgressions is a combination of different media in a distinct hybrid genre, the video/shadow play. The installation is created as an immersive environment with four transparent, slowly rotating Mylar plastic cylinders. On the cylinders there are various scenes that combine Indian and Greek mythology with historical events, especially the English colonization of India, in a patchwork merging history and fiction, such as the depiction of the goddess Kali holding the decapitated heads of English colonizers in her many arms. This, as well as illustrations of different organs from the human body and animals, such as monkeys and lions, is painted in the traditional Indian Kalighat style. The scenes and figures are painted from the inside of the cylinders with the so-called "reverse painting" technique. Three video projections are traversing the cylinders showing the skin of a Caucasian male as a reference to the postcolonial history of India. When the reversed paintings from the cylinders cast shadows on the walls in the gallery space it is as if they drift across the Caucasian male's skin, like animated tattoos that dynamically change size and merge with other shadow figures. The shadows from the paintings on the rotating cylinders are framing and enclosing the visitors in the installation. In fact, the visitors become part of the shadows in the installation having their own figures casting shadows on the walls, merging with the figures from the video/shadow play. In this way, visitors are affectively engaged and implicated in the video/shadow play.

Walking inside the video/shadow play visitors can hear the ambient soundscape of a sitar playing the same chords on a loop as a meditative backdrop to voices speaking in

poetic language, which is seductive and dream-like. A female-sounding voice states a once-utopian aspiration: "We had everything, everything, everything before us" (Malani 2001). Yet the belief in better times to come is punctured by the way the statement is spoken in the past tense, which makes the visitor aware that this aspiration is not applied to the present moment in time, serving as the future (where everything was possible) to the moment the statement was made. In this way, the entanglement of present and future times is introduced as something that is inevitably transgressing the boundaries of separated temporalities. This transgression of linear time is also stressed by the cyclic time manifested in the rotating cylinders and the looped sound of the sitar on the soundtrack. It becomes clear that, for the speaking voice, time also equals money when it starts to list prices on mobile phone times: "Air time Rupees one forty nine" (Malani 2001). Then the following lines are rhythmically spoken: "I speak Orange, I speak blue, I speak your speak just like you" (Malani 2001). The word Orange refers to one of the mobile phone providers in India at the time the video/shadow play was created. The reference to the brand Orange makes a gesture toward the processes of globalization and consumerism that continuously transform the conditions of people living in India and elsewhere. Time, not only in relation to the time of labor, but also to the time of consumption, such as speaking on the phone, is connected to a value and enrolled in the monetary economy.

The work makes evident that not only time is given a value but so too are languages, and it illustrates how some languages are seen as worth more than others. This is emphasized when a technologically modified voice, which sounds like that of a little girl, says: "Amma, please send me to English school / and Amma, she really was no fool" (Malani 2001). The child's plea to her mother proposes that the English language is required in order to succeed and get a job in the society of the future. In India, English is also to a large extent regarded as the language of global consumerism, which is emphasized when a female-sounding voice says: "So la ti do / I do, I do in high heel shoe / I do, I do want to be like you / I orange, I blue / I do, I do" (Malani 2001). Languages have been given a value and, in the same way as time, are enrolled into the monetary economy. Meanwhile the voices speak in English on the installation's soundtrack, the video projections display Indian scripts in local Indian languages: Urdu, Telugu, Tamil, Malayalam, Gurumukhi, Bengali, Gujarati, and Marathi. The Indian languages slowly fade into the ground as if symbolizing that they will soon disappear as a consequence of globalization, wherein the dominant spoken language is English—the valued language of multinational companies and the future of consumerism. Being and speaking English "just like you" is the means of access to money and therefore also the future. As art historian Mieke Bal states: "the thought that English opens all doors and that without English, one is doomed to poverty, has bound language to money, and money to English. This is the cultural loss of globalization" (Bal 2016, 253). This dystopian cultural loss, which is stressed by the video projections, concerns the increasing standardization of languages and expressions in the quest for globalization, on behalf of the complexities and troubles of speaking and translating many different languages.

Giving Voice to the Shadows

The vocal exchange in *Transgressions* can be experienced as a poetical portrayal of a mother and her child, talking about what appear to be familiar things, such as choice of school and shopping. The voices sound as if they have been recorded close to the microphone. Here Malani is working with the potentials for intimacy without implying some singular identity but what can instead be experienced as enculturated bodies. Neumark explains the enculturated body: "Emerging from the body, voice is marked by that enculturated body. That is, *embodied* voices are always already mediated by culture: they are inherently modified by sex, gender, ethnicity, race, history, and so on" (Neumark 2010, 97). The "I" in "I speak orange" or "I do want to be like you" creates an intimacy as a vocal presence, modified by history, gender, and ethnicity. Words such as "Amma," which can be translated to the English word "mom," and the references to "Rupees" and "Orange" situates the voices as coming from enculturated bodies speaking from within the site of India where the postcolonial and capitalist struggles are unfolding. The "you" from the sentence "I do want to be like you" performatively interpolates the visitors as performers, inscribing them into the work by calling on the visitor as an enculturated body, as a representative of the ones mastering the English language, and as somebody who is part of the consumer culture.

The sound of the voices in *Transgressions* calls our attention to the materiality of the voices, for example the rhythm and tone in which the words are pronounced, and not just the words they say. Especially the childish voice questions the notion of identity through the materiality of the voice; it is hard to place, seeming as a displaced floating voice with no body. It is a technologically modified, intense, high-frequency-sounding voice, ambiguous in its appearance to the extent that it poses questions, or as to whether it is the voice of a child at all. The voice is not simply clear-cut child or not-child, it sounds in-between—as an Other that is hard to locate as a singular identity, but still an enculturated body. In this way Malani states that *Transgressions* is not about identity politics, but rather about structural problems connected to the ways in which the systems of globalization and consumerism enables or disables voices of Others outside the dominant currencies and languages of these systems to be heard.

It is here the utopian impulse of the work is unlocked, creating a situation or a space where the otherwise unheard Others, the ones in the shadow, are listened to, pointing at the ones potentially excluded from the systems of globalization and consumerism, drawing lines to the times of colonialism as another system constituting the voices of the colonial subject as Other. This connects to postcolonial theorist Gayatri Chakravorty Spivak's category of the "subalterns"—those whose utterances cannot be heard by the system, owing to their social positions and the ways the system enforces its hierarchy. Subalterns are present but remain unheard in a global context. The Other is always in the shadow (Spivak 1994). In *Transgressions,* the Other is the child not able to speak the regional languages of where they were born, they speak English instead, because it is seen as the language of the future and the gateway to becoming successful in the

globalized world. In this way, the performative voices that speak in the installation give voice to the shadows and express a critique of past colonialism just as much as do the linguistic expansionism and imperialism of English as the language of wealth in the globalized world of the present and the future.

Neumark writes, the voice can act as a material force, a catalyst that can open the audience to experience and reflect upon political issues in a way where distant viewing and listening is impossible. The voices and images in the video/shadow play complement each other as assemblages, fragmented narratives, and storylines. Memories, imagination, dreams, and different temporalities are not clearly distinct in Malani's work, but come together through the interplay of the voices, video projections, paintings from the cylinders and their shadows, and the bodies of the visitors. They are all oscillating between appearing and disappearing, emerging and vanishing, manifesting an affective ambiguity as material yet ephemeral. The intimacy created by the vocal interpolation of the visitor, as well as the incorporation of the visitors' shadows, makes *Transgressions* a very physical and affective experience of the otherwise abstract politics of globalization and the world of consumerism. Malani is placing the visitor in a double role: as "you," the one who speaks English and does not understand the regional Indian languages, and as the role of the Other, the shadow on the white skin of the Caucasian male merging with the shadows from the cylinders. *Transgressions* both displays a dystopian impulse and a utopian impulse. The work is creating, on the one hand, a dystopian scenario where only English, as a profitable language in the global economy and rise of global consumerism,

Figure 4.2 Nanna Lysholt Hansen, *Dear Daughter/Anatomy of the Chthulucene #6*, 2018. Courtesy of Nanna Lysholt Hansen.

is spoken, and less profitable languages, such as Indian languages, are forgotten and not spoken any longer. At the same time, on the other hand, the installation creates a utopian alternative space—giving voice to the otherwise unheard enculturated Others. *Transgressions* engages the visitors to listen to these voices and affectively implicates them in the situation unfolding in the video/shadow play, by placing the visitors in this ambiguous double role of Other and self.

Dear Daughter/Anatomy of the Chthulucene

The speech performance *Dear Daughter/Anatomy of the Chthulucene #6* was created by contemporary Danish artist Nanna Lysholt Hansen (born 1980). Lysholt Hansen's artistic practice is concerned with the interplay between the female body as subject and object in connection to technologies. Lysholt Hansen has exhibited at places such as I: Project in Beijing, The Saint-Valentin Espace d'Art in Lausanne, The Pratt Manhattan Gallery in New York, and Kunsthal Charlottenborg in Copenhagen. Just like *The End of Eating Everything* and *Transgressions*, Lysholt Hansen's speech performance displays a dualism where a utopian and dystopian scenario are exhibited at the same time. All three works point to dystopian possible futures or pasts of disaster, the extinction or suppression of voices of Others, often women, in global consumerism and production. Yet, at the same time, the works all display a reimagination of another world where the voices of women and Others, the otherwise unheard, are heard.

Dear Daughter/Anatomy of the Chthulucene #6 was performed as part of the exhibition *Shaking the Habitual* concerning feminist utopias at the gallery space named *meter* in 2018. The performance is the last part in Lysholt Hansen's project *Dear Daughter*, which consists of a series of three performances. All three speech performances are recitations of letters spoken aloud to her daughter. In all the three of the *Dear Daughter* performances Lysholt Hansen interweaves, in her spoken letter to her daughter, her own experiences and thoughts on crucial elements in female life, such as pregnancy, birth, mothering, and female sexuality, with text fragments from feminist literary sources. The first series of performances, *Dear Daughter/Organic Cyborg Stories (After Donna Haraway)*, were first performed in 2013 as a letter to Lysholt Hansen's unborn daughter. The second part of the performance series, first performed in 2014, *Dear Daughter/Motherboard Theories of Evolution (w/ Braidotti, Plant et aliae)*, was a letter to Lysholt Hansen's newborn daughter. *Dear Daughter/Anatomy of the Chthulucene* (O' Connel Oh Oh Haraway) was first performed in 2016 as a letter to Lysholt Hansen's almost-speaking daughter and is about sex and sexuality. Here, Lysholt Hansen weaves the biologist and feminist thinker Donna Haraway's concept of the "Chthulucene," together with anatomic descriptions of the clitoris by female urologist Helen O'Connell as well as Lysholt Hansen's own experiences with mothering and female sexuality.

At *meter,* a giant clitoris sculpture made from white Styrofoam, from Lysholt Hansen's sculpture series *The Chthonic Ones/Anatomy of the Chthulucene* (2016–2018), stretched

its tentacular structure out in the gallery space. Four palettes made of something that looked like soft clay with neon colors on them were placed on the floor around the clitoris sculpture. Approximately twenty people were seated on a ramp or standing up against the walls of the small gallery space. Lysholt Hansen sat in a mermaid posture, completely naked except for a headset worn above a nylon sock-mask, which covered her head. She had a small speaker reciting the letter to the daughter that she moved around with her as she made her way down the ramp toward the clitoris sculpture. The ramp was not very broad, so Lysholt Hansen was more or less in between the legs of the audiences on the ramp. Lysholt Hansen painted child-like drawings on her naked body with loose lines of the luminescent neon colors from the palettes on the floor. It was a very intimate bodily experience with Lysholt Hansen's body almost touching the audience as she moved. At the same time, the performance seemed cold and distanced, which was stressed by the way that Lysholt Hansen had covered her head with the nylon sock-mask, the headset, and the speaking voice from the speaker that seemed to instrumentalize and alienate the naked body. However, the voice heard seemed intimate and calm, speaking slowly as if delivering a meditative guidance. Deep breaths and intimate sounds from the mouth are sometimes heard on top of the soundtrack bringing associations to new age music with long drones and harmonic tones slowly unfolding. The calm intimacy of the naked female body, the meditative voice, and the instrumentalization and alienation of the same body through the mediation of the voice through the speaker and the disconcertingly covered head are reflected in the semantic content of the letter.

Lysholt Hansen uses recent anatomical descriptions of the clitoris, a part of the female body that was mapped in detail for the first time by O'Connell in 2005. Throughout the performance it became clear that this mapping of the clitoris is part of an activism that aims to disseminate knowledge about the clitoris, and the sexuality that comes with it, because for long periods of time it has been suppressed and not spoken about. In the performance we are also told that the majority of the clitoris's anatomy is chthonic, or underground, stretching tentacularly into the body, linking Lysholt Hansen's description of the anatomy of the clitoris to Haraway's conceptualization of the Chthulucene in *Staying with the Trouble: Making Kin in the Chthulucene* (2016). This link was also made visible in white Styrofoam sculpture at the center of the performance. In the performance, the chthonic structure of the clitoris was also connected to the narrative frame of the Chthulucene, which is a conceptualization of our current time as a place where past, present, and the yet to come are entangled. Haraway describes the Chthulucene as the time of the chthonic ones, which are "beings of the earth," to which the organ of the clitoris can be said to belong, which are "both ancient and up-to-the minute" (Haraway 2016, 2). This notion of entangled time is crucial in Haraway's investigation of the possibilities of moving on from "disturbing times, mixed-up times and turbid times" (Haraway 2016, 1). As an alternative to the current conceptualization of our time as the Anthropocene where an onrushing destruction is taking place, manifesting a kind of dystopia, Haraway wants to bring back attention to the possibilities of feminist partial healing and making kin, and proposes a conceptualization of our current epoch as the

Chthulucene: a period where the sense of ongoing living with each other is unfolded in places where times and matter are entangled (Haraway 2016). Haraway's conceptualization of the Chthulucene—the entanglement of times and matter, where feminist partial healing and making kin is possible—is also embodied in Lysholt Hansen's speech performance through an interplay between technology, body, and performative voices that display a polytemporality and an aesthetics of intimacy, intensity, distance, and alienation creating both dystopian and utopian impulses.

Zones of Entanglement between Machines and Organic Selves

The first sentences in Lysholt Hansen's *Dear Daughter/Anatomy of the Chthulucene* condenses how she combines her own experiences of motherhood in relation to her daughter with the anatomic descriptions of the clitoris and Haraway's notion of the entanglement of times in the Chthulucene: "Now we play / We are glitter, pink, purple, coral and slime / This which I am going to tell you reaches into your biology, your genealogy and from there stretches tentacularly and technologically into the Chthulucene, the future we are becoming. Again. Now" (Lysholt Hansen 2018). The linguistic meaning of the letter that Lysholt Hansen performs matters, but so too do the ways in which she materially performs it. Although Lysholt Hansen is corporeally present, her naked body painted with neon colors live in the gallery, her presence there is also mediated and estranged. The voice heard reciting the letter is not mainly coming from Lysholt Hansen's mouth as she sits on the gallery floor, but from the speaker she is moving with her whenever she moves her body. The dissociated voice heard in connection to Lysholt Hansen's slowly moving body destabilizes the experience of the "here and now" of the performance and creates questions as to whether the performance is personally authored, leaving the audience with a titillating discomfort.

The use of the dissociated voice from the speaker moving around the gallery space together with Lysholt Hansen's audiovisual presence makes sensual the zones of entanglement between machines and organic selves. In the speech performance Lysholt Hansen switches between playback, dubbing, and loose synchronization in order to attach the speaking voice from the loudspeaker to the performing body in the gallery, leaving the audience with an unsure feeling of from when and from whom the voice emanates. It is an ambiguous body-voice-technology relation unfolding in the performance. In the following, I will discuss why the alienating and destabilizing interplay between voice, technology, and body is crucial in making Lysholt Hansen's speech performance become a place where both dystopian and utopian impulses are exhibited, generating a space where conventions and norms are investigated and different social structures and interrelations are vocalized, enabling the audience to imagine otherwise.

Dubbing, Playback, and Loose Synchronization

The tradition of dubbing, synchronization, and playback is one frequently used in film and it has been written about by Michel Chion. He has discussed the differences between body-voice relations with regard to these.

Chion writes that in playback performances "there is someone before us whose entire effort is to attach his face and body to the voice we hear. [. . .] Playback marshals the image in the effort to embody" (Chion 1999, 156). The playback technique is used when there is a recorded voice and miming body on stage. It is when Lysholt Hansen moves her lips behind the nylon mask as an effort to attach her face and body to the voice we hear. Chion points to the synchronization process that happens in the playback of the voice with precise movements of the lips, in order to simulate that the voice heard comes from the mouth moving on film. He writes that this is a representational procedure: "We take this temporal co-incidence of words and lips as sort of guarantee that we're in the real world, where hearing a sound usually coincides with seeing its source" (Chion 1999, 128–9). Hearing the speaking voice from the speaker in Lysholt Hansen's performance coincides with seeing the movements of the lips moving in real time behind the nylon mask on the neon-painted body. The voice coming from the speaker is in this way attached to the neon-painted body performing live in the gallery space. However, it is only sometimes that the articulation of the words heard from the speaker accords with the lip movements of the mouth behind the mask. Other times, the mouth behind the nylon mask is whispering the words in synchronization with the words uttered from the speaker, which appears to double the voice as if it both belongs and doesn't belong to the performing neon-painted body. This is the effect of dubbing the vocal performance.

Chion writes that dubbing is when "someone is hiding in order to stick his voice onto a body that has already acted for the camera" (Chion 1999, 156). In Lysholt Hansen's performance the dubbing is a way to stick the naked body's voice onto a speaking body that has already acted for the voice recorder. It is a doubling of speaking bodies where one body is only heard and never seen. In film, Chion argues, dubbing can help characters to appear more realistic and comprehensible, creating the illusion of wholeness between image and sound. In Lysholt Hansen's performance, however, the gap between the body and the technologically distributed voice destabilizes the experience of the performing naked body and the speaking body as a whole. Lysholt Hansen further emphasizes the destabilization by performing a loose synchronization, by a delayed performance of the words heard from the speaker, or by only moving the lips behind the nylon mask to some of the words heard. It stresses the fictitious world of the performance space. Michel Chion notices that "in general, loose synch gives a less naturalistic, more readily poetic effect" (Chion 1994, 65).

The use of playback, dubbing, and loose synchronization techniques feeds an experience of the body seen and the voice heard as both connected and disconnected at the same time.

It is a performance playing with the expectations of the audience, performing a complex and ambiguous relationship between body and voice, image and sound, live, recorded, and projected. When Lysholt Hansen uses the playback and dubbing techniques in her performance, it is not to make the temporal relationship between voice and body seem realistic to the audience, in the way Chion argues that the techniques are used in cinema. It is rather used to destabilize what the audience is experiencing, displacing the here and now of the voice-body relationship into a polytemporality.

Vocal Kinship

The polytemporality of the Chthulucene, where past, present, and the yet to come are entangled, is manifested both in the semantic meaning of words told and in the vocal performances of the voices heard in *Dear Daughter/Anatomy of the Chthulucene #6.* Lysholt Hansen play with the synchronization of body-voice-technology through the use of playback, dubbing, and loose synchronization. This opens for a polytemporality that unfolds in the voice performance and materiality during the performance time. The merging of time is also stressed in the semantic dimension of the work, where voices of Haraway's writings in 2016, O'Connell's text from 2005, and Lysholt Hansen's script from 2017 are fused. The polytemporality and entanglement of times is also quite literally stated in the script to the speech performance: "sym-poetically we have all melted together. / Over time. / Over time / To different times" (Lysholt Hansen 2018). The speech performance does not take place solely in the present, but instead takes place in a polytemporality, where an entanglement of past, present, and the yet to come is merged.

The polytemporality in the performance creates an alternative space where the dichotomy between the utopian and dystopian impulses are dissolved throughout the temporality of the speech performance. The vocal entanglement of past, present, and future in the performance can be argued to unfold a dissociation of the voice-body relationship, creating a dystopian alienation of the female body and the notion of mothering. This is also stressed by the nylon sock-mask's objectification of the naked female body, with the neon-colored, child-like lines drawn onto it, visually manifesting how female sexuality, caring, and mothering have been, are, and possibly will be, suppressed and muted.

At the same time, the performativity of the voice and body enact and make evident a caring and mothering between multispecies, rather than just narrating it. In the performance, the caring and mothering is intimately unfolded between Lysholt Hansen and the voice from the speaker, the daughter, and the audience—between the organic and the technological, the human and the nonhuman. The performance presents the zones of entanglement of both time and interrelations. In this way the performance can be said to demonstrate the utopian impulse. The polytemporality of the entanglement of times emphasizes Lysholt Hansen's performance as an alternative place where utopian impulses can unfold—where voices of the otherwise unheard can be listened to, and where imagining otherwise is intimately acted out. Lysholt Hansen ends her speech

performance by opening up the relationship between mothers and daughters and, in this way, including the audience as daughters in a feminist partial healing, making kin and caring for the chthonic: "Dear Daughter, / Here is no mother. Here is mothering / here is caring for others, caring for the chthonic, for the self-with-others. Care. Dear Daughter. The future is female. / Now you take over" (Lysholt Hansen 2018). It is almost therapeutic listening to the otherwise silenced history of female sexuality, to the traumatizing and dehumanizing effects of the ways in which female sexual, tentacular being has been repressed, especially because Lysholt Hansen, through her performance, also creates an alternative space where the clitoris and female sexuality are not repressed, giving voice to the chthonic ones, a space where intimacy is fostered through multispecies' caring and mothering.

Conclusion

In this chapter, I have discussed how utopian impulses have been vocalized in different ways in the three artworks Wangechi Mutu's animated video *The End of Eating Everything*, the video/shadow play *Transgressions* by Nalini Malani, and Nanna Lysholt Hansen's speech performance *Dear Daughter/Anatomy of the Chthulucene #6.*

Each in their own way, the three artworks display a dualism where the utopian is inside the dystopian or the dystopian is inside the utopian, unfolding throughout the temporality of the artworks. In both Wangechi Mutu's *The End of Eating Everything* and Nalini Malani *Transgressions*, dystopian scenarios are exhibited by audiovisual means as dehumanization and disaster through global consumerism and eating everything, or as destruction of culture and languages in the rise of English as the imperialistic language of global consumerism. At the same time, both *The End of Eating Everything* and *Transgressions* create utopian spaces where the voices of women and Others are heard; the scream from the hybrid Medusa and the voices of the enculturated bodies of Indian mothers and children speaking English instead of Indian languages. In these works these voices, otherwise repressed as chthonic monsters and Others, can scream and speak in a way that points to the complexities of political issues in a quest to prompt the reimagination of another world and their role in it. The speech performance *Dear Daughter/Anatomy of the Chthulucene #6* by Nanna Lysholt Hansen also holds the dualism of dystopian and utopian impulses, as the other artworks do as well. On the one hand, the work holds a dystopian scenario in its alienation and objectification of the female body and the notion of mothering. On the other hand, it creates a utopian space through giving voice to women, capturing the intricacies of political issues, and it creates an alternative space for experiencing an imaginative space where voices of the otherwise unheard are made audible.

The three artworks can be said to vocalize dystopian and utopian impulses in different ways using different media and vocal techniques. Through an entanglement of history, fantasy, memories, dreams, and fictional and real-time spaces, the audiovisual narratives and performances enable affective experiences of political issues that stretch out in relation

to the past and the future. In this way, the artworks present, in each their own way, alternative and imagined places in which real conditions, values, and positions are investigated. The artworks' visual elements, in their interplay with the performativity of voices as an artistic medium, exhibited as screams, poetic dialogue, or meditative speech, act as material forces or catalysts interpolating and opening the audience to experience concrete yet imagined dystopian and utopian places and times entangled in each other, and to reflect upon how things are, have been, and could be otherwise.

Part II

Journeys across the Grid
Postcolonial Transformations as Sound Art

5

"Diam!" (Be Quiet!)

Noisy Sound Art from the Global South

Sanne Krogh Groth

The sound art scene is not limited to the Northern hemisphere. Rather, it is globally distributed and has for decades also appeared in various manifestations and constellations in the Global South. Globalization, postcolonialism, and decolonialization are therefore issues that are just as crucial to the field of sound art as they are for other fields of social and human science. These issues are slowly beginning to enter the academic studies of sound art. However, academic interest in these issues still does not equal what we find empirically in the field. If one surfs the Internet or travels abroad to visit urban areas in the southern hemisphere, one is likely to encounter artists and communities creating works of contemporary sound art. Some of these artists involve themselves in independent long-term collaborations across the hemispheres, while others work within or supported by public institutions, but by far the majority of them are organized in local independent groups or social movements. Curators in the Global North have noted this proliferation and have, in recent years, begun to expand the repertoire of sound art by inviting artists from the Global South to perform and exhibit at cutting-edge festivals and galleries. Many of these transhemispheric collaborations have emerged from particular historical, institutional, and social contexts and take place within a growing critical awareness of postcolonial and decolonial issues.

I suggest that these changes require the development of new analytical and theoretical tools within the study of sound art, tools that allow for a rewriting of the history and theory of sound art from a truly global perspective. Such a rewriting of sound art history and sound art practices will have to be acutely aware of issues of globalization, postcolonialism, and decolonialization; it will need to integrate representations on the Internet with those of live concerts, installations, and interviews; it must reach out toward anthropological and ethno-musicological methods; and it should make aesthetic considerations central to its analysis.

This chapter, and this section of the book in general, is a modest attempt to begin the work of learning to pay analytical attention to these global shifts and experiments in sound

art. The ambition is not to map the entire world of sound arts, nor is it to develop a new fully fledged set of methodological and theoretical tools. The intention is simply to pay attention to these global changes, and through this to start a discussion about the paradigmatic shift that is long overdue in contemporary sound art studies.

As stated in the introduction to this anthology, sound art is not an isolated entity. It is inevitably entangled in and emerges from related experimental art forms. This chapter therefore begins by tracing how experimental music and arts from and in the Global South have been dealt with by closely related aesthetic fields. It then turns to a reflection on my own experiences from the Indonesian experimental music scene by discussing the participation of Indonesian artists at the 2019 Club Transmediale festival in Berlin and compares this participation in the sounds art milieu of the Global North with experiences with these same artists during my exploratory fieldwork in Yogyakarta and Solo on the Indonesian island of Java in 2018.

This comparison welcomes what we could call a "global turn" in sound art, a turn that calls for mappings of the "blank spots" geographically and historically, while also revealing the "blind spots" in the self-reflection of sound art discourse produced in the Global North.

Global Art—Contemporary Art

First, I turn to a discussion of globalization and modernism within the context of contemporary fine art that has been ongoing for the past few decades (Dornhof et al. 2016; Latimer et al. 2017; Heiser et al. 2019). A major event in the development of this discourse was the Dubai Art Fair in 2007, where the term "global art" was introduced for the first time as contemporary art (Belting 2009, 1). The fair's aim was mainly economic, expanding and redefining the market for fine arts. In his analysis, Belting notes a difference between this new global art and previous systems and tendencies: "global art is no longer synonymous with modern art. It is by definition contemporary, not just in a chronological but also . . . in a symbolic or even ideological sense" (Belting 2009, 2). Global art is in "spirit postcolonial; thus it is guided by the intention to replace the center and periphery scheme of a hegemonic modernity, and also claims freedom from the privilege of history" (Belting 2013). The interest in this term for this chapter is that it exceeds former geographical territories and historiographical narratives. It is *intentionally* postcolonial and *intentionally* also trying to avoid the kind of universalism that is often found in modernism and in the idea of "world art." In contrast, world art was "initially coined as a colonial notion that was in use for collecting the art of 'the others' as a different kind of art, an art that was also found in different museums where anthropologists and not art critics had the say-so" (Belting 2013). The term is synonymous with the art heritage of "the others," meanwhile it was still grounded in a conception of art based on modernist universalism; "today [it] looks somewhat odd, as it bridges a Western notion of art with a multiform, and often ethnic, production to which the term 'art' is applied in an arbitrary manner" (Belting 2009, 4).

Global art, a term coined in the 1980s, on the contrary, defined art that was created as art to begin with, similar to other contemporary art practices. Another significant difference to world art is that global art emerged from a world in which art history did not play a significant role. In a European context, art museums have played a strong role in the cultivation of the historical aspects of art, while auction houses and collectors play a stronger role when it comes to the cultivation of contemporary scenes. This resonated with Belting's view that the loss of authority experienced by museums has not been replaced by the auction houses: "The result is a dangerous and far reaching 'de-contextualization' of art to the degree that artworks are being sold even in places where they have no local meaning and cannot translate their message for new audiences, but serve the taste of collectors who anyway operate in their own world" (Belting 2009, 11). All that are left are the biennials, but they offer a context that goes beyond the event, which makes it hard to develop a deep and sustained dialogue with these new tendencies. This way global art escapes the art historian argumentation, meanwhile becoming part of a market that has been created by many other factors.

Where Belting in his 2009 article presents the situation of global art in a polemical way, media artist and museums director Peter Weibel displays more optimism. In the extensive catalog for the 2013 exhibition *The Globalization and Contemporary Art* (co-curated with Belting and Andrea Buddensieg), global art appears to Weibel to be a decolonialized art that introduces democracy. He positions global art as "forces [that] are threatening Europe itself, namely, . . . the negative sides of modernizations, colonization, and globalization" (Weibel 2013, 20). Weibel argues for the transformational potential of global art, and its capacity to reevaluate the local and the global through "rewritings":

> We are witnessing the reentry of forgotten and unforeseen parts of geography and history, we experience how historic concepts and events are reenacted. Contemporary art and the contemporary world are part of a global rewriting program. We observe how Indian Art rewrites European art and how European art rewrites Asian art and how Asian art rewrites North American art. . . . What we see today is a rewriting of technologies, economies, politics, cultures, and art forms. (Weibel 2013, 27)

The rewriting of contemporary art and changes to the Western canon have been participated in by the Internet, "where everyone can post his or her texts, photos, or videos. For the first time in history there is an 'institution,' a 'space' and a 'place' where the lay public can offer their works to others with the aid of media art, without the guardians of the art world" (Weibel 2013, 27). This is a democratization of the arts, as Weibel states: "In this sense we are living in a postethnic age; we encounter the postethnic state of art" (Weibel 2013, 27).

It is hard not to find a new universalism in this call for a postethnic art world. From the situated and ethnographic perspective that I later will argue from, there can be no such thing as postethnic. The two discussions above sketch out well the dilemma of the sound art scene of today. The democratization of the arts that occurs globally, caused by the Internet, institutional reorganization, and sporadic personal and institutional exchanges, is of course a positive and stimulating progress. Meanwhile,

we also need to be aware of the important loss of context and history that follows, and how the ideas of globalism might even tend toward a new universalism anchored in Western ideologies.

Indonesian Art History as Global Art

In Jakarta, Indonesia, the Museum of Modern and Contemporary Art in Nusatara (Museum MACAN) opened in 2017. A strong teleological historical narrative of Indonesian contemporary art is here presented in line with those we find in many other contemporary art museums across the world. In the catalog for the opening exhibition *Art Turns. World Turns,* it is stated that the exhibition "places the Indonesian collection as the central spine, which is then interweaved with other historical world events and aesthetic influences to create the presentation" (Adikoesoemo 2017, n.p.). The backbone of the museum's content is the collection of the museum's patron and founder Haryanto Adikoesoemo, an art collector and son of the billionaire Soegiarto Adikoesoemo (who founded an Indonesian logistics company, AKR Corporindo). The opening exhibition, curated by Charles Esche from England and Agung Hujatnika from Indonesia, presented 90 of the 800 works from the patron's collection. In their curatorial statement, it is argued with a reference to Belting and to the notion of "global art," that the museum introduces a "new institutional thinking . . . that seeks to represent the contemporary landscape of the art world—both Indonesian and international—in the 21st century" (Esche and Hujatnika 2017, n.p.).

Figure 5.1 A string quartet from Universitas Pelita Harapan (UPH), Conservatory of Music, Indonesia, performs in the entrance hall of Museum MACAN, Jakarta, Indonesia, January 2018. Photo: Sanne Krogh Groth.

The exhibition *Art Turns. World Turns* was organized in four sections shaped after Indonesian national history: *Land, Home, People*; *Independence and After* [1945]; *Struggles around Form and Content*; and *Global Soup*. It was thus organized in a way "that most Western art histories position Europe" (Esche and Hujatnika 2017) with the exception that the center was removed. My visit to the exhibition in January 2018 was highly interesting and informative. But that was it, in a certain sense. Even though the narrative in the exhibition was centered around Indonesian national history, it was as if the overall concept of the institution did not acknowledge its situatedness in Indonesia. Instead, it eagerly reenacted the global art scene that, after all, emerged from concepts of European ideals, conventions, institutions, and historiographies.

When it came to the aspect of sound, I did not experience any within the curated exhibition. The only sound I was met with was the sound from the string quartet sitting in the panoramic entrance hall next to the exhibition entrance, playing pieces by Mozart and Mendelssohn. In other words, they were performing the very same history from which the exhibition had ostensibly tried to pull away. And this was despite the fact that the contemporary and experimental music scene in Java, as well as the sound art scene, is vivid and stimulating. My experience at Museum MACAN illustrates that the practices around global art do not automatically make sense universally, neither do they automatically embrace the field of sound art. Sound art, as defined in the present anthology, is noisy, political, subversive, and situated. Thinking of the specific Indonesian sound art and noise artists who I know, and will reflect upon later in this chapter, I find it hard to imagine these artists interacting with the museum in Jakarta. The museum claims to represent contemporary Indonesian art, but, I would argue, it does so on the premises laid out in the concept of European art history, and through a strong awareness of the *gaze of the other* (Sartre 1956).

Experimental Music, Performance, and Noise in the Global South

Of course, I do not stand solemnly with the awareness of narratives and histories of art and experimental music biased toward Euro-American backdrops. A 2018 anthology on Latin American experimental music positions itself against such Euro-American centrism by advocating

> for the importance of locating a variety of experimental practices both temporally and geographically, thus avoiding generic classifications and asynchronous understandings. These associations with musical memories, with pasts, presents, and imaginary futures, invite alternative modes of listening that subvert expectations and challenge any given configuration of experimentalism as a fixed ontology. (Alonso-Minutti, Herrea, and Madrid 2018, 5)

Such a definition of "experimentalism" is very open and must be highly situated if it is to be useful as an analytical tool. This approach is explicitly framed in contradiction to several

American and European handbooks and readers on experimental music. One example is Cox and Warner's anthology *Audio Culture* (2004), which emphasized particular genealogies instead of establishing its narration through teleological narratives. In line with Cox and Warner, *Experimentalisms in Practice: Music Perspectives from Latin America* also takes a step away from the such narratives, but in a different direction. Instead of searching for traces and connections, Alonso-Minutti et al. stress the field's performativity and commit themselves to "understanding music experimentalisms as a series of continuous presences that navigate fluidly in a transhistorical imaginary encounter of pasts and presents, primarily concern[ed with] . . . what happens when experimentalisms happen" (Alonso-Minutti, Herrea, and Madrid 2018, 2). In other words, their aim to narrate a counter-history becomes a perspective on experimental music as "always highly localized, historically grounded, fluid, and full of inconsistencies and contradictions" insisting on the empirical material not as a part of an overarching global structure or grid, but as "contingent to specific music traditions and shared habits of listening." They therefore argue for what they call "situated tactics [. . .] regardless of any universalist claims about its stylistic sonic outcome" (Alonso-Minutti, Herrea, and Madrid 2018, 4).

Simon Emmerson and Francis Taylor's 2018 anthology on electronic music addresses the "global" by shifting "to seeing a bigger picture—not a 'world music' but a music of the world . . . establishing 'global reach' . . . done through a series of snapshots touching or overlapping—all different 'takes' on the same ideas of reaching out and connection—but most resulting in a two way *interaction*" (Emmerson and Taylor 2018, 10–11). The book's opening section "Global reach—local identities," for example, touches upon how electroacoustic music styles from Latin America and East Asia "have in very different ways adopted, adapted and made their own, using much locally generated material" (Emmerson and Taylor 2018, 11). The section challenges the "myth of origins" with an article on electroacoustic music in Argentina, and presents the "globalized infrastructure" in East Asia and the relationship "to a specific nation culture" in China (Emmerson and Taylor 2018, 11–12).

Within theater and performance studies, the anthology *Not the Other Avant-Garde* (Harding and Rouse 2006) opens up historically and geographically limited histories with an argument that insists that, instead of letting various performances support a theory of the avant-garde (Poggioli 1968; Bürger 1974), they "move from a Eurocentric to a transnational conception of the avant-garde—one which recognizes that the sites of artistic innovation . . . tend to be sites of unacknowledged cultural hybridity and negotiation . . . hoping that [this] will initiate a larger rethinking of the avant-garde" (Harding and Rouse 2006, 2). In this case the authors, in line with Poggioli and Bürger, acknowledge the avant-garde as being activist, subversive, political, and critical, meanwhile they let the empirical material guide the analysis of specific historical and situated performative settings.

Finally, an extensive and essential source for the exploration of sound art in the Global South is Faille and Fermont's book *Not Your World Music: Noise in South East Asia* (2016). The book provides a wide-ranging introduction to experimental artists, networks, and venues throughout Southeast Asia, while it also seeks to integrate unavoidable contemporary political and aesthetic questions. The book "is organized around the idea that music is more than a collection of sounds; it is a social activity" (Faille and Fermont 2016, 1), and is

explicitly positioning itself as "political: it is anti-sexist and anti-colonial" (Faille and Fermont 2016, 2).

As indicated by the title, the book also provides a critical commentary on the term "world music." World music was coined in the 1960s as a term attached to commercial recordings of performers from the Global South, while also appearing in academic circles as "a less cumbersome alternative to *ethnomusicology*" (Feld 2000, 146). Even though the intentions were to oppose "the synonymy of *music* with Western European art music," which dominated in music institutions and publics at the time, the "terminological dualism that distinguished *world music* from *music* helped reproduce a tense division" (Feld 2000, 147). Through the 1980s, we find "world music" as a genre gradually and increasingly integrated into the popular music industry and academic discourse. Some music was protected and entered the United Nations Educational, Scientific and Cultural Organization (UNESCO) heritage list, but, when it came to Western commercial law, the same protection was not achieved. The cultural mixes ended up in the stereotypization of the "other"; the commercialization and commodification of these musical practices for which the original performer often did not receive royalties; all the while the financial structures of Western capitalism maintained this power imbalance (Feld 2000). As mentioned earlier, Fermont and Failles's book is a reaction against this highly problematical history of dealing with music from the Global South. Instead, they turn to "acts of producing, circulating and enjoying music outside the usual capitalistic channels through which music from Asia has reached Europe and North America and their area of economic and cultural influences" (Fermont and Faille 2016, 4).

Entanglements Transferred

With an awareness of the previous literature reflecting globalization, postcolonialism, and decolonialization outlined above, I will turn to my own experiences within this field, paying particular attention to the collaborative aspects between European organizations and Indonesian artists. I will discuss the aesthetic consequences of performances circulated across the hemispheres; of what happens when highly situated works (Groth and Samson 2017) are performed in institutional frameworks established within dissimilar historical and social conditions. As is also stated in the earlier literature on the avant-gardes of the Global South, they have not emerged out of diffusionism: as cultures and aesthetic tendencies that have traveled from epicenters in Europe and the USA, across continents, and entering new territories to be adopted and settled there. The backdrop is not that of European history, but is multifocal and diverse, and, as such, it differs from situation to situation.

In David Novak's writing on noise music in Japan during the 1990s, noise is defined as an art form in a state of constant renegotiation and change. To grasp this flux, Novak establishes a theoretical framework built on the terms exchange, circulation, feedback, and friction. The exchanges and circulations of noise, in particular those between Japan and the US, "touched down in particular places and eventually came to be *imagined* as a global music scene" (Novak 2013, 5). A scene that, after all, was in reality highly situated and specific. Feedback is

introduced as a "critique of cultural globalization, a process of social interpretation, a practice of musical performance and listening, and a condition of subjectivity. . . . Feedback . . . shows how circulation always provokes something else" (Novak 2013, 17). It is this "something else" that interests me, and Novak's theoretical frame is beneficial as it contains the complexity and diversity in cultural exchanges, their global entanglements, the local situatedness, and the idea that the grass is always greener on the other side (Novak 2013, 16). In order to nuance these complexities, he destabilizes the circulation even further by also introducing Anna Tsing's term "friction," to refer to notions of "'missed encounters, slashes, misfires, and confusions' . . . of global interconnection (Tsing 2004)" (Novak 2013, 18).

Challenges from the Global South

CTM—Festival for Adventurous Music and Art is a highly esteemed festival in Berlin. It takes place every year in January at various venues across the city and for two decades has presented the latest developments in electronic music, dance music, sound art, noise, and experimental music in combination with artists' talks, workshops, film presentations, and installations. Since 2016 the festival has had a special focus on inviting artists from the Global South in a deliberate attempt to challenge and stimulate the artistic program with carefully curated circulations and exchanges.

Among the many features presented in the 2019 program, there were around a dozen artists from Indonesia, of whom I knew half, both from previous exploratory fieldwork in 2018 to Yogyakarta in Central Java and from various concert performances in Copenhagen. Together with a number of other Southeast Asian artists, the Indonesian artists were presented under the headline Nusasonic:

> a multi-year project establishing dialogue between sound cultures in Southeast Asia and Europe. The initiative will incorporate formats such as artistic labs, commissioned works, concerts, festivals, lectures, and more. (CTM 2019 web page)

The first time Nusasonic took place was in Yogyakarta in Java, over ten days in October 2018. Initiated by the Goethe Institute South East Asia and in collaboration with the local communities Yes No Klub (Yogyakarta), WSK Festival of the Recently Possible (Manila), and Playfreely/BlackKaji (Singapore), as well as with the CTM (Berlin), the program facilitated talks, workshops, and concerts to gather together the sound artists of Southeast Asia. It was from this collection of artists that some were invited to participate at CTM in Berlin three months later.

Tradition without the Cultural Outfit

In the CTM 2019 catalog, this part of the festival's extensive program was represented by two articles: an interview by festival leader and founder Jan Rohlf with the Balinese duo

Gabber Modus Operandi (GMO), and a text by Indra Menus and Sean Stellfox about the community Jogja Noise Bombing in Yogyakarta, Java.

As a name, Gabber Modus Operandi is a construct with references to two musical phenomena. Gabber is referring to "gabberhouse," the name for a radical genre of hardcore dance music in Rotterdam at the beginning of the 1990s (Rietveld 2018, 75). Actually, it turns out to be more a play on words than a musical reference for the Balinese duo. As they put it in an interview:

> we don't really know if we play gabber . . . The name "Gabber" is kind of a joke. We're mocking this seminal Yogyakarta new media art collective from the 90s; they called themselves Geber Modus Operandi. (Rohlf 2019, 70, in conversation with GMO).

The musical style of GMO is "200 bpm orgasm club music! That's our goal. . . . [it] explores sound healing and sarcasm sounds . . . to examine the differences between the sacred, the stupid, and the fun" (Rohlf 2019, 67). They refer to "jathilan," a ritual Javanese trance dance, "but we don't really appreciate it with the whole cultural outfit. We're more interested in how it is practiced by people on the street. We love it when kids wearing Sepultura or Rancid t-shirts and Adidas shoes are suddenly doing jathilan. It's the best crossover. . . . It's like mixing subcultures" (Rohlf 2019, 67). Their performances maintain a high level of energy and are in themselves a crossover of various genres within dance, noise, and electronic music; meanwhile references to "jathilan" are also present in their performative appearance.

The duo's mix of traditional and contemporary art forms is a common tendency among the artists on the experimental scene in Indonesia. According to GMO, it was the band Senyawa, an internationally known band from Yogyakarta founded in 2010, that was their source of inspiration and "who opened up so may new pathways for Indonesian music" (Rohlf 2019, 68). According to Senyawa themselves their combination of traditional music with the experimental is a political positioning against *gamelan*: an icon of traditional Indonesian music. As Senyawa-members Rully Shabara and Wukir Suryardi phrased it in an interview:

> for Indonesians, gamelan is elite. It's music for royals, music for rich people. It's very expensive, very refined. We prefer music like *kuda lumping* [a popular Javanese ritual dance that invokes trance], where it's for the people, accessible for people. Using broken gamelans, iron instead of bronze . . . it's very raw and brutal. But, at the same time, this is *our* music. This is what we were listening to when we were kids on the streets, everywhere. Not gamelan. Gamelan is on the radio, in the palace. It's very perfect, too perfect. (Novak 2016)

Such critical dialogues with the Javanese tradition, myths, and mysticisms are also at the core of another of Rully Shabara's projects, a band named Zoo. Here, the artist recreates the discovery of the archaeological remnants of a fictional ancient Javanese civilization, Samasthamarta, including its alphabetical system called Zugrafi, and an oral language system called Zufrasi. This "discovered" material has been used on several of the band's albums and in their performances—including at CTM 2019—where they appeared as both mythical figures and as musicians playing experimental rock on the main stage of the venue, Berghain (I will return to Berghain later).

This self-critical and subversive attitude toward one's own history, conventions, and traditions is very much in line with what we could call a conventional avant-garde strategy. They do not let go of their cultural identity, but rather they renegotiate it and turn it in to something new. Such aesthetic choices can be a factor in the explanation of why Senyawa and Zoo, besides being highly talented and creative musicians, have had significantly stronger appeal to audiences outside Indonesia than any other experimental Indonesian music group. The international acknowledgment, concert tours, interviews, etc., at some point produces a feedback loop that will, at some level, cause an interaction and become an element in the feedback loop of Senyawa's aesthetic expression, to eventually also influence other Indonesian experimental artists working toward the same direction. One might say that here, too, the gaze of the other plays a role in this circulation and the transformation of these aesthetics into something else.

Street Noise Activism

The other article in the CTM 2019 catalog, written by the Yogyakartan noise artist, curator, and producer Indra Menus in collaboration with the Yogyakarta-based American artist Sean Stellfox (Menus and Stellfox 2019a), is a piece that also appears in a slightly extended version in their own bilingual publication *Jogja Noise Bombing: From the Street to the Stage* (Menus and Stellfox 2019b). The article offers a historical overview of the experimental music scene in Yogyakarta going back to 1995, with a special focus on the activities of the noise community Jogja Noise Bombing (JNB), the community's street noise activism starting in 2009 and their annual international festival. Here is Indra Menus describing the beginning of the scene in the 1990s:

> In the early days of JNB, local noise musicians always faced difficulties in booking shows, because organisers and venue owners feared that noise would destroy their amplifiers and PA systems. This lack of venues drove us to create *something new*. Once we got kicked out of a spot, we could then move to another location and do it all over again. This concept is part Occupy, part punk rock, and part DIY synth culture. (Menus and Stellfox 2019a, 78, italics added)

The "something new" referred to in the quote above is the so-called street noise bombings—an activist practice equivalent to graffiti bombing but with sound. Basically, it consists of riding a motorcycle with speakers and amplifiers strapped to the back, finding a suitable place—like a busy street corner—and then playing the noise into the street (Groth 2018).

Even though an implicit political agenda and resistance can be found in the music, the explanation of these street noise bombings also emerged out of social circumstances, pragmatics, and needs. A similar causality is found in the country's DIY synth culture, stemming from the fact that "local musicians cannot afford to buy electronic gears. About 11% of the population lives under the poverty line [. . .]. Hence, some independent instrument makers [. . .] produce their own low-cost DIY synthesizers, sound generators and effects" (Faille and Fermont 2016, 88). This way, central elements of their aesthetics developed from local social circumstances. And the noise musicians seem to be aware of this:

> Even when we do noise bombing in indoor venues, we still try to apply the concept of our street performances to the venues we play in. This means that we try to make sure performances are short (usually 20–30 minutes maximum), and involve impromptu collaborative sets between performers. The idea is to keep our shows similar to how we should play when we were on the street. (Menus and Stellfox 2019a, 78)

The illustrations that follow the article in the CTM catalog are photos from concerts during the Nusasonic festival. The concerts here were taking place in outdoor surroundings, presumably public spaces, where artists performed collaboratively, sitting on the ground, surrounded by mixers, synths, wires, amplifiers, speakers, and audiences.

Controlling the Noise

At CTM 2019 Gabber Modus Operandi, Zoo, and the Yogyakarta-based DIY artists Andreas Siagian and Lintang Radittya performed late at night at Berghain, a legendary nightclub in Berlin and a retuning venue during the CTM. The sound systems in Berghain are famous for being of extremely high quality, producing a dense and physical sound, and being played at a really, really loud volume. The experience of being at a Berghain concert is a massive and physical immersion within sound under professional and controlled circumstances. For example, during the performance by Siagian and Radittya, an employee walked around among the audience with an instrument to—I guess—monitor the decibel levels. Berghain is placed in an enormous postindustrial building in former East Berlin. The place itself and the various spaces within the building carry with them a lot of charisma, history, and pathos. I must also admit that, with this being the fourth festival in which I participated there, the venue also started to appear as a functional institution within the highly professional frame of performances at CTM. The adventure of going to BERGHAIN! was starting to fade. To me, it was becoming a black box in which less attention was paid to the situated, the social, and the discursive, in favor of presentations of autonomous aesthetics. As an example, Siagian and Radittya were placed on a stage in a massive theater, with smoke and dull lighting making their performance distant and theatrical.

Electroacoustic and performative control were also central to the performance by the duo Sarana from Samarinda in Borneo, representing two of the few female artists within this field. Their performance took place at HAU 2, at Hebbel am Ufer, a theater, which was also a returning venue during CTM. Again, the sound system was professional and well-adjusted to the space—a "black box" with cushions on the tribune to seat the concert audience in the most comfortable and relaxed way. The lights were darkened when the two performers entered the space and stayed this way throughout the whole concert—even during the applause. The sonic material of the performance consisted of field recordings gradually built up in a soundscape composition, which, over time, became more and more noisy. The sounds were well balanced in both time and space, appearing as a very controlled performance. Reflecting on this later, I'm not actually sure if the sound material presented actually benefited from the sound system. In a way, it all became *overly* clean and

controlled—until the end, where an acoustic scream by one of the performers broke the electroacoustic aesthetics. "*Diam!*"(Be quiet!), one of artists screamed loudly and desperately. The scream that brought the concert to an end, felt to me almost like a protest from the Global South against the Western aesthetic hegemony of the concert event itself. The scream came as a great relief as it finally seemed that there was still space for a noisy sound within these very pure and controlled aesthetics of noise.

Multifocal Backdrops

My backdrops to these concerts were of course the genres and histories of US-European noise and experimental music. Meanwhile, my ears were also attuned to the aesthetics that came out of the situations and atmospheres I had experienced in Java the previous year (Groth 2018). The speaker and power systems there were of a different quality to those in Berlin and were definitely pushed to their limit, sometimes even causing power cuts and feedback. Hence, the sound was extremely noisy, in a noisy way. But also, in a way, that most musicians and audience members actually adjusted to.

Among the performances I experienced here was Sarana, paired with the American musician VX Bliss, in a noise battle orchestrated by Indra Menus. During this performance, Sarana managed to push their harsh noise to such an extent that VX Bliss seemed to give up on conquering a space in the joint set. In another performance a few days later, in the neighboring town Solo, Andreas Siagian was coupled with the Singaporean noise artist SIN, both performing on gear built by Siagian. In both concerts, the audience supported the artists and brought energy to the noise battle by commenting and slam-dancing around, sometimes even with the musicians.

The performances in the darkness in the controlled space in Berlin were very far from the situated explosions I had previously experienced in Yogyakarta. The institutional

Figure 5.2 Sarana (Samarinda) x VX Bliss (USA) performing harsh noise at Jogja Noise Bombing Festival, Yogyakarta, Indonesia, January 2018. Photo: Sanne Krogh Groth.

Figure 5.3 Andreas Siagian (Yogyakarta) and SIN (Singapore) in a "noise battle." Bengawan Noise Syndicate Noise Festival, Surakarta, Indonesia, January 2018. Photo: Sanne Krogh Groth.

settings of CTM became a dominant voice transforming the Javanese aesthetics of noise into "something else"—into a theater performance characterized by control; one of high fidelity, of restricted social behavior, and of nonpersonal performers appearing on stage. After the concert, I asked Sarana about their choice of having the space being darkened. They explained that they did not want to appear as individuals as "someone" had mentioned that they were only selected to participate in Berlin due to the fact that they were female artists. This is of course not an unheard of outcome of issues concerning gender problematics, jealousy, and rivalry. In the present case, though, and in combination with the framing of a strong European institution, these circumstances had probably unintentionally directly influenced the aesthetic outcome.

Unintentional Transformation?

The aesthetic transformations that this chapter has described in the 2019 performances in Berlin took place as part of a deliberate attempt to establish a more decolonial approach to sound art curation and collaboration. The intentions of this attempt became clear during a panel talk at the festival with the participation of Southeast Asian artists and curators from the Nusasonic program. It was noticeable how representatives from the Goethe Institute and the CTM *did not* participate or moderate on stage, but instead participated as an audience asking questions. The panel debate highlighted how the curatorial processes at both festivals (Yogyakarta and Berlin) had been explicitly collaborative from the start and that the selection of artists was made in consensus between the Southeast Asian and the German curators. The traps of earlier attempts at artist collaboration and exchange between the Global North and the Global South—such as the universalism that accompanied world art, the decontextualization that attended global art, and the stereotypization, commercialization, and ignorance of authorship that troubled world music—seemed to have been avoided.

And yet, a transformation of the aesthetic expression had taken place. This time, I believe, it was caused by the "invisible" conventions that were all habitual to the producers at the CTM. It was, from a European perspective, the well-known institutions, venues, technologies, and social behaviors that caused the friction—the "missed encounters, slashes, misfires, and confusions" (Tsing 2005). The unavoidable entanglements of Indonesian and European aesthetics led to "something else" and to new aesthetics—but still with the conventions of Western aesthetics of sound and performance art. These aesthetic conventions, unarticulated and unnoticed because they were taken for granted, I would argue, impinged upon the flowering of the aesthetics I had experienced in Indonesia during the performances in Berlin. Where the sensitivity toward decolonialization and democratic collaboration seemed to be of high priority at an organizational level, the same sensitivity toward the colonial history of aesthetics itself was absent.

Global sound art studies calls for a continuously situated attunement from all participants—curators, performers, audiences, and academics—at all levels. The approach has to be to multifocal and situated; to acknowledge the entanglements of global and local identities, technologies, and sites; and to have a careful awareness of historical and social contexts. The approach is by necessity political in its attention to and implementation of matters of decolonialization. But, as I have tried to show in this chapter, political attention also has to be always already attuned to aesthetics, and attuned to the political histories that attend every performance of situated art. This double attunement to politics and aesthetics is challenging, as it demands almost unobtainable action and awareness from the participants entering a field filled with mines and traps. But, fortunately, it is also a field with stimulating challenges that develop sound art in new productive and fruitful directions.

6

Curating Potential

Migration and Sonic Artistic Practices in Berlin

Juliana Hodkinson in Conversation
with Elke Moltrecht and Julia Gerlach

Introduction

This chapter looks at sound art and migration in Berlin, in the light of grassroots and institutional curatorial practices. Recognizing Berlin as a unique historical, cultural, and geopolitical hub, the chapter explores curatorial transformations and issues of artistic arrival and adaptation, and also the visibility and recognition of migrant artists' work in the city. Patterns of globalization are discussed in two interviews with, respectively, music curator and codirector of the intercultural Ensemble Extrakte, Elke Moltrecht, and head of the music section of the DAAD Artists-in-Berlin Program (ABP) from 2012 to 2018, musicologist and curator Julia Gerlach.[1]

The interview with Elke Moltrecht charts the task of establishing a collectively diverse musical practice within the cultural context of Berlin. Elke Moltrecht addresses the role of dialogue and curatorial stimulus, intervening in evolved instrumental practices, as well as the precarious nature of bringing musicians and audiences together in interculturally experimental projects. The interview with Julia Gerlach considers the DAAD Artists-in-Berlin Program in transformation from diplomatic tool to an aesthetic proposal of geographical diversity. Discussing procedures of artist selection demonstrates that the portfolio of artists selected over the years is more than just a series of aesthetic choices by individual juries, but also a social mechanism constructed and filtered through interactions with the Berlin music and sound art scene.

Postcolonial Curating, and Berlin as a Global Music City of Artistic Migration

Postcolonial curating may be regarded as a form of organizing festivals, exhibitions, and concerts so that exposure is given to the relation between sonic practices and geographical diversity, in contradistinction to the supremacy of European artists and power structures. It is worth considering musical and sonic practices in Berlin in terms of the spectrum offered by these two strong trends, as Berlin's identity as a music city rests on both these traditions, and the synergy between its organizations often turns on these different desires and pressures.

The term postcolonial curating is an ethnocentric term, yet sympathetic to processes of decentering. It qualifies curatorial impulses that come from outside curators' direct cultural influences or professional spheres and the organizational structures within which they curate. For example, it may be used to describe non-Western music in general. Both interviews touch upon the fact that sound art as a term in this context has a rub with Western art music (WAM) and non-WAM, being at a further remove from Western music, more foreign, exterior, and different. Talking of postcolonial sound art reduces Western art music further. Thus, if postcolonial curating is not exactly a comfortable term yet, it at least exposes the discomfort of all alternatives.

But the term postcolonial curating may go deeper, and involve not only providing and establishing platforms for such exposure, but also organizing the very sonic practices themselves in new combinations, providing different frameworks within which experimentation can occur at the heart of musical and sonic creativity and exchange. As the interview with Elke Moltrecht shows, Ensemble Extrakte is one such endeavor to generate a new intercultural and trans-traditional sonic practice.

Several current developments highlight how institutions are under transformation in relation to artistic migration within music and sound art in Berlin. In terms of classical music, one notable phenomenon was the opening of the Barenboim-Said Academy in Berlin in 2016, and its public face, the Pierre Boulez Saal, which opened in 2017—two institutions that aim to make Berlin into a home for Arabic music in Europe, and to integrate elite musicians from across the Middle East at the heart of Europe.

In 2016, the electronic music festival CTM had the title "New Geographies," thematizing artistic effects of collapsing borders and emerging new hybrid topographies. This brought the festival to a new venue, Werkstatt der Kulturen, and involved guest co-curator Rabih Beaini, whose migration from East to West Beirut has been a guiding influence on his musical taste as music producer, as well as offering a micro-residency program for emerging artists/students of sound art.

Under the curatorship of Berno Odo Polzer since 2015, MaerzMusik has redefined its identity as a "Festival für Zeitfragen" (Festival for Time Issues), with the 2017 edition carrying the additional subheading "Decolonizing Time." In his introduction to the festival, Berno Odo Polzer explicitly acknowledges that a festival of music situated in the center of Europe is necessarily a public, communal, and political space, and lists the following issues

as being at the heart of sonic practices today: "sonic immersion, marginalization, racism, homophobia, colonialization, psychograms of western societies, normativity in artistic practices, gender, ecological and financial crises, inequality, speculative history, cultures of memory, science-fiction, speculative fabulation, multispecies feminism, mysticism, collectivity, liberation, spirituality and the perception of time."

Other drivers of musical diversity are the many initiatives involving migrants who have made Berlin their home independently of official patronage, with grassroots intercultural projects such as exploratorium's Intercultural Music Pool, Hangarmusik, Ensemble Extrakte, and many others.

Interview with Elke Moltrecht[2]

Elke Moltrecht is a musicologist, curator, and initiator of international and interdisciplinary festivals and series that link forms of music through uncommon thematic associations. From 1992 to 2005 she worked at Podewil Center for Contemporary Arts in Berlin, heading the music program. She is the curator of international and interdisciplinary festivals and projects such as "*faithful!* Fidelity and Betrayal of Musical Interpretation," "Visualizing Music" at the Humboldt Lab Dahlem, "Hybrid Music," "Kreuztanbul—Intercultural Happenings between Kreuzberg and Istanbul in Sound, Image and Word," "The Beyrouth of Education," and "40 Years of Speed and Space—Los Angeles—Berlin." She cofounded Ensemble Extrakte in 2013. From 2014 to 2019 she was executive director of the Academy of the Arts of the World in Cologne.

> Elke Moltrecht (EM): I think the time has come for us to find alternatives to existing artistic concepts. Contemporary music, for example, is still largely stuck in an enclave. The real problem is that contemporary music approaches everything predominantly aesthetically; sound art and music theater too, although to a lesser extent. Even if I do love *l'art pour l'art*, and appreciate aesthetically great music, I notice that contemporary music has often lacked a concrete engagement with the events of our time. Of course, composers have philosophical thoughts behind their work, even political in some cases, but the results are in most cases abstract and overly intellectual, or realized within musical parameters involving lots of electronics, algorithms, or acoustical translations, with these musical parameters making up the tools for capturing philosophical or political topics. I ask myself what's missing here, and what could be done differently? So, together with Sandeep Bhagwati, I had the idea of founding an ensemble with musicians from different cultures, all living here in Germany. It was not about flying in musicians from India or Pakistan, but rather about locating different musicians within Berlin's diversity. We started bringing together musicians with backgrounds from Bulgaria, India, Persia, Australia, Europe—also German musicians who played Armenian or Mongolian instruments such as the duduk or Jew's harp. Beginning in 2013, through incredibly intensive workshops, we tried to work our way towards a more relevant music—not contemporary music in the traditional sense, but nevertheless "breathed on" by contemporary music.

Juliana Hodkinson (JH): Once you've assembled and committed to this combination, what kind of shifts do you notice? Do issues such as the work concept, creative hierarchies, and diverse expectations all solve themselves organically in the practical situation? When you put together people of vastly different backgrounds and invite them to go beyond their comfort zone, does progress happen intuitively and organically, or does it take a lot of discussion? What is the role of discourse in the group, or is all the work achieved through sound?

EM: It's really challenging! Looking back, I can say that the original idea was hopelessly naive—to imagine there would be a common understanding around which we would harmonize. Everyone is rooted in his or her particular culture, whether Eastern, Western, Southern, or Nordic, but we wanted to try to build on the richness of our respective backgrounds, with no one playing 100 percent what he or she normally played. The oud is not played with the whole instrumental technique from its Persian roots; maybe the vibrato or other particular technical aspects are left out, while the musician instead focuses on the sound of the whole ensemble. We explored where different musical forms could take us, by trying out an Indian cadential structure, or an Arabic circular form, with refrain, strophe, refrain, strophe—keeping a particular model in mind and then changing some of the rules. Every rehearsal needed weeks of preparation, discussing musical material, process, and goals. Our first idea was to form an ensemble, which would work like a band, with the idea that if everyone just plays together long enough, a new sound will emerge. Even though we decided not to use a conductor or composer in the classical sense, it turned out that we did need a musical director to facilitate this process—to *extract* details from the various rehearsals and bring them all together. The members of the ensemble were given listening homework, in preparation for each rehearsal. We worked together with the DJ duo Gebrüder Teichmann, and wanted to use looping as a basic structural ingredient, and the Teichmann brothers put together tracks for the musicians to listen to at home, ahead of our rehearsals, so that they could individually develop interpretations or work up new instrumental techniques. Then Sandeep structured all this material, and the outline of a new piece was born. It turned out at this point that the musicians really needed a cart horse, a *spiritus rector*, to guide them. That was the first phase. We had a concert in the festival Turbulenzen here in Berlin, alongside the Six Tones Ensemble from Vietnam, Asian Art Ensemble from Berlin, and Omnibus Ensemble from Uzbekistan. All four ensembles had completely different approaches to navigating tradition and contemporary music, all completely incomparable with one another. Some groups had more inner synergy than others, but they all wanted to avoid the top-down creative process where a composer gets a list of instruments, sits at home, and writes something which the musicians then just play. Of course, all contemporary music ensembles have their individual profiles, and good composers immerse themselves in the technical possibilities of each ensemble, but even when ensembles stimulate collaborations with suggestions and improvements, or don't play exactly what's written, it's still top-down. Some composers can't deal with alternative approaches to rehearsal processes at all. Who's interested in the musicians' process? they ask. I'm interested! I'm interested in how contemporary music rejuvenates itself, how it's interpreted and diversely reinterpreted. Some composers call themselves political activists, but when they compose they don't want their political attitudes to be expressed in their music. They

are most interested in relationships between sounds in space, which sounds come from which channels and whatever—*l'art pour l'art.*

JH: If I were a non-European sound artist, could I just jump into the European scene with a phenomenological approach, or would Europeans expect me to demonstrate a social or political point of reference in my work, which they can hold up as representing non-European music? How does this filtering work, if I come from x, but I want to work *away* from that and orient myself towards a Eurocentric cultural scene? Will curators find this uninteresting or even inauthentic?

EM: There are many different realities. Helmut Oehrng, for example, was always identified with deafness; everyone expected that when they commissioned a new work from him, there would be sign language in it. Or they'd say, "Samir Odeh-Tamimi, please do something Palestinian," and so he wrote several pieces with orientalism built into the instrumentation alongside European instruments; but at some point he had enough of this role. Most artists who come to Berlin want to be active in the music scene here, and therefore want to adapt to it. No matter whether you're Turkish, Iranian, Polish, or Norwegian, if you want to "arrive" in the contemporary music scene here, you have to fulfill the rules of the Western music canons. So anybody who wants to make a career here will necessarily leave their background behind them at some point. Of course, there are exceptions. Lars Petter Hagen brought the Hardanger fiddle into contemporary music with his Donaueschingen commission *To Zeitblom*. You need a lot of self-confidence and considerable standing to make a work like that. Lars Petter Hagen is absolutely an established Western composer; not many composers from the geographical periphery would dare to turn up in central Europe demonstrating their heritage so clearly. Referencing different cultures doesn't have to lead to cheap fusion or multi-kulti mannerisms. The problem with the term "world music" is that it's considered to be separate from "high culture." Subgenres such as flamenco and oriental jazz are distant from art music, but they don't belong in jazz festivals, and neither do they sound like contemporary music. How we can change this? I don't mean that we need new workers' songs or political propaganda, and it also doesn't have to sound like Hanns Eisler. But musicians need to find different approaches, for better or worse. There are some good projects in sound art. I remember an animal-noise piece by Hans Peter Kuhn several years ago in Brandenburg and one with bird songs by Georg Klein in Berlin, where you could sit in a field or garden and hear animal noises from other continents. These are good beginnings, where we can access sonic experience through a different topic, such as plants or animals.

In my Berlin festival "*faithful!* Fidelity and Betrayal in Musical Interpretation," I tried a new way of approaching composers. I asked Dror Feiler, Ernstalbrecht Stiebler, and Osvaldo Budón each to compose pieces that could be performed by three different ensembles. The first was an improv ensemble, the second was an early-music group, and the third was an ensemble specializing in contemporary classical music. In each case, we wanted works that were both through-composed and could be played by improvisers. We wanted to find out how composers think when they have three target groups, and what role these different ensembles attribute to the score. Hearing each piece played by three different ensembles gave us some answers. And Dror Feiler proposed at the end to put them all on top of each other . . . tutti! One of the ensembles played with conductor, the other without, or the pianist led from the keyboard. Dror Feiler looked at me and said:

that's totally exciting, giving concrete tasks which then produce unforeseeable results. I did another festival some years ago, called "Im Sog der Klänge" (In the Wake of Sounds—Sound and Body between Polyphony and Space). I commissioned new works based on the polychoral music of the Renaissance. We had eighteen musicians from Neue Vocalsolisten, Ensemble Resonanz, and the Composers' Slide Quartet. We invited the composers to make spatial compositions. The composers responded very positively to the project, and the diversity of pieces coming out of this process was immense. As a curator I really want to kick-start new processes; I have been questioning the musical canon for thirty years.

JH: You describe how the roles of conductor and composer are distributed in Ensemble Extrakte's rehearsal practice. I presume your dramaturgical role as curator also interferes productively with the musical process. How do you bring in your academic background from musicology? You mentioned already the difference between European composers who know how to navigate within this field, and newcomers in a stage of wondering whether to adapt or not: how do you work as a curator with migrant artists who are not in a stable position?

EM: Artists vary from individual to individual. With some composers new discourses open up; with others, not. As a curator and musicologist I have to nurture, and leave space for unexpected outcomes. Our ensemble is still precarious; we have no regular funding. When we started up, we naturally had no track record, and now that we've consolidated ourselves it's clear that we're not a typical music ensemble. With an oud, a duduk, and a tabla in the instrumentation, even with established Berlin musicians like Cathy Milliken, Klaus Janek, or Gregor Schulenberg, the ensemble is regarded as very alternative. So, parallel to developing our ensemble, we have to develop the discourse on and off the stage.

JH: I hear a modesty towards the task in hand, and an acknowledgment of the fact that there are no shortcuts, neither within an evolving practice nor in the discourse. Looking at the new discursive formats in MaerzMusik, we can feel perhaps inadequate towards some of these topics, at the same time as being easily disappointed with outcomes. But we shouldn't be suspicious of the attempt to mobilize these discussions, just because we can't deliver on them yet. It is valuable to put these thoughts at the top of the agenda, even if the issues precede the content.

EM: Look at Terre Thaemlitz' piece *Deproduction*, presented at documenta 14 and Akademie der Künste der Welt, and then further developed with Ensemble Zeitkratzer at MaerzMusik. I've worked with Zeitkratzer from its birth in 1997 when I was at Podewil. I was at first critical of *Deproduction*, I found it lacking somehow, but it is very vital, and it is about who turns towards certain issues. With Thaemlitz's work, we can safely say that gender issues have recently become a globally relevant topic. Documenta 14 was full of works relating to the topic of forced migration and exile since the Second World War. There were emotional qualities of feeling foreign (*Fremdsein*), and the sense of arrival (a*ngekommen sein*)—all of burning relevancy. But when it came to the musical program at documenta 14, there were just some old graphic scores by Earle Brown and his generation. Cardew and others were highly political, but haven't we had any politically relevant music since then? It's important for the contemporary music community to start openly thinking about these things. Possibly a festival such as Donaueschingen, which programs only new works, could attempt this one day, if Björn Gottstein would pose these questions. But with the weight of history in Donaueschingen—the Südwestrundfunk

orchestra and vocal ensemble—everyone has to follow certain lines of duty. In Ensemble Extrakte, the musician who originally found our work most challenging has become one of our most central players. That's a great result.

JH: Your distinction between having arrived or not yet arrived is a good pair of terms. Everyone can relate to that as an artistic position. Also in terms of career development, one can feel quite "arrived" in some aspects, but not yet arrived at the next issue or challenge, or the next collaboration. Embarking artistically on a long journey, we often have to acknowledge that we are just at the beginning. I find it interesting to hold onto this idea of movement as an artistic position, keeping things productively in flux. It can be a focal point: not yet having arrived.

EM: Our CD would be an example of that. It was an important step for us, to make a CD while still being in a process; but I stand by our recordings, even if I still see potential in our ensemble. The sonic vision is still partly vague, and we are still exploring how to open that up in a direction where a genuine phenomenological effect arises. Some of the pieces on our first CD have those qualities, but not all.

JH: All the Ensemble Extrakte musicians are very "arrived" in each their own field, indisputably stars of the stars, and yet each of them has to hold back some of their basic competence or put it on reserve. Tools and motoric skills are put out of action, almost like a handicap. You say it's a long process, after this partial dismantling, to build up something new, and after five years you still face the question how far you've come. Others would give up in that time. And this failure becomes the argument for not trying again.

EM: Ever since I've been working as a curator, I have always tried to add something which was not yet present. In my work at Podewil, I combined the IRCAM aesthetic with the new laptop generation.[3] They were always regarded as opposites; why not bring them into the same perceptual space? Podewil became the first institution to build club electronics into a concert space. I also focused on tuning and intonation, looking for the tuning systems behind all kinds of music, from non-European cultures to the individual tuning systems of La Monte Young, Marc Sabat, or Wolfgang von Schweinitz. I didn't want to draw historical contrasts between tradition and modernity, but rather open up a topic in which many kinds of music could fit together. In another project at Ballhaus Naunynstrasse, I presented four lute instruments—cittarone, theorbo, oud, and saz—and discovered many similarities between these instruments, despite their independent traditions. Of course, with these kinds of experiments, I sometimes got smaller audiences, but sometimes hundreds came to find out what was going on!

JH: What kind of audiences does your work draw? Do they recognize the issues you want to raise?

EM: In Berlin audiences are totally diverse. Look around us, everywhere we see people from all cultures, transforming one another. I don't make regionally orientated projects or festivals anymore, about Iran or Morocco, or Indonesia; these regional themes make no sense anymore. It doesn't even make sense to write in brackets after the artists' names their country of origin, because for some it would be such a long list: born in Algeria, grew up in Algeria and Paris, went to London to study, and now lives in Berlin. How should I claim the right to decide which countries have most influenced a particular artist? Just because he or she has a light-brown skin color, do I see him mainly as an Algerian? It's absolutely superfluous to focus on regional issues, but it is a challenge, when you table issues such as race and migration, to attract audiences of color and diaspora.

There's a delay loop in the German migration policy, whereby people who in their first home countries enjoyed a high level of culture and education need three generations to achieve the same status here. Berlin's Gorky Theatre is an example—this level of cultural participation, on the stage and in the audience, is the fruit of the second and third generations of Turkish migrants. And then of course you discover the internal diversity of the Turkish migrant population, with Alevits and Kurds, Erdogan-fans and -foes.

JH: You put out questions as magnets and see which artists and audiences are attracted to them, letting clusters of people and issues arise. This way of working may not produce clear answers, but it ensures that something comes about which was not there before.

EM: Yes, but I do more than that, too. When an artist opens up towards a new topic that I've introduced, particularly if it's a politically complex issue, I make recommendations about artworks or theories that might be interesting points of reference in our dialogue, so we can get more concrete and go beyond a merely speculative exchange. If I've not got the right set of references myself, I refer the artist on to colleagues who might be relevant.

JH: That sounds like a way of creating space for alternative systems, drawing threads between networked knowledge instead of thinking in boxes. Maybe there are only a very few institutions which can adopt this level of complexity and contribute the right expertise. Dialogical processes require patience and long-term planning, to move from discourse to manifestation. And of course it all has to be financed somehow, even in the face of cuts or the removal of funding support. Institutions have to take all that into account as the initial price of moving forward.

EM: I predict the next step will be in the middle, between the independent scene and established institutions. It's important to open room for discourse, as MaerzMusik is doing, and now we have to see what kinds of musical practice can grow from that. Maybe that means commissioning in smaller formats, rather than huge orchestral works. We also have to look at alternative ways of making calls for works. Recently, I was involved in an experimental call which accessed the African diaspora in Paris through the DJ community. The call went out via word-of-mouth, and people were invited to send in their concepts on short video or audio files. It was a big risk, giving these no-name artists a budget, and it could have gone badly wrong. But it was spectacular; we absolutely accessed a different vein of work within performance, sound, and music. And it even sold out too!

JH: That shows how the tired concept of the call can be rethought. Calling who, where?

EM: Yes, more and more institutions are doing this. If we want to reach migrants and refugees through open calls, we have to think about using a different set of terms and channels.

JH: Some sound studies academics don't acknowledge music as being relevant for sound art, which is of course a very strong position. Personally, I prefer a greater integration between music and sound art, but I can understand that position. Contemporary music has so many built-in filters—institutionally, historically, aesthetically. There are always interesting figures working on the periphery, spotting the holes to fill; but the center of contemporary music might never transform itself. If we were to subsume all music under the term sound art, thereby neutralizing several discourses, maybe it wouldn't hurt so much that not everything which has to do with sound fits inside this term "music." Tuning isn't yet music? No problem! I hear you saying, "let's do it on musical premises, though." Without including musical factors then we can't transform a really significant part of sounding art. So, it's not just a matter of sticking additives into contemporary music— topics, issues, theories—but we have to work with the material from the inside out.

EM: At a recent symposium in Bochum, when it came to the topic of transcultural music the issue of Cage and his inspiration from Indian music came up. This inter-/trans-influence is decades old, and even sounds dated sometimes. Amelia Cuni supplemented Cage's *Song Books* (1970) with Indian dhrupad vocals. What she did conforms to the score completely, while also not being classical dhrupad, and it raises exciting questions. We can't talk about a straightforward influence from Indian music here, rather it's some kind of transform, which was actually present in contemporary music decades ago, and here it has partially reappeared. Which of the younger composers would do this today? Klaus Lang and Mark André bring meditation and spirituality into their work; we can hear this spiritual repose and concentration in their works. But if we're talking about influence through construction and porousness, openness, then that's hard to find today in the same way as we find it in Cage.

JH: Has there been a regression since the exotica-decades, where there was an interest in tackling non-Western music at an instrumental level? The criticism "we've had that before" presumes that previous attempts were a dead end. But surely it's not wrong to look back to concepts and sounds from the 1960s and 1970s, and try to update them?

EM: Look at La Monte Young (Artists-in-Berlin Program 1992), Terry Riley (ABP 1978), John Cage (ABP 1971), Morton Feldman (ABP 1971). Where did it all disappear? Ensemble KNM recently gave a concert with the South Indian musician Ramesh Vinayakam, who had evolved a form of notational transcription which he called "gamaka box," from orally transferred Indian classical music, so that European musicians could follow and copy Indian sounds and techniques.[4] This was a super way to go about it, even if the musicians were still at the workshop stage of learning about these Indian techniques. The first step is getting the European violinist to engage with the Indian violin; the next stage is making a synergy out of it. Working in a different direction, you have artists like Mazen Kerbaj (ABP 2015) from Lebanon, living here in Berlin, who has completely absorbed the Western canon. Around the millennium change, there was a lot of art coming fresh from Lebanon that was influenced directly by the war there; these artists were hearing bombs going off every minute. You can hear the power of the sounds even in electronic filterings. It was in 2009 that I did the Beyrouth festival; there was still a lot of energy then—for instance, the political hip-hop of Rayess Bek. Now it's all become so compliant, with danceable DJ-ing and wishy-washy electronics that don't want to hurt anybody. The contemporary music community seems to me these days like a choir of singers who start singing on different pitches and after a few minutes they've all arrived on the same pitch. Not many people dare to be different. Simon Steen-Andersen (ABP 2010) is a good example. Although he is consensual, and some of his pieces are more successful than others, he brings in good energy. I haven't yet seen his falling piano, but I imagine it sounds like the Big Bang. Even though it doesn't make me think exactly "is this postcolonial?" it seems to be shaking up this massed choir of homogenous voices. Take Spahlinger—he's actually a very political person, and very open-minded, but you can't tell by looking at his compositions today. Or Lachenmann . . . yes, of course he has opened up sound, but extended techniques aren't a political statement any more. But a more positive dynamic is entering the field, through the commissioning of politically relevant compositions—take, for example, Klangforum Wien's project *Happiness Machine*, or Isabel Mundry's pieces *Mouhanad* and *Hey!*, which have prompted controversy and discussion. These are developments in the right direction.

The Origins of the DAAD Artists-in-Berlin Program

In contrast to the ad hoc framework of Ensemble Extrakte, the DAAD Artists-in-Berlin Program is a major publicly funded scholarship program offering artists worldwide the opportunity to pursue their careers in Berlin for one year, within a curated program. It is funded by the German Federal Foreign Office and the Berlin Senate, with additional project funding coming from other federal funds, foreign governments, and other organizations.

With a structurally global outreach, the DAAD program was originally launched as a catalyst for internationalizing the isolated West Berlin arts scene, stimulating artistic migration and exchange. This role has gradually been transformed since the fall of the Berlin Wall and the proliferation of artistic migration routes around the world and toward Berlin. The DAAD's Cold War role as a diplomatic upholder of Western values has dissolved into multiple international relationships. The DAAD Artists-in-Berlin Program is presently in a position to support and even drive the city's engagement with cultural diversity, sensitizing relationships between expert juries, guest artists, and the local art-music scene.

In 2018, the city of Berlin additionally set up a funding program called Weltoffenes Berlin,[5] creating scholarships for artists persecuted or threatened in their home countries. Within this framework, the DAAD Artists-in-Berlin Program is responsible for hosting a persecuted artist or writer protected by the International Cities of Refuge Network (ICORN) Program. The Senate's Weltoffenes Berlin program is a response to artists' needs for political freedom worldwide. It acknowledges a strategic shift in arts funding from supporting artistic internationalism within the paradigm of East-West Cold War politics, to a present-day awareness of migration as a wider force impacting on the city of Berlin, with artists constituting part of the influx of economic migrants and refugees.

With the construction of the Berlin Wall in 1961, West Berlin's isolation from the international community looked set to increase and, in 1963, the Ford Foundation made a financial injection into the cultural and educational life of West Berlin, establishing two new courses at the Freie Universität (Free University of Berlin) in American Studies and Comparative Musicology and setting up a residency program for invited artists and scientists to live and work in Berlin. During these years, the Ford Foundation had a cooperative relationship with the CIA, based on the common interest of asserting the cultural power of the United States through the promotion of artworks that were seen, for better or worse, to embody intellectual freedom, unbounded creativity, and a series of breaks with European cultural history. In 1965, the Ford Foundation handed over the Artists-in-Berlin Program to the DAAD. Originally founded in 1925 by a political science student of Heidelberg University organizing an exchange trip to New York, like all German institutions the DAAD was brought under the jurisdiction of the National

Socialist regime during the mid-1930s, with an imperial brief to assert Germany's "cultural superiority." After World War II, the Allies were quick to realize that the reestablishment of the DAAD would be crucial for supporting the democratization of German society. This relationship between the DAAD and the Allies was the context for the establishment of the Artists-in-Berlin Program.

Interview with Julia Gerlach[6]

Julia Gerlach directed the music section of the DAAD Artists-in-Berlin Program from 2012 to 2018, and developed the festival "mikromusik" and the intercultural project *Re-inventing Smetak* within her work at the DAAD. She studied musicology at the Technische Universität (TU) Berlin (Berlin Institute of Technology), and has taught within the areas of musicology, cultural management, gender, and the avant-garde while building up a freelance portfolio as a curator and producer within sound art and experimental music. Gerlach is especially committed to the expansion of the ideas of music and sound art, and to intercultural projects.

> Juliana Hodkinson (JH): The DAAD Artists-in-Berlin Program has changed since it was founded, and so has Berlin—the DAAD program works in a broader field now, where artistic migration includes artists who have come to Berlin in different ways, including refugees and artists-at-risk. Both the Federal State and the Berlin Senate are establishing a new grants program for artists-at-risk.
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> Julia Gerlach (JG): These new grants are for artists who are threatened by political persecution or censorship, and can no longer work in their home countries. Here in Berlin, there are various scholarships financed by the Berlin Senate providing shelter for such artists. One, the ICORN residency, is administered by the DAAD Artists-in-Berlin Program. Another will be administered by the Academy of Arts. It is a positive strategy to link residencies to institutions with know-how, where the artists can easily be integrated into an artistic sphere. Generally, residencies have increased both within Germany and under the Goethe Institut outside Germany. The aim of the residencies is, briefly, to offer the artists a protected working space and an opportunity for artistic development and intensive exchange with the host society. And that of course is reciprocated by the hosting contexts.
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> JH: One additional target group of the Weltoffenes Berlin program is artists endangered in their home countries who have already arrived here.
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> JG: It's also open to migrant artists who have already arrived in Berlin, but who are not applying for asylum—for example, in the hope of returning home in the near future. These new scholarships were developed explicitly to help politically persecuted artists. The Artists-in-Berlin Program has always offered protection for artists whose situation in their country of origin may be tense and difficult. Some artists stayed in Berlin after the end of their scholarship because events in their country of origin in the meantime made it difficult for them to return, and the program has supported them in the bureaucratic processes of extending residency permits etc.

JH: Let's discuss three main issues. Firstly, the individual guest artists: how they are selected, how their work develops while they're in Berlin, and what it means for them to receive the institutional support and attention of the DAAD. Secondly, sound art regarded institutionally: how does the DAAD influence the cultural field of sound art in Berlin, how much exchange is there between the artists' home countries and Germany, and what are the broader effects after artists return home? And thirdly, the development of the DAAD and its Artists-in-Berlin Program from its early days during the Cold War, up to today, when globalization has different fault lines.

JG: The function of the Artists-in-Berlin Program changed significantly after the fall of the Berlin Wall. Before that, it was designed to bring artists to Berlin to internationalize the scene here. It was all about enriching a culturally impoverished city with experience, discourse, and artistic stimulation, and it certainly succeeded in that. After the first couple of years, the selection process of the one-year residents was always made by a jury—except in the visual arts, where this has been changed to a process of nomination, as the number of applications far exceeded the organization's capacity to process them all. Additionally to these regular residencies the program had the capacity to invite some artists from around the globe for short-term residencies, and this choice was often connected to thematic topics of institutions in Berlin. There was a synergy between the needs of local festivals to bring certain artists to Berlin, and the DAAD as facilitator. Brazilian composer Walter Smetak was invited here in 1982 with two other Brazilian composers, Marlos Nobre and Hermeto Pascoal, for the Horizonte Festival within the framework of the Berliner Festspiele, which had a South American focus that year. The director of the DAAD traveled personally to Brazil and visited a short list of artists, before deciding who would be invited, and the jury was simply asked to confirm the director's choice. There is still this flexibility today in a few short-term grants, allocated directly by our director. Looking back, it's interesting that in the 1970s and 1980s there was this traffic of suggestions from local festivals to the DAAD; the DAAD evaluated them and then invited the artists. It was a cooperation that was quite central to the way the Artists-in-Berlin Program worked.

JH: I sat on the jury of the Artists-in-Berlin Program in 2017, and experienced a flat playing field. Everyone can apply, all applications are conscientiously prepared and presented to the jury and equally seriously considered. There are no prior recommendations, nothing is fixed in advance. But some people still find it mysterious, how the DAAD reaches its decisions.

JG: Up to 2018, the jury's names were not made public; now they are communicated after the selections. The procedure has become highly formalized. So anyone who has heard of the residencies can apply. But the question is rather: who knows about them?

JH: Right, how great is the probability that an artist from Namibia knows about this residency program, or how to apply for it?

JG: That might well still be down to chance. In countries with an established contemporary music and sound art tradition, it works by word-of-mouth. I imagine most artists in the US just know about the program, and in Namibia most artists don't know about it. Depending on the particular country in question, there might be a local Goethe Institut director who knows about the program, meets an artist who is doing interesting work, and passes on the information. Or an artist might approach the Goethe Institut in connection with some touring activity, and then find out about the Berlin residency program by that route. It's a relevant question, whether these connections actually

work well enough. This year we had an applicant from Thailand, a singer-songwriter. The local Goethe Institut director in Thailand had contacted me to ask whether it would be worth her applying, mentioning also that she was having difficulties in Thailand, due to her political engagement. I looked at her videos and encouraged her to apply, with the advice that she should emphasize the experimental and political elements of her work in her application. Seen from the perspective of a European aesthetic, her work might easily be dismissed as being stylistically rooted in popular culture. She sings, plays guitar, and also uses other instruments, her works are absolutely crazy and experimental and certainly political. The composer Du Yun, who is an expert in Asian contemporary music, sensed immediately that this Thai artist soared above what is considered as pop culture in Thailand, and rated her work as highly experimental—but not everyone would detect that. The artist applied and was nearly selected. Even though she didn't get the residency in the end, the connection through the Goethe Institut worked well in this case.

JH: Do applications from certain countries increase from year to year, even if you don't proactively campaign in these countries for more applicants?

JG: A bit. I have been working hard on my regional contacts with the Goethe Institut in South America, and they have been active in distributing knowledge of our program. The DAAD partnered with the Goethe Institut, for example, to make a revival of Walter Smetak's work in 2015. Smetak emigrated from Switzerland to Brazil in 1937 and lost his Western identity there in an extremely inspiring manner. Driven by a search for collectivism, inner transformation, freedom, and spirituality, he was a precursor of Brazilian counterculture and influenced the Tropicália movement as well as the experimental music scene in Brazil. His *Plásticas sonoras* (*Resounding Sculptures*) include conventionally played string instruments, as well as objects of visual art, charged with symbolic meaning. After decades of oblivion, the DAAD and Goethe Institut got together with Ensemble Modern to revive these experimental sound sources, and invited other composers to engage with Smetak's instruments. Through our Smetak project, then, I had some intermediaries who spread the word about the Artists-in-Berlin Program, and more applications from Brazil began to come in. There have always been applications from Brazilian artists studying and working in New York, and so on, but not many from Brazilians in Brazil. A proactive campaign would be a lot of work, but I have always tried to build on my contacts and to communicate the program as widely as possible. It always has an effect, too, when an artist from one of these countries is awarded a residency. When Israel Martinez from Mexico was selected in 2012, then we naturally received more applications from Mexico in the following year. But normally this doesn't actually lead to more residencies for artists from these countries, because juries tend to think that if there's just been an artist from Mexico, then it would be better next time to choose someone from Peru.

JH: So geographical diversity has its own mechanics within the applications, and is not only affected by, say, the combination of the jury members?

JG: The jury that you were a part of in 2017 was the first one where there was equal gender representation on the jury, and where I also made sure that there were jury members with specific knowledge of music and sound art from the Asian and South American regions. We also decided to finance intercontinental flights for the jury.

JH: Diversity costs!

JG: Right, and that's why it made a difference in 2017. Before that, I had always been trying to achieve diversity, but ultimately the jury members were all based in Europe (even if some were originally from South America), and were all well-integrated German speakers. 2017 was also the first time we conducted the entire jury selection process in English.

JH: Diversity is often mentioned, without really being enacted. In the DAAD jury, I could sense that there was real diversity competence in the room—colleagues that absolutely complemented my perspective. We didn't agree on everything, because we didn't all have the same background. That was refreshing.

JG: That was the consequence of my previous experiences. I always had jury members who were cosmopolitan, open-minded, and interested in diversity—and among the selections were composers and sound artists from Lebanon, Uruguay, China. But each year when it came to the final selection, head-to-head in the final round, the jury tended to make safe choices, identifying familiar artistic positions and avoiding bigger risks. So I decided that this time we need to tighten that diversity screw a bit more.

JH: Let's stay with the 2017 jury selection, and turn to the issue of music and sound art as distinct practices, but also to the guest artists' countries of origin. Ashley Fure's music has been well represented at MaerzMusik, and her music is represented across Germany and central Europe. Does the DAAD have to work differently with Liping Ting and Carlos Gutierrez? Is it a different task, to create a context for them, on arrival? What do artists from outside the USA and Europe need, and how do you go about shaping their concerts, exhibitions, dialogues, and encounters?

JG: Yes, there is a real difference. I will not need to do much to promote Ashley's music, the curatorial work with guest artists like Ashley lies rather in defining specific projects for their time in Berlin and offering them a free space where they can step away from certain pressures. Sometimes by the time I meet them for the first time, they've already landed in the music scene here—particularly artists who fit into the Echtzeitmusik scene. Mazen Kerbaj (ABP 2015) and Zeena Parkins (ABP 2014) were absorbed into the local scene on arrival; a close and interwoven exchange established itself quickly. With Liping Ting it's similar, because she has contacts from the time she spent living in Paris. But my strategy with the arriving artists is always the same: I encourage them to take new steps, to realize important projects that need time, and to dream. And I follow their projects. For example with Carlos Gutierrez, there needs to be acclimatization, and his practice requires more preparatory work. For building instruments, he needs help finding clay. In La Paz he would drive to a spot where he can pick up the clay directly in the landscape; he knows the places to get different kinds of clay. Here you have to order it. Or for other instruments, he needs to find a replacement for animal skins. These challenges arise frequently in relation to his work, and they concern areas where my background as a musicologist hasn't given me much experience. Methods of acquiring material and finding practical solutions are closer to a visual arts practice. I don't know where to fire clay instruments! This is the trajectory that I enjoy the most.

JH: So something that's totally central for Carlos Guttierez's work experiences a fracture in the transplantation of his artistic practice to Europe, and he has to overcome new issues, adapt, transform, and find alternatives.

JG: Instead of fish bones he's decided to use small wooden sticks, and instead of skins he's taken various types of paper and plastic. He looks for equivalents . . .

JH: . . . in DIY and art supplies stores?

JG: Actually, the materials are not the main point for him, rather the sonic vision. Carlos Guttierez is researching indigenous cultures, which are omnipresent in Bolivia with a 50 percent indigenous population, and he is interested in sonic images as manifested in particular materials. He uses, for example, a flute which is larger at one end and then gets smaller at the other end; this leads to extremely frictional multiphonics. For his exhibition at "mikromusik," which he will develop together with the visual artist Tatiana Lopez, his wife, he will recreate sonic phenomena relating to collectivism and ritual impact in indigenous music. Carlos Gutierrez and Tatiana Lopez belong to the Orquesta Experimental de Instrumentos Nativos. It was founded in the 1980s in La Paz by the composer Cergio Prudencio, and has been important for establishing contemporary music in South America, and for the equal fusion of indigenous traditions and contemporary musical idioms. His aim is to build instruments and to find an electronic mechanism to make them sound in an installation. We are meeting about it next week, to see where he's up to so far. Our collaboration in this case is centered around the questions of how to harmonize his vision with the possibilities of the material at hand, and how to find collaborators in the Berlin scene to realize the mechanization of the instruments. Martin Riches—who has developed many mechanical instruments himself—will be Carlos' adviser, and Tito Knapp will assist with the technical solutions. So something new will develop from the contact with artists in Berlin. The curatorial challenge is that the originality of the artists' approach must be tangible, and it must form the backbone of the installation.

JH: We are used to seeing the names of DAAD guest artists on the program at Ultraschall and MaerzMusik. The discourse on globalization, expanding contexts, and decolonization has become a central festival topic at MaerzMusik, but in the past there must have been some guest artists whose work would not fit these festivals. Not all artists' work is well suited to the established classical scene. Is it your goal to place artists within prestigious festivals, to gain maximum exposure for their work, or do these ambitions need to come from the artists themselves? And is there a change underway in the balance between scored music and sound art contexts?

JG: Previously there was not so much difference between MaerzMusik and Ultraschall. Ultraschall has been a great partner since it was founded in 1999 and our composers always have a slot within the festival. This exposure at Ultraschall has often propelled international careers, as in the case of Simon Steen-Anderson. The collaboration with Rainer Pöllmann is always very productive. Matthias Osterwold (director of MaerzMusik, 2000–2014) was also always happy to host DAAD artists in his festival; I'm sure he would have taken Gutierrez too. I work differently with the present director, Berno Odo Polzer; we develop it together. I wouldn't go so far as to say that the idea of decolonization at MaerzMusik came from me, but in our first meetings, when Berno Polzer began to talk about issues of time, I always said that my central topic is the opening towards other cultures. It was relatively clear that we would end up curating something together around that meta-topic. I think that's the best way to evolve these things. Having a content-based discourse with partners in the Berlin music scene is more valuable than putting our artists in a display cabinet, so to speak, which just underlines the foreignness of their status in the city. This dialogue and exchange is about contextualizing them, bringing new issues to the table based in the value or meaning of their work. Ideally, the works of our

guest artists don't find their way into these festivals just because they're on a DAAD scholarship; it's rather the other way round, that their work is programmed because they embody some of the values and topics afoot in the festival—be it MaerzMusik, Kontakte, labor sonor, CTM, SAVVY, or Ultraschall. The DAAD doesn't just want to be a paternalistic funder; we want to truly represent the interests of our guest artists. Let's not forget that there are other projects beyond the residencies—work that develops afterwards. In the case of Carlos Gutierrez, we are in dialogue with MaerzMusik about establishing a longer-term collaboration with the Goethe Institut in La Paz. That brings us to another of your questions: what do the artists return with? That's not always so easy to influence, because we need there to be a collaboration partner in the country of origin who can contribute with funding or other resources. But the artists often take new initiatives when they return home after a residency. Osvaldo Budón (2014) from Uruguay invited Berlin sound artist Annette Krebs to perform with him, so she traveled to Uruguay and made a larger South American tour out of it, and I think Ute Wassermann's South America tour came about through the same contacts, too. Guest artists often become active as curators or producers in their home countries, sometimes in collaboration with the local Goethe Institut. Mazen Kerbaj (2015) invited several people from the Berlin music scene to Lebanon, with the help of the Goethe Institut there. Sometimes, it all happens by itself, or perhaps a letter of recommendation from us is needed. The Goethe Institut is important for us as a partner; after all we are interested in many of the same contacts.

JH: You work with ideas, potentialities, which can then be developed, but in the end it depends on the individual artists, which connections flourish and what response their work receives.

JG: Exactly. I didn't want to close this South American topic with the Smetak project. On the contrary, that project produced new contacts, which I realized could lead to new projects in the future. In the 1980s, there were two important guest artists from Uruguay—Graciela Paraskevaidis (ABP 1984) and Coriún Aharonian (ABP 1984)—and those connections spread to Bolivia, where there was already the Orquesta Experimental de Instrumentos Nativos playing contemporary music. Composers from Brazil and Uruguay started to compose for the Bolivian orchestra, including Carlos Gutierrez. So there is an interaction, a musical history, in South America, which is not so present here, and when you start working with these topics then at some point you find yourself in South America and can start to see how particular sonic practices have developed the way they have. But of course I don't know as much about decolonization as the artists that I curate. For an artist like Carlos Gutierrez, there's an absolutely clear progression in the way this music has developed from the history of the indigenous peoples, and how influences have spread. In Bolivia things are not so separable in any case, as regards to which cultural forms have been transformed and brought together with a contemporary musical language. Carlos can explain these things through a much clearer and more comprehensible lineage. My formulations are unprecise, and limited to my musicological background. These artists are all naturally much more advanced in their sense of self-definition, whereas we Europeans are still struggling to describe South American music and sound art at all.

JH: Many of my non-European colleagues have better-trained mental muscles for comparative cultural history than I and my European colleagues. They have a very precise comparative skill set which they have trained to a high degree, and they don't stumble

over basic words and definitions as Europeans do. Looking back on the first wave of DAAD guests from the USA, all of a sudden Berlin was full of American-influenced art and discourses, which became increasingly anchored here. Compared with other European centers, is Berlin a particularly natural place for this absorption of influences?

JG: Long before I started working with sound art from Brazil, I was irritated by the fact that Germans and Brits insist on two opposing definitions of sound art, which more often than not leads not only to disputes in communication, but also about what is or is not sound art. The German definition is very narrow, and tendencies within artistic practices are often upheld as dogmas, so that at some point anyone who works in a different way— anyone who doesn't work site-specifically with hidden loudspeakers, for example—is not considered to be a sound artist. That bothered me a lot. Of course, when artists arrived here in Berlin from other countries, they couldn't understand why their work was not regarded, in Germany, as sound art. We need to follow the veins of history and various narratives that sound art has fed on in different contexts. If we are faced with art by, say, an artist who has grown up and worked in Nigeria all his life, we have to ask what this artist is relating to, what this practice is building on, and what questions and issues are behind it. I have always been more interested in exploring these questions, than in closing in on a more precise and limited definition of sound art. When you explore sound art from various cultures, and then return to Europe, you see that sound art here is just as culturally bound as elsewhere; it is also dependent on local materials, attitudes, environments. My goal is to continue to expand the field of what can be considered as contemporary music or sound art, or maybe to dissolve these categories. In the visual arts it's long been common to look at the frameworks and points of reference that individual artists relate to, and to acknowledge that artistic practice doesn't have to fit into a particular language. I would definitely have chosen the Thai singer. I can work with that oeuvre, and I find it right to do so. Contemporary music wasn't always such a narrow field, there used to be more jazz musicians in contemporary music, for example, and that was often a way in for musicians from Ghana or India, or pop musicians, to enter the field; it wasn't all so concentrated on "Neue Musik" in the classical sense. The 1970s and 1980s were quite open, but things got narrower in the 1990s.

JH: Are individual artistic biographies changed by the DAAD residencies? Obviously it makes artists' CVs look good, but do they change their praxis and come to new conclusions about the values at stake in their work?

JG: It's a process. Karen Power (ABP 2015) recently gave us the feedback that during her DAAD residency, she began for the first time to think in terms of large-scale projects. The DAAD residency helped her to make the step into music theater. Many artists experience similarly that the residency offers time for taking on larger-scale planning. My initial meeting with guest artists is about starting a process, supporting an artist who might be continually trying out new things. Thanks to the daadgalerie in Oranienstrasse, we can also offer the opportunity to try out setting things up. With Mazen Kerbaj, for example, we made an installation for MaerzMusik 2016 out of his audio recordings from the Lebanon-Israeli war; they had been lying dormant since 2006. When he told me about these recordings, I encouraged him make something out of them, and together we transcribed the tapes. The most striking development in a DAAD residency is typically not so much a change in artistic direction, but rather the consolidation of significant works. Osvaldo Budón, for example, wrote in his application about a project with fifty-

five microtonally tuned guitars hanging from the ceiling; I don't know if he would have been able to realize that work, *Tablaturas espaciales*, if he hadn't come to us.

JH: Some dreams only make sense when you begin to see that they could come true.

JG: Time and financial alleviation enable our artists to work more intensively, and with more production money.

JH: We're talking a lot about synergies with production opportunities in the city of Berlin, but do you curate projects where the DAAD doesn't have to negotiate and collaborate, but simply decides to execute a project and make it happen—how does that work? Do the artists get a budget allocation, or do they articulate their needs, which are then individually quantified?

JG: I set up the festival "mikromusik" for just that purpose. It exists in an absolutely synergetic relationship to the Berlin music scene, but it's more closely tailored to the needs of artists on our program, and allows us more easily to present our newly arrived artists or works that arise after artists have returned home. I choose some projects, and of course the guest artists come with their requests, and maybe I make a suggestion about which local musicians could be relevant if the work develops in one or another direction.

JH: These two aspects are already in the application phase: applicants have to write about what they want to do in Berlin, and through which connections they could make a start.

JG: Commonly I speak first with the artist and then contact a festival director and say what I'd find interesting, and then the director would meet the artist and see what common interests they can align on, what are the guest artist's visions, and what formats are possible. Special projects that I find particularly interesting and where I want to take a risk, I can place within "mikromusik."

JH: How can one create these soft changes over time, without coercion—or is that a new form of colonization: knowing what you want to achieve in the broader context, no matter which artist is coming?

JG: I suppose I do colonize a bit, through having preferences. But geographical diversity is already built into the kernel of the program, even though we still work on developing it. I am learning through each artist and I can feel that the audience has this interest in learning as well.

JH: We've talked about artists' identities and about institutional curating. I'm also interested in other patterns of uncurated artistic migration, in artists who come to Berlin for other reasons, not because of a residency opportunity, but who would still need a scholarship or a context in order to work.

JG: We haven't been able to address those problems in the Artists-in-Berlin Program, when artists come to Europe for reasons of persecution or censorship. The jury process isn't designed to take account of those kinds of issues, and the role of our residencies is not primarily to protect artists from precarious situations elsewhere in the world.

JH: Social factors don't play a role?

JG: There are no questions about these aspects on the application form, although sometimes we have secondary knowledge of individual circumstances. That was the case with Turgut Erçetin (ABP 2016) from Turkey. For political reasons, Turgut Erçetin did not return to Turkey at the end of his residency in Berlin, but applied for a visa to stay. Or the writer Yiwu Liao (ABP 2012) from China, who had been very regime critical—he stayed here. And Arvo Pärt (ABP 1981). So this does happen, but we don't ask artists about their circumstances in the application process, and I have never experienced that an artist's

political or social background played a central role in the jury process. With the Thai singer it was clear, however, that because her work is so political she cannot perform in Thailand anymore. There is a political position behind her work.

JH: Artworks often challenge the contexts in which they are presented even if they are not deliberately political, and even if the artists are not consciously trying to exercise an institutional critique. Simply by being positioned somewhere—inside, outside, periphery, center, easy, difficult—artworks take up a position in relation to a given context.

JG: I don't want our guest artists to go home sounding recognizably like they've been on the Artists-in-Berlin Program, I don't want them to sound like composers from the Berlin contemporary music scene, if there is such a style. I want us all to ask what the contemporary issues are, and then bring that into dialogue with our position here, hopefully creating an interesting exchange for both sides, so that everyone broadens their horizons. That's my curatorial interest. I like to let the artists get on with their work here as they do at home, whilst knowing that through the change of daily environment there will be an interaction and some kind of change. Berlin has also changed, through becoming international and diverse. So much migration and global networking has already happened here, so now the function of the DAAD is rather to ask questions, to prod at continuities and point to developments. That's what I try to do.

7
Four Artistic Journeys

7.i

Pockets of Communities

Holger Schulze in Conversation

with Emeka Ogboh

Holger Schulze (HS): On what project or projects are you working on right now, in January 2019?

Emeka Ogboh (EO): These days, I am working a lot with food and taste in exploring migration and the position of Africans in contemporary Europe. I find food a compelling medium to engage with the topic of migration. Apart from that I'm also getting into making music, creating electronic compositions in which electronic music and soundscapes are fused together. These compositions are inspired by soundscapes that I recorded, mostly from Lagos, Nigeria. I am also digging into my culture for new inspirations and work: I am Igbo from the southeast of Nigeria, and currently exploring the oral history and the music from the eastern part of Nigeria. I am experimenting with these sounds, creating new ways of hearing and engaging with them in form of electronic music. For some reasons, the concept of space pops up a lot when I think of musical works that I am making, my idea is to install these works and not just have them as music on stereo format. In these new works I'm still exploring how sounds influence a space, so it's not just about making music or a sound piece. It's also about how these sounds function in the space of installation, and how we engage with the space. Finally: How do we make a connection to what a sound is trying to say? How does sound create an experience in that space, and how do we make a connection to what the sound is trying to convey?

HS: If you reflect on aspects of migration, on the one side, if you will, the outer landscape of moving people and people moving through landscapes—and, on the other side, the inner landscape of tasting and food: Is there a relation for you between these two areas you recognize? I am thinking right now of the famous two beers you brewed and presented in 2017: the *Quiet Storm* beer for the Skulptur Projekte Münster and the *Sufferhead Original Stout* beer for the documenta 14 in Kassel. Both beers fuse somehow in their process of production taste cultures from Lagos and Nigeria—and also their soundscapes—with those from Germany.

Figure 7.i.1 Emeka Ogboh, *Sufferhead* original. Photo: Anjin Photography, 2017.

EO: The projects on food are not just about taste, it's also about the movement of people from one place to the other. The projects I'm working on speak of disconnection and of dislocation. But I am not just focused on taste and movements of people—my interest is also on their experiences and reactions to the soundscapes of these new places. For instance you move from a loud African capital, to a European city where sounds are very much suppressed and on low decibels, how does this different soundscape affect your psychology? Many migrants/immigrants, in their longing for home, try to seek out the places that sound and feel a bit like what they are familiar with. You have African markets and restaurants in many European cities that people will visit not just to shop or eat, but also to experience some form of familiarity. You have these little pockets of communities scattered across Europe catering entirely to a specific people from a certain region of the world. Château Rouge in Paris, for example, is very African: you have all sort of Afro shops and restaurants there. But then, it is not just about the food or cultural materials—but the general buzz of activities, sounds, and languages that Africans, mostly from the francophone region, could connect with.

HS: I like the term you used: *pockets of communities*. It has this intimacy. You carry things around in your pockets; these things make a bit of sound from there. So, what I hear, here, is that the markets and the taste that are transferred from one cultural area to another are of course not only taste and markets. But they carry with them at the same time a sort of sonic complex and a performative complex that is transferred here—and one can experience there.

EO: If you go into a typical African restaurant in a European city you are going to find certain experiences that one can connect with place they come from. There's probably a big screen television on high volume, showing either some YouTube videos of music from different regions of the continent or news from local African TV stations. For example, a

Figure 7.i.2 Emeka Ogboh, Danfo Ojuelegba. Photo: Emeka Ogboh, 2014.

typical Nigerian restaurant in Europe will be showing news from Nigeria, or Nollywood films, or YouTube videos of Nigerian Afropop musicians—the type of music you would hear in a typical nightclub in Lagos. The conversations happening there are probably on high decibels, the language is probably pidgin English or other familiar Nigerian languages. These, coupled with the food smell and the interior decor of the restaurant, immediately transport me back home. Typically, it's not the same situation in a European restaurant where the ambience is more quiet. The music level is on low and stays in the background. Its most likely an intimate type of music in the sense so it does not disturb. We kind of like things loud and community-like. It is not just what is playing on television or on loud speakers, it is also people watching and interacting loudly with each other. This ambience transports you to a different place: You are still in Europe but then you walk into these restaurants and you get transported back home.

HS: How do you transfer this sonic performativity of one area on the globe to another one? How do they both constitute together an emerging bricolage of sounds? This combining strategy now does not really sound mainly political—as you have been categorized by some critics. One of the anchors for such an interpretation was apparently a work such as "Song of the Germans" you presented in 2015 at the Biennale di Venezia. A work that stages the German national anthem in the African languages Ibo, Yorouba, Bamoun, More, Twi, Ewondo, Sango, Douala, Kikongo, and Lingala). But, frankly speaking, it seems to me like one of the most overused tricks in art critique to address any work that brings national symbols and protagonists of global migration between the southern and northern hemispheres together, immediately and quite thoughtlessly as being political. Isn't this more the result of a search for a neat and well-established category?

EO: I think my work reflects a lot on the environment I find myself in. It's like a social commentary to what is going on at a particular moment. The works that I did and that are considered by some as political happened at a certain time and place, and reflected what was going on there. Living in Europe in this period of constant debates and talks on migration and citizenship, an artist is bound to create works that reflect this ongoing discussion. When I am asked: *What is your biggest artistic inspiration?* Most of the times I would say: *My environment.* I don't go out thinking: *Oh, it's so political—Let me do that*

work! I create a work that is inspired by what is around me. And if this period happens to be a political moment then of course that could also be reflected in my work.

HS: Now, you spoke about the different sonic preferences of sound cultures in different countries and continents, be it in Paris, Lagos, or Kassel: Is there a sort of intended listener that you think of, if you will, when you conceptualize one of your works?

EO: One thing that I have learned over time is that they are very different reactions to one and the same artwork. There is no black-and-white scenario where you can easily predict how people would react to a work. This is one of the things that I find interesting about the visceral nature of sound, and how it connects to individuals differently. I really do not seek for an intended listener. But if, for example, I'm making a show for a museum or a gallery, obviously the intended listener will be the type of audience that visits museums or galleries. So, I am not focused on trying to target any intended listener. I just make the work—and put it out there for people to react or not react to.

HS: Can you remember some reaction of a listener, a visitor that extremely surprised you—be it in a good or in a more awkward, or even in a bad way?

EO: There have been many surprising reactions. But one very remarkable reaction happened when I presented the *Lagos Soundscapes* at the Kiasma Museum of Contemporary Art in Helsinki in 2011. It was an outdoor installation for the ARS 11 exhibition. The sound was installed on the already existing set-up of speakers in the foyer of the museum, used by Brian Eno for his *Kite* installation in 2000. Shortly after the installation went up, I was upstairs installing the indoor piece when I got called to the reception. And on approaching the reception, I was pointed out to this young Nigerian guy, who then walked toward me and embraced me. It was an emotional type of embrace. I was like: "Wait—what is going on here?" And he, all emotional, goes on to narrate his story, how he's been living in Helsinki for the past three years as a student and also working part-time to augment his finances. Almost every day he comes to the bus stop close to the museum to get on a bus. On this particular day that the sound installation goes up, his regular routine got disrupted. He is from Lagos, and he knows the sounds. According to him, "I am hearing the sound of Lagos here in Helsinki, and all around me I am seeing white people." This was something he couldn't relate to. He got really confused and agitated, with different

Figure 7.i.3 Kiasma, Helsinki, 2011.

thoughts running through his head at the same time. He thought he was hallucinating as a result of studying and working too hard. He hasn't been back home since he came to Helsinki, and thought it was some sort of voodoo to draw him home.

It was a bit of psychological meltdown for him and he called his friends to narrate what was going on. His friends probably thought he was having a breakdown, and advised him to skip school and work for the day, and instead take a taxi back home so that they can take care of him. But he insisted that he was going to find out what was going on, and somehow managed to track the sounds down to the museum, where he went in to the reception to make enquires. This enquiry led to my being summoned to the reception, and that was how I met him, and explained to him what my work and installation was about. In conclusion, he said he was going to visit Lagos for Christmas later on in the year, and this was due to the nostalgic impact of the sounds on him. And he did visit home, many months later, in December—this was all happening around April—I got a call from him saying he was in Lagos. This encounter was a strong revelation and changed my perception of the sound installations I did. Prior to Helsinki, I had already installed the sounds of Lagos in some European capitals, but my focus was on how Europeans—people who do not know these sounds—would react to this strangeness. I hadn't considered how people who knew the sounds would react to the familiar in a different space. Since the Helsinki incident I am very conscious of that, and when I install sounds of Lagos abroad, I am always looking out for the Nigerians, those who know the sound—because they will react differently to that.

HS: Being touched by these sounds and by their recordings means also a sort of transportation through sound, being teleported to the place, to the environment where these sounds originated?

EO: This is one of my main attractions to sound: this teleportation attribute. You get transported from one space to another. A similar thing to the Helsinki encounter also happened during the *No Condition Is Permanent* (2018) show I had at the Imane Farès Gallery in Paris, It was an audiovisual show on Lagos. On this particular day in December, I went to the gallery with two friends, and I was in the inner room when I was called out
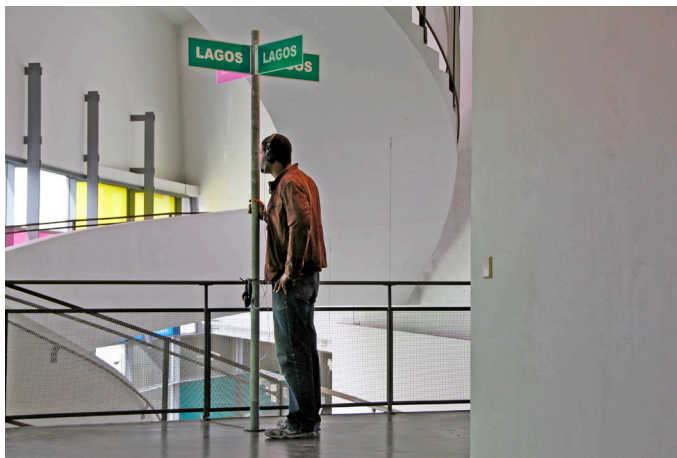
Figure 7.i.4 Emeka Ogboh, *Lagos soundscapes*, ARS 11 Kiasma, Helsinki. Photo: Abraham Oghobase.

Figure 7.i.5 Emeka Ogboh, *Syntax Error*. Photo: Tadzio; courtesy Imane Farès Galerie, 2018.

to the main gallery space. And then there was this Nigerian guy out there crying uncontrollably. He was experiencing a rough time in Paris, with no steady accommodation and was living on the streets, so you can imagine his emotional and mental state of mind. And then he comes across this exhibition, walking by on the street and seeing these Lagos visuals through the gallery windows: This led him, out of curiosity, to step inside and then experience the sound installation in the space. This kind of transported him home to the city he lived and grew up in, a city where he still has family and friends in. And so for him it was a whole bunch of emotions that exploded at the same time, and he was just crying all through our conversation. This was a very emotional and strong encounter for me. I never imagined this scenario happening when I was working on the installation. I never knew it would have this strong emotional effect on someone, considering that Paris is not one of those cities with many Nigerians. During the work process of creating the artwork, you are more caught up with the concept you're working on: reenacting Lagos as much as possible, but then someone reacts emotionally to the installation, it blows your mind. So, these two encounters stand out for me in terms of my work with sound, especially soundscapes, and these encounters have heavily impacted me on how I think about my work.

HS: By this teleportation one is also teleported into sensibilities and taste? Probably these people being touched by your works immediately also smelled the location, they tasted what they ate or drank there.

EO: When I did the installation *Market Symphony* at the Smithsonian National Museum of African Art, Washington, DC, in 2016, the main feedback I had from people who knew this market was: "Oh wow! Listen: the sounds teleported me back to this place; it reminded me of the time I was at the market." But one woman told me that it didn't just bring back the memories of the market: but it activated the smell of the place. She could smell the market again, and she said could even "taste" the air of the market. I found that really strong. That is the beauty of working with sound: it evokes different sensibilities, and in a different way for each person experiencing it.

HS: In the more recent approaches of sound theories, and especially in the anthropology of sound, many researchers claim that sound indeed activates all these sensory memories, related to individual situations. It is not sufficient to just use verbal labels to describe or categorize a certain sound, a sonic experience, or a sonic environment. Sound activates a

Figure 7.i.6 Emeka Ogboh, *Syntax Error*. Photo: Tadzio; courtesy Imane Farès Galerie, 2018.

whole corporeal, a physiological experience. How does this then affect your practical approach to working on an artwork: What guides your working process?

EO: If I'm working on a concept that involves city field recordings, I don't necessarily have a detailed guide on the working process: It's an organic process for me, and it starts with seeing the city as a composer, and I only document and edit what it composes. Most times I am not out looking for anything specific, I let the city guide me and I just stay open to new interesting discoveries. But if I work with a composer, for example, or if I compose music entirely from scratch, the ideas at the beginning are articulated most of the time, though I leave room for new directions during the process. When you are collaborating, it's less stressful to have things thought through at the start, you also need to be able to communicate your ideas to your fellow collaborators. Same too when I am composing a new piece, though sometimes I may not have a clear direction—but start with a scenario and then see how things pan out. All in all, I do not have one specific methodology, I am very open to different approaches—wherever the work may lead me.

HS: Is there a sound or taste memory you remember in this very second, a kind of sound-, sense-, or smellscape?

EO: This is the period in Nigeria we call *dry season*, the *Harmattan*: when you have this cold, dry, dusty breeze from the Sahara that seeps through the country. There is this particular dusty, chalk-like smell that comes with it. In the eastern part of Nigeria where I grew up this would probably be the dominant smell right now. The fine dusts also settles on your lips and leaves a salty, chalky taste when you run your tongue across your lips. There are also a lot of bushfires because everything is very dry this period, and these fires leave a burning grass smell and crackling sounds in the air. There's also the sound of wind, coming through windows and trees: depending on the trees around you. The house that I grew up in had a certain type of pine that whistles as the wind blows through its needles. These are the kinds of smells, tastes, and sounds that come together for me at this moment. I don't know why having this conversation with you activated this memory . . . maybe I miss Enugu, where I grew up.

7.ii

Cairo Baby-Doll

Some Remarks on a Cairo Sound Art Scene

Søren Møller Sørensen

On January 25, 1850, the French author Gustave Flaubert wrote from Cairo to his friend Dr. Jules Cloqet:

> What can say about it all? What can I write you? As yet I am scarcely over the initial bedazzlement. It is like being hurled while still asleep into the midst a Beethoven symphony, with the brasses at their most ear-splitting, the basses rumbling, and the flutes sighing away; each detail reaches out to grip you; it pinches you; and the more you concentrate on it the less you grasp the whole. Then gradually all this becomes harmonious and pieces fall into place of themselves, in accordance with the laws of perspective. (Flaubert 1996, 79)

Apparently, Flaubert reached that full aesthetic satisfaction in the encounter with the oriental otherness whose pursuit arguably was the true *raison d'être* for the European elite's oriental journeys that were in vogue in the mid-nineteenth century. Or at least, he does his rhetorical best to convince his friend about that by evoking the generally acclaimed summit of aesthetic arousal—the impact of a Beethoven symphony—to explain how Cairo impressed him. At its best, Flaubert's account of his travel witnesses to his capacity of bedazzlement and bewildering, and to his sensitive reactions to shock-like experiences that transcend his culturally attuned categorical system. The more dubious side is the harmonizing "perspective," that is, the orientalist imaginary that he brought with him from home and that domesticates and neutralizes the shocks.

Since then—Flaubert returned to France in August 1850—the *raison d'être* for the quest for cultural otherness outside our comfort zone of Western-style modernity has become less obvious. At least since Edward Said's *Orientalism* (Said 1978), it has been part of our intellectual habitus to approach this quest with the highest degrees of self-critical awareness and with the fear of being trapped in orientalist stereotypes.

This basic problem only becomes more complicated when we try to come to terms with avant-garde scenes outside the Western hemisphere. What are we actually looking for? What do we desire? "Otherness" of some sort, as far as avant-garde art, per se, strives for being "other" with respect to stable artistic norms and traditions. But do we request an

additional otherness when the scene and its artists are located not, for instance, in Berlin, New York, or Copenhagen, but in the faraway and "exotic" Cairo? It will be clear from the very first encounter with this modern, traffic-jammed, and culturally diverse Middle Eastern metropole that a demand for a cultural otherness in accordance with the traditional orientalist imaginary that was binding for the nineteenth-century traveler will not be fulfilled. But still it seems that Western visitors expect faraway places such as Cairo to be saturated with meaning in a way that we do not expect at home, and that we expect that art from these faraway places mirrors this particular significance. Do we witness the transformation of the old wish for exotic *couleur locale* to a demand for a particular, aesthetic manifest relation to the place when it comes to non-Western artists, or are other cultural mechanisms in play?

These critical questions—paired with the immediate experience of a strong and particular importance of the place—accompany me in my encounters with works and people from the small scenes for avant-garde music and avant-garde sound art in Cairo. Maybe because places in Cairo make themselves so strongly felt for a visitor from Northern Europe, with its more subdued city life, and maybe also because sound is such a prominent feature of all Cairo cityscapes.

The City Plays its Part

Attending an evening with *Cairo Impro*—with free group improvisations by the composer Bahaa el-Ansary,[1] the guitarist Pawel Kuzma, and their guest for the evening—you will not fail to notice the strong impact of the sounds and vibrations of Cairo. Situated in an old Cairo neighborhood and close to the Citadel that towers over this part of the city, the concert venue is as far as you can imagine from white cube-like neutrality. The roar of the monster city is never absent and it affects you as an integral bodily experience through all the solid building parts while more discernible sounds and signals reach you through doors and windows.

Bahaa el-Ansari, who this evening is improvising with his friends is probably the most internationally acknowledged composer of the younger generation in Egypt. In an interview that I conducted in 2017, he described his particularly Egyptian way into the profession of a composer of contemporary music and spoke about his particular relation to his city and its recent history. He was trained in Egypt, first as an instrumentalist and later as a composer—but in a rather conservative manner, and he looked in vain for appropriate challenges in the musical styles to which he had been introduced. In 2011, the year of the Egyptian January Revolution, he was in the third year of his composition studies, and he explains:

> At that time I didn't know that there was something called contemporary music or about all the new aspects of music. But something happened that is directly linked with Egypt. The night before 25 January, I met on Facebook an Egyptian composer living in Austria. We took contact via Skype and we spoke together to four o'clock in the morning. That is to say we

spoke four or five hours. He told me about contemporary music and we saw lot of videos. It became the turning point. (Sørensen 2017)

Bahaa el-Ansari obviously enjoys telling his story and I enjoy listening. It goes on like this:

Immediately after, I started writing my first string quartet. The next day was the revolution and I went about in the streets and started writing my piece. Most of it is composed in the streets during the revolution. (Sørensen 2017)

This story of course doesn't constitute Bahaa el-Ansari as the first composer of contemporary music in Egypt. But it vividly illustrates how the artistic trajectories of a generation of young Cairo artists are linked with the dramatic history of this city during the last decade. Today Bahaa el-Ansari's music is played internationally, and his conceptual approach and his aggressive and noisy style have become more sophisticated through the study of European predecessors such as Johannes Kreidler and, among the older generation, by Helmuth Lachenmann.

Dialectical Conceptualism

The concert with *Cairo Impro* featured, among others, the young sound artist Jacqueline George. My meeting with her, some days after the concert, again nourishes the particular perspective of this subjective account of some trends in the sound art avant-garde scene of Cairo today.

We met in front of the *Café Gruppi*, a relic of the splendors of Khedive Cairo and formerly the most notorious Italian café in Cairo, known for its extravagant cakes and sweetmeats, although, due to renovation, it has now been closed for several years. From there we went along the busy shopping street named after the early nineteenth-century industrialist Talat Harb to a café close to the Egyptian Supreme Court. It is an eminently noisy place with high ceilings and hard surfaces. Everything moving in the room has left audible traces on the recording of our talk. Not to mention the boisterous conversations at the neighboring tables—about lawsuits at the court I imagine . . .

Not unlike sound art scenes elsewhere in the world, the Cairo scene developed initially in visual art rather than musical institutions. So too does the artistic trajectory of Jaqueline George leading from drawing, painting, and sculpturing to sound art. But talking about herself, she stresses much more the conceptual character of her artistic approach than the link to a particular material or technique. She studied at the Faculty of Art Education at the Helwan University in Cairo, where the influential artist and educator Shadi El Noshokaty organized thematic workshops. These were not, Jacqueline explains, so much about techniques; rather they were about the conceptual aspects. The teaching was about "how to think and how to be an artist like a researcher," "how to think ideas and how to translate them"[2] into some appropriate medium. The special interest for working with sound was triggered by the encounter in 2008 with her colleague Magdi Mostafa, who was some ten years older, and who at that time worked as an assistant professor at the Faculty.

When asked about the character of the concepts that she is working with, things become trickier. Obviously, Jacqueline George is a gifted dialectician. As a sound artist she is aware that "there are lots of meanings in sounds" and as a Cairo-based sound artist, she is aware of the richness and diversity of Cairo street sounds. But she doesn't approach this stunning sound world with the intention of soundscape-like documentation or deep listening-like contemplation. As the dialectical philosopher "stresses the concept" (cf. the German philosopher Hegel's concept, *Die Anstrengung des Begriffs*) to disrupt the conventional conceptual schemata, Jacqueline George pushes the signifying aspects of quotidian sounds to take them to somewhere unexpected. She addresses this issue, first somewhat vaguely. "Actually, it starts with very simple words I am interested in like 'place,' or maybe 'the communication between universe and my body.' I make a brainstorm and write down everything I think, and after that I try translating these strange ideas to sounds." She goes on, explaining that it was in Ahmad Basiony's last workshop she developed her idea about sounds as abstract ideas—and turns at last to an illustrative example: "It was for an exhibition about marketplaces, I once made a doll and I put the sounds of the market inside her body parts. You had to touch her 'private space' to start a special track of street sounds. I put the public inside her and so I demonstrated the difference between public space and private."

Ahmad Basiony, who Jacqueline George referred to as instrumental in the development of her dialectical conceptualism, is an indispensable reference for the young Cairo scene for sound art. Ahmad Basiony, multimedia artist and, at that time, assistant teacher in the workshops of Shadi Elnoshokaty, was shot dead by security police while taking part in the January revolution and video-documenting what was going on. The life and death of Ahmad Basiony intimately links the emergence of the Cairo sound art scene with the Egyptian revolution of 2011 and with the short-lived Arab Spring. The revolution, its upcoming, and its aftermath, opened a huge space for political activism that readily linked with avant-garde art activism. It also quite literally opened—regrettably only for a short while—the cityscapes for artistic projects. Today, Ahmad Basiony has become the symbol of all this. His name has become synonymous with the revolutionary fervor that reverberates in Egyptian sound art even today when the revolutionary aspirations have long been let down. Both Jacqueline George and her colleague Magdi Mostafa recall with enthusiasm the public space art activism during the days of the revolution.[3]

About-Ness and its Other

After a cup tea at the local plastic-chairs-on-the-pavement-café at *Sahat al-Geesh* in central Cairo, I walk with Magdi Mostafa to his nearby studio that occupies a spacious ground-floor flat in an imposing early twentieth-century building: stylistically inspired by Italian architecture of its time, and, as such, still a demonstration of a Cairo's being culturally not so far away after all. Surprisingly, the heavy building effectively keeps out the traffic noise and allows light music from some digital device to dominate the acoustic space. Only the

view through the windows, revealing carpenters in the backyard handcrafting furniture and Magdi's warm hospitality and his slightly Egyptian-inflected, international English, reminds us that we are still in Cairo.

Magdi introduces himself as "an Egyptian artist based in Cairo,"[4] and tells about his upbringing in the Northern provincial town, Tanta, his early experiences with his father's tape recorders and record collection and his educational background; again: not in music, nor in sound, but in visual art and craftsmanship. Magdi tells me about this while I look around at the nicely prepared sketches and models in his study, which bear witness to this portion of his skills and educational background. From the traditional visual art forms, he moved first to animation film and from there to soundtracks for his fellow students' animations. These soundtracks were surprisingly successful despite the absence of any professional training in music and sound production.

Magdi's first work "with no pictures," and the first work that Magdi himself designates as "sound art," was produced in 2002. It was presented at the *Youth Salon* in Cairo's *Palace of Arts*. "It was probably the first time that an Egyptian audience went to an art place to find headphones only," Magdi says, ". . . but it was a success." The next year, at the same venue, this piece was followed by the first site-specific sound installation made by an Egypt artist: *Transmission Loss*. It was a site-specific work taking issue with "space" rather than "place," if we apply the terminology proposed by Miwon Kwon (Kwon 2002). Magdi is cautious to make clear that this work had "no messages." Rather it was a dialogue with the "physicalities of the space; its dimensions and materials." The idea of taking issue with the pre-aesthetic sonic identity of the venue was driven so far that parts of the sounds were transmitted through the building's announcement system, while others came from low-tech devices such as radio speakers and car speakers borrowed from friends and colleagues. Magdi categorizes the sounds of the work as "voice performance by myself and some friends" and "field recordings": sounds from Cairo cityscapes and all kind of sounds suitable for "listening practices."

Of course, it is a risky business to attempt the reconstruction of the experience of an event that took place some sixteen years ago. But an account on the institutional and physical framings of the event may give some ideas.[5]

The *Youth Salon* (ṣalūn al-shabāb) is an annual exhibition for artists younger than thirty-five years old. It is the Cairo event where many newly educated and upcoming artists have their first chance to present their works to the public. It is big—the 2002 vernissage attracted thousands of viewers, many of them friends and family of the exhibitioners—and I believe it reflects the trends at Egypt's art schools and thus, for a great part, being conservative. No wonder the jury was divided in their view of Magdi's work: some jury members valued its freshness and originality, others weren't able to recognize it as art, and others again viewed it as an unwelcome intrusion of Western culture into Egyptian society. After only three days, the work was taken down, and the acoustical environment in *Palace of the Arts* returned to the usual.

This "usual" can still be experienced today, and, before concluding this chapter in August 2018, I snuck in while some young artists were preparing a new exhibition to assure myself about the building's acoustic character. *Palace of the Arts* is part of a compound of art

institutions on the mid-city island, Zamalek, in Cairo. It was built in the 1980s with Japanese money. It is comprised of all concrete buildings that in style imitate classic Arabic palace architecture with domes, courtyards, and "arabesque" ornamentation. Like the other buildings in the compound, the walls of the *Palace of the Arts* are tiled with marble, but particularly the ceilings are more modern and lighter in character. It is centered around a narrow, tower-like construction, with a spiral metal staircase leading to a dome of glass and steel. The room's reverb is surprisingly short and subdued.

Magdi Mostafa's sound artworks from 2002 and 2003 were decisive steps in an artistic career that would soon become international and would soon also embrace the conceptual—the "about-ness"—that was absent in the early works.

The interest for the conceptual possibilities of sound art seems to be triggered—as it was the case with Jacqueline George—by the cooperation with Ahmad Basiony, the abovementioned symbol of the January Revolution's unified hopes for intellectual, artistic, and political freedom.

The most widely remembered result of the cooperation between Ahmad Basiony and Magdi Mostafa was the project *Madena* (meaning city in Arabic) from 2007. It was an artistic reflection on the overwhelmingly diverse soundscape of the metropole Cairo that questioned the very issue of mapping. Different ways of mapping were confronted: the aural mapping through field recordings, the traditional visual map, and still another map being produced during the performance. "A heap of clothes was placed in the center of the performance space, with Basem Basiony[6] sewing it together on a daily basis to create another map of Cairo, for the duration of the exhibition."

In his later works, most of them produced for Western commissioners, Magdi fluctuates between a delicate aesthetic purity with the focus on some acoustical phenomena per se, and a coarse and direct "about-ness." The installation *Sound Cells: Fridays* evokes the sound of Fridays in the artist's former humble neighborhood in the Cairo district Giza as he heard them through the walls in the narrow street. Fridays are the Muslim's days of prayer, but they are also the days of household duties, cleaning, and washing. The installation exhibits a number of worn, primitive washing machines (collected in the neighborhood), whose sounds are combined with the sound of the local sheikh delivering the speech before the Friday noon prayer. The subject of the speech is woman life and a woman's duties viewed from this particular sheikh's particular standpoint. "Somehow he describes her as an empty vessel," Magdi explains, "very much like the washing machines." An academic, contemporary-art-lingo interpretation by an American critic goes:

> Sound Cells (Fridays) thus raises a richly complex tapestry of social issues. In addition to capturing the aural character of a particular space, the piece also touches on gender roles in a society at the intersection of religious conservatism and globalized modernity, and the questionable fetishization and anthropomorphization of banal utilitarian objects.[7]

Confronted with the questions of the importance of being exactly a *Cairo*-based *Egyptian* sound artist, Magdi answers promptly: "When I go to a Western city—in Germany for instance—I hear almost nothing. The input to your ears is a lot less. It makes sense to focus on this city because there is so much material to work with. This is one of the most rich

environments of sound, and when your surroundings provoke your ears all the time you should work on it . . ." "Some would call it sound pollution?" I suggest. "It is pollution, only when you reject it," Magdi notes.

It is obvious that the work of Magdi Mostafa has two equally important sides. Dialogue and experimentation with materials and acoustical properties is for him as viable an artistic approach as is a conceptual focus. But it is equally as obvious that his own experience with the recent political history of his city is a major force in his work. His most recent work, *Surface of Spectral Scattering*—a high-budget project shown at La Biennale de Lyon:[8]

> is a 600 m² light sculpture with multi-channel sound. It has a concept, but I am not good at telling about it, because it comes from my personal experiences and dreams. The main line is the revolution, the Egyptian revolution. I was in it. I was part of it from the first day. I lost Basiony in it. But it is not about the revolution directly. But is influenced by the very simple idea about how rage can be transformed into a glowing energy, how people wake up from a deep sleep and say no, we want something else! It is about the minimal and abstract idea of how one unit can glow and ignite another, as the revolution spread from one neighbourhood to another from one person to another. It is something that I lived, literally. These glowing minds were something I experienced in the vast scale in the city. Here you see again the city as inspiration. It is like flying over a city and seeing how the energy of rage is spreading. Its energy of rage, but positive rage . . .

A Freer Play of Relations

On my desktop in front of me is a copy of Ahmad Basiony's master's thesis from 2006. It is in Arabic and its title translates with some effort as "Expressive dimensions of sound effects and their role in the construction of the visual artwork in perception of postmodernity" (Basiony 2006). Basically it is a survey of artistic practices and theories, current in the international discourse of sound art at that time. It is written at approximately the same time as the first courses in sound art were taught at my university in Copenhagen. It might differ in its perspective and focal points from similar contemporary Northern European works; but not in a particularly Egyptian, Arabic, or Eastern way.

The Cairo scene of sound art was born out of global interaction, and it has always been dependent on integration in international art networks. This pertains to all aspects: aesthetic strategies, technology, funding, and distribution. Thus a successful career as a Cairo sound artist is necessarily also an international career, this not least due to hard economic facts. Egypt is not an affluent country with government-subsidied specialist art institutions as we know them, particularly in Northern Europe.

This implies a twofold dependence. The international affiliation necessarily makes the Cairo sound artist subject to shifting currents and fashions on international contemporary art scenes. And, at the same time, his or her particular identity as *a Cairo sound artist* makes the international career reliant on shifting views on the region linked to developments far from the semiautonomous art discourse. So, for instance, Egypt's prominent position at

the Venice Biennale in 2011 was hardly a mere coincidence. In 2011—the year of the Egyptian January revolution—the Egyptian visual and sound artist Hassan Khan was elected chair of the Biennale's artistic committee and the Egyptian pavilion paid tribute to Ahmad Basiony by showing his work *Thirty Days of Running in the Space*. Both Shadi El Noshokaty and Magdi Mostafa had a share in this, Magdi as the sound producer.

Obviously, Middle Eastern scenes of contemporary sound art are situated in a relational play with a richness of dimensions that far exceeds the discourse of orientalism that I hinted at in the beginning. All aspects of a given sound art scene will be conditioned by this play. This goes even for the "Egypt-ness" of Egyptian sound art. When the Cairo artists focused on in this chapter give such high priority to their city as place and space, they are reacting to its strong acoustic imprint—and they are also reacting to an international art market's demand for the aesthetic representation of some modern version of exotic otherness. Or they reject it: one of my Egyptian interlocutors told me that the European public was shocked by the confrontation with one of his non-conceptual and abstract works—not by the work itself, however, but by the fact that it was the work of an Egyptian!

This leads us back to the introduction's exposition of the problematics in an old-school orientalism perspective. Hopefully, we are now able to revisit these *topoi*, knowing that today they are embedded in a much richer relational play. We share too many of the parameters that are in play when sound becomes art and when place becomes aesthetically significant to allow a dichotomic view. This doesn't mean that the issues of power and domination that were prevalent in the critical orientalism discourse are obliterated. In the best case, it means that our demand for otherness can be situated in a freer—more open— play of relations.

7.iii

When I Close My Eyes Everything Is So Damn Pretty (Can't Do the Thing You Want, Can't Do the Thing You Want, Can't Do the Thing You Want)

Samson Young

(First published at https://www.thismusicisfalse.com/text/)

0. I am supposed to be asking what sound art wants, in the same way that one could fantasize about what domesticated animals want or deliberate upon a bucket's secret aspirations.

1. Yoko Ono once remarked in an interview, and here I am paraphrasing, that the history of <u>Western</u> music can be divided into BC (Before Cage) and AC (After Cage) (Blau 2012).

2. I underlined the descriptor Western to remind us all that we are talking about a very specific kind of music history under a very specific kind of cultural-historical circumstance. I fully accept this condition. I get real tired of people who pretend that they don't *already* accept this. OK now that this is out of the way, we may continue.

3. I wouldn't go as far as saying that Cage got it *all* wrong with Eastern philosophy. Though, I do have some very specific things to say about how he confusingly smuggled what amounted to a modernist notion of authorship into the ancient divination practices of *I-Ching* and, by doing so, essentially neutralized the most radical thing that it can say about concert hall's version of egocentric subjectivity—but I will save that for another time.

3½. The sort of tendency (as encapsulated by the Yoko Ono quote) to declare what Georgina Born terms a "disciplinary year zero" (Born 2015) vis-à-vis an unexamined

and unequivocal celebration of Cage has not been helpful for artists, curators, or scholars interested in talking about and making sound art.

4. Much of Cage's project has to do with challenging the pedestal on which the European composers of the Western canon stood, as well as the unbroken musical lineage that the European modernists claimed. So why are we turning him into a demigod? Why is sound art institutionalizing a competing but parallel Canon of directly descended sonic royalties, which by the way included only a handful of token Asians?

5. At this moment in time, nobody has really any idea what we are talking about when we call something sound art. I am not convinced that that's an urgent question (not *yet*—but there *will* come a time in the near future when sound art is finally institutionalized, when we will have achieved a level of arrogant certainty about what it is, at which point it will be at least fun to talk about definitions again, but, until then, I digress). Though, for something that has proven to be so difficult to pin down, there is certainly no lack of dogma surrounding it.

6. A certain contingent of the sound art community (not a small one) is plagued by a sort of idealization of sound art's medium-specificity (i.e. an insistence that sound art is defined by the primacy of the material of sound, and therefore practices that dilute the purity of the material's condition fail as sound art), as well as a reactive rejection of and break with music (i.e. what Brian Kane termed "musicophobia" (2013)). Douglas Barrett thinks that sound art *is* in fact our good old friend absolute music reincarnated in the contemporary art context (Barrett 2018). I think Barrett got many things right, and he was certainly correct in calling out the culturally conservative and artistically regressive tendencies of the variant of sound art that idealizes the auditory, as though the sense of hearing occupies an ethically superior position.

6½. Let me make another disclaimer. Barrett is (and we are also) talking about a very specific kind of practice, which is the sort of sound art that circulates within the contemporary art context, and is enabled by the institutional, economical, and curatorial structures of contemporary art. That is not to say however that strange and beautiful things are not happening in the concert halls of Darmstadt, New York, or Hong Kong; or that a pristinely produced LP of a field recording of the Peruvian rainforest is not in itself radical—it absolutely can be. But these are relatively stable moments in that we think that we know how to create, process, consume, or ignore these events and practices. But the real perplexing moment comes when somebody puts that Peruvian rainforest recording in a white cube and calls it an installation, however unqualified that claim might appear. Given the context in which this piece of writing will appear, I assume that this is what you are interested in—

6¾. —what's in it for *you*, what sound art *can do for you*. You are not really expecting me (though, I hasten to add, I would thoroughly enjoy doing so) to break an analytical sweat and perform a close reading of the field recordings from *For Whom the Bell Tolls,* are you?

7. Where Barrett got it a bit wrong, however, is to equate sound art with absolute music vis-à-vis their insistence on *autonomous sound*. The picture is much more fucked up than that.

7½. Allow me to elaborate: autonomous sound as an ideal, which bestowed upon music its status as the highest of all arts in the romantic era (a status that still persists in the classical concert hall of today), has its roots in enlightenment thinking, and the Kantian aesthetic of the disinterested judgment of taste, where beautiful objects appear to be "purposive without purpose." But note that this aesthetic judgment is not in itself medium-specific: we could imagine, for instance, a musical experience, a "mental free play" that is derived from the comprehension of the object-hood of music, which resides in music's "text-proper," that is, the score. This obsession with the score-as-text and, by extension, as embodiment of musical essence is at the core of what Lydia Goehr terms "the imaginary museum of musical works" (Goehr 1992). One could argue till the cows come home whether or not the aesthetic judgment in question constitutes an actual musical experience (and that, paradoxically, is where we might encounter the most hard-core proponents of medium-specificity, the sonic-dogmatist), the point being that the act (of un-sounding, of a silent contemplation of music) does not in itself undermine the said judgment's commitment to formalism. In other words, if we took Kantian logic to its extreme conclusion, we would have already arrived at a place where "music could become untethered from sound as an autonomous medium, left, at an extreme, without sound" (Barrett 2018).

8. It is not medium-specificity that's getting the resuscitation in sound art, methinks, but aesthetic formalism, and, more specifically, a particular variant of formalism that contemporary art (if we imagined contemporary art to be an upper middle-class, cosmopolitan, and left-leaning art professional who is well versed in the insights of the European intellectual tradition) could still live with. Formalism (if we imagined formalism to be an older man with bad hair who embodies the very essence of intellectual conservatism) has never really totally left us. It's been trying to make a comeback for years under various guises. In music, a more traditional configuration of formalism has been banished to a ghetto of the classical concert hall that is otherwise known as new music—that's not what we are interested in. What is so special about this new and more palatable version of formalism?

9. Let us make a detour and talk about poetry (bear with me, there is a good reason for this). Neo-formalism, or new formalism, in poetry had a brief moment in the United States and the United Kingdom in the 1970s and 1980s. Neo-formalist poets privileged metrical artifice, stylization, and above all, *musicality*—that is, poetry as a ritual language and an "aural technique," as a formal exploration "separated from everyday speech by its incantatory metrical form" (Gioia 1987).

10. Literary scholars and poets alike had been quick to react against a perceived conservative tendency in neo-formalism, at various times calling it "a dangerous nostalgia," "literary fascism," "essentialism," and "(a privileging of) white Anglo-Saxon rhythms and culture" (Sadoff 1990). Neo-formalist poets had also been

criticized for using language as a vehicle for establishing cultural authenticity, to signal that "one is on a serious journey among (canonized) artists" (Dawson 1985). At times, it was aesthetic formalism that was explicitly being contended with:

> The dissociation of sound, sense, and intellect, then reminds us of the danger of art in fin de siècle, the danger of appreciating aesthetic beauty formally and thematically, at the cost of the observed, sensory, disturbingly contingent world. As Charles Simic ironically writes, in his World War II poem, *Travelling Slaughterhouse*: "When I close my eyes everything is so damn pretty." Closing our eyes while opening our ears create a myopic, unimaginative poetry. (Sadoff 1990, 9)

10½. Are the neo-formalists conservative, positivist, and therefore regressive? Probably in some ways, many ways, but to be fair they never demanded a demonstration of correctness of poetic form, like a colonial ruler demands correct grammar of his subjects, but formal innovation (albeit in *their* terms; that said, to his credit at least Gioia acknowledged that many of the most important formal innovations in the English language, such as the haiku, were the results of non-Western imports). Postmodern radical subjectivity placed the free play of form under a kind of ban, or at the very least, made it *really* uncool. The position can be summed up thus: "to be true to the irreducible uniqueness of personal experience entails either avoiding or violating all predetermined forms and discursive structures" (Shapiro 1993, 30).

11. So why am I telling you all of this? Well, if our (let me momentarily exclude myself from the plural here) agenda as scholars, artists, and curators of sound art is to undo the "great audio-visual divide" (Feld 1996, 96), to open our eyes while keeping our ears open, to the ultimate end of recentralizing criticality in musical, sonic, and compositional practices—if this very specific thing is what we want, then I say we are *already* there: that's exactly what sound art had managed to achieve since the time of its popularization as a descriptor of a loose set of practices in the contemporary art context, despite its numerous instances of identity crisis and ontological confusion (note that I am not saying that's what sound art is, but commenting on what it does). The battle has *already* been won, if that's your fight.

12. But here is a caveat: in the process of realigning sound and music with the some of the progressive agenda of contemporary art, sound art has also managed to smuggle into the white-walled space its own version of neo-formalism as at least one among many valid and current avenues for artistic exploration. Examples abound: I am thinking about the pure sonic shapes of Bernard Leitner, of the contrapuntal and interweaving lines of Cardiff's *40 Piece Motet*, of Susan Philipsz' voluminous bath of voice as sculptural form, of Ed Osborn's *Sidewinder*, and other sonic-architectural devices, of all of the abstract multichannel sound composition that's ever been produced for and played/exhibited/listened-to/looked-at in a gallery, and of that Peruvian rainforest field recording-as-installation.

13. So should we be alarmed? Should we be weary of sound art's conservative agenda, its assumptions, its celebration of received forms (can you tell I *really* don't care?).

Interlude: A Self-Interview

Samson Young 1 (SY1): What was the first thing that came to mind when you were asked to derive a text for this very specific thing in a set of very specific circumstances?

Samson Young 2 (SY2): That it sways with the wind—which I think is possibly a cliché, though that's really how I remembered it. But memories can be deceptive. Maybe it didn't sway with the wind, maybe it did. But I never saw it and I just assumed that it did so. Maybe my assumption is a romantic notion, a preset of the mind, an effigy of the real thing. I can also cause it to sway of course by pushing it, and I did push it around, that I do remember. But is a swaying that is independent of my intervention more honest, truthful, purposeful, and good?

SY1: We are talking about a thing, and the way the thing acts upon the world. Why do you invoke categories and judgments of a different order?

SY2: People start invoking notions such as honesty and integrity when they run of out things to say about the thing itself.

SY1: What is the thing itself?

SY2: Well, it depends on what you mean by the thing. I wouldn't go so far as to describe myself a formalist, though I do enjoy a good close reading, the sort of analysis that breaks a sweat.

SY1: Stop deflecting my questions with fancy quasi-philosophical footwork.

SY2: Yes, but if I am having fun deflecting your questions tell me why I should stop. What do you want from me?

SY1: I want you to stop dancing around the thing and start engaging it. Let us for a moment focus on your physical relationship with the thing. How do/would you interact with the thing?

SY2: I probably shouldn't push the thing so hard that it caned myself or somebody else in the face—that's just abusive, and being abusive is never good, and I'd learned the hard way, but that's really the only rule.

SY1: Okay, we are getting somewhere. Go on. More?

SY2: I brush my fingertips across the line that the thing forms. Cold, hard, glossy surfaces. I push a few against their will and I observe as they bounce back. Resilient things they are. What lessons do swaying metallic bamboo poles teach me? Does the thing instruct us to be principled, stubborn, or unyielding?

SY1: Here we go again. I've had enough of your stuff theory.

SY2: But it's important, no? What are the formalistic tendencies of cynicism in the thing? Am I mindful of the exploitative tendencies of the material that constitutes the thing?

SY1: I am not saying these are not important things to think about. I just don't know how they are relevant to our discussion of the thing in question.

SY2: Well, form is how something is put together, relationship among its parts. So, if the thing is the sum of its materials and their effects upon the world, then in the act of engagement I became one with the thing, and by extension, its form. But we are talking about a specific kind of relationship—the pushing, the swaying, and the caning. It's not like I am falling in love with the thing, so I guess it makes little sense to speak of a loving or abusive relationship with the thing, no?

14. If forms always contain and confine, and if it is impossible to imagine societies without forms, then the most strategic political action will not come from revealing or exposing illusion, but rather from a careful, nuanced understanding of the many different and often disconnected arrangements that govern social experience. (Levine 2015, 18)

15. I will end on a hunch that I cannot qualify: the neo-formalism that sound art has smuggled into the gallery space is not the earnest and naive nostalgia for enlightenment that marked the post-Cold War era out of which it emerged. It is, rather, a *mourning* of the bankruptcy of pure forms as an aspiration, within which is already a full awareness of its utter unattainability—something Seth Brodsky might call an "unconscious fantasy" of form (2017). It is not the act of crafting of form that is being celebrated, but the purity of a kind of crafting that is, in spite of itself, a staging of its own negation that doubles as a celebration of its lack. An ethical play between the tolerance for ambiguity, and a hunger for clarity. The effigy and after-image of form. A parapraxis, not a praxis. A sideway nod. The thing that sound art doesn't know that it wants.

7.iv

Sound in Covert Places

Indonesian Sound Art Development through Bandung Perspectives

Bob Edrian

Introduction

After the Reformation in 1998, Indonesia began to develop whole new ideas and perspectives toward the understanding of media. The fall of the New Order, after almost 32 years in power, led Indonesian society to a new kind of direction, especially in relation to the way Indonesian people engaged with mass media. Indonesian people were no longer repressed by an era of dictatorship and a few years later came a generation who were fully independent and able to determine their future.

The development of art collectives and communities in the 2000s, especially cities in West and Central Java such as Jakarta, Bandung, and Yogyakarta, not only created a new atmosphere for socially engaged and participatory art in Indonesia, but also triggered the development of intermedia or media art. Art collectives or communities such as Ruangrupa (Jakarta), Performance Fucktory (Yogyakarta), Gabber Modus Operandi (Yogyakarta), Garden of the Blind (Yogyakarta), House of Natural Fiber (Yogyakarta), Biosampler (Bandung), Common Room (Bandung), and Videolab (Bandung) began to explore the possibilities of combining art and technology. The term "multimedia art" became very popular in Indonesian art exhibitions and performances in the 2000s, and was also institutionalized at art schools such as Institut Teknologi Bandung's Intermedia Studio, which, in 2007, offered the first intermedia art major not only in Indonesia but anywhere in Southeast Asia.

The year 2007 was not only a period when media art became institutionalized, but also when Common Room (Bandung) started an important media art festival called *Nu Substance* that lasted for about five years. Before this, there had only been two Indonesian media-oriented festivals of significance, and neither fully identified with the concept of media art. In 1999, the Yogyakarta-based collective Performance Fucktory initiated a

multimedia festival entitled *Mencari Harmoni* (later changed to *Parkinsound*) while Jakarta-based Ruangrupa initiated a video art festival called *OK. Video: Jakarta International Video Festival* in 2003. This festival then transformed into a media art festival in 2015. While *Parkinsound* focused on the fusion of music and multimedia performances, and *OK. Video* focused on video art, the *Nu Substance* festival was already developed within the idea of the relationship between art, culture, and the exploration of media, making it the first media-concerned festival in Indonesia.

In terms of sound art, 2007 also marked the exhibition *Good Morning: City Noise!!! Sound Art Project*, held by Galeri Soemardja, Institut Teknologi Bandung (ITB, Bandung Institute of Technology), which introduced the term "sound art" as we now know it in the Indonesian contemporary art world. Although the exploration of the element of sound in art, especially in fine art and visual art, had already begun in the 1970s through the exploration of some members of the Gerakan Seni Rupa Baru Indonesia (GSRBI), this was arguably the first sound art exhibition (both national and international) ever held in Indonesia. The idea of sound art proposed by the curators, Aminudin T.H. Siregar and Koan Jeff Baysa (United States), was realized by presenting works through headphones. All of the sound works were selected through an open call submission. Following the idea of exhibiting sound works, Common Room, through their *Nu Substance* festival, held an exhibition in 2011 entitled *Derau: Pameran Seni Bebunyian* (Derau: Sound Art Exhibition) at Studio Ropih (later known as Platform3), Bandung. Ruang Gerilya (founded in 2011, later known as Gerilya Artist Collective) also explored the sound-space relationship through one of their exhibitions in 2013 entitled *05 Seniman, Suara, Ruang* (05 Artists, Sound, Space). In 2016, one of the most prestigious art spaces in Bandung and Indonesia, the Selasar Sunaryo Art Space, held their sixth biannual exhibition, called *Bandung New Emergence Vol. 6: Listen!*, promoting sound explorations by Bandung's young and emerging artists as the main theme. In 2018, eleven years after the *Good Morning: City Noise!!! Sound Art Project*, Galeri Soemardja once again held a sound art exhibition, this time entitled *Soemardja Sound Art Project*. This exhibition marked not only the demand and interest toward the idea of sound art in Indonesia, but also focused on the importance of sound art in Bandung in particular.

Before the term "sound art" became frequently and specifically mentioned(both as a piece of artwork and in the context of exhibitions and performances), the symptoms indicating the emergence of sound art in Indonesia appeared in various categories of disciplines and explorations. Even harder, the element and ideas of sound often emerged in the smallest or most ignored parts of the whole installation work, performances, and festivals. The idea of revealing Indonesian sound art history is to investigate and dig deeper into covert places within many possible platforms. This article represents "sound traces" located within the Indonesian art world, from the Bandung-Yogyakarta young artists' rebellion in the mid-1970s, the emergence of intermedia, to the analysis of recent sound art events in Bandung.

The History of the Indonesian Expanded Medium of Art

In 1979 Indonesian artist Bonyong Munni Ardhi presented his work entitled *Patung Suara* (Sound Sculpture) in the *Gerakan Seni Rupa Baru Indonesia* (Indonesian New Art Movement) exhibition at Taman Ismail Marzuki, Jakarta. The piece was based around a radio that plays the opening and closing jingle of the national radio *RRI, Radio Republik Indonesia* (Indonesian Republic Radio), enclosed inside a box made of thick plastic veils. In order to listen clearly, the audience had to open the plastic veil that blocked the sound. The *GSRBI* was a collective of young artists formed in 1975 as a response toward what they considered the obsolete ideas of visual art being promoted by an older generation of Indonesian artists and enthusiasts who represented the jury committee (Affandi, Rusli, Popo Iskandar, Sudjoko, Alex Papadimitriou, Fadjar Sidik, and Umar Kayam) for the 1974 *Pameran Besar Seni Lukis Indonesia* (Indonesian Painting Grand Exhibition, later known as the *Jakarta Biennale*).

These young artists from Bandung and Yogyakarta protested the exhibition by sending a bouquet along with a note that read "*IKUT BERDUKA CITA ATAS KEMATIAN SENI LUKIS KITA*" (CONDOLENCES ON THE DEATH OF OUR PAINTINGS), and was accompanied by a statement signed by the young artists. A year later GSRBI changed not only the idea of painting in Indonesia, but also the medium of fine art/visual art in general, with exhibitions beginning that year and continuing until 1979, when they disbanded after issuing a book entitled *Gerakan Seni Rupa Baru Indonesia*. The group tried to reunite in 1987 by conducting a collective exhibition entitled *Pasaraya Dunia Fantasi* (The Fantasy World Fair) but failed to regroup, though, as individuals, each member of GSRBI continued their careers as artists and curators. Member Jim Supangkat is known as the first independent curator in Indonesia, organizing the Biennale IX Jakarta in 1993–1994.

The GSRBI was an enormous influence on Jakarta-born artist Heri Dono (Supangkat, Damajanti, and Kent 2014, 48–9), who later relocated to Yogyakarta. Heri stated that he visited all the GSRBI exhibitions in the late 1970s, and in the 1980s he developed the idea of "pemurnian" or "purification" from different kinds of art to enrich his own artistic works. For Heri, purification meant extracting the essential elements from music, dance, and theater (Triadi 2016, 129). He then combined these elements with his visual artwork (Supangkat, Damajanti, and Kent 2014, 90). He extracted sound from music and movement, and from dance and theater, and then developed these into his installations. In his 1989 solo exhibition at Cemeti Art House (now Cemeti Institute for Art and Society), the term "installation art" was not yet popular (Wiyanto 2002, 2), and was barely known in Indonesia. Heri's installation *Aquarium Art, Mubeng Art* (a combination of visual, sound, and movement elements) was called an "experimental sculpture" by Cemeti's curators, Mella Jaarsma and Nindityo Adipurnomo (Triadi 2016, 129). The term "installation art" was then used and became popular in the Indonesian art world when Jim Supangkat mentioned the term, as well as the terms "curator" and "independent curator," and the idea of postmodern

and contemporary art, in 1993–1994 at the Biennale IX Jakarta when he was appointed as the curator. Heri was also one of the participants at the Biennale with two works, including an installation entitled *Watching the Marginal People*, a work chosen by David Toop in his curation of the Hayward Gallery's sound art exhibition entitled *Sonic Boom: The Art of Sound* (2000). A year earlier, Heri had been involved in the Asia Pacific Triennale (APT) in Brisbane, Australia, where he presented an installation based on Javanese gamelan instruments, entitled *Gamelan of Rumors*, which was later collected by the Fukuoka Asian Art Museum in Japan. Another artwork with the element of sound was *Animal Journey*, presented in 1997 at *Sounding Sphere* at the Harima Science Garden City opening, Hyogo Prefecture, Japan, which was later mentioned by Shin Nakagawa in his book *Musik dan Kosmos: Sebuah Pengantar Etnomusikologi* (Music and Cosmos: An Introduction to Ethnomusicology) as one of the most important developments of sound art in Indonesia (Nakagawa 2000, 112).

The Indonesian art world in the 1990s saw a boom in multimedia art and an increasingly international outlook that influenced the art movement in the 2000s (Wiyanto 2011, 10). The idea of multimedia art influenced younger artists such as Jompet Kuswidananto and Venzha Christiawan, who collaborated in a duo called *Garden of the Blind*, describing their 2001 performances at the Plastic Kinetic Worm, Singapore, as "sound performances." The two artists (both from Yogyakarta) then went their separate ways, with Venzha forming a collective called House of Natural Fiber (HONF), which developed the idea of combining art and technology, and Jompet working as a solo artist focusing on Western influences on Javanese people and culture. Jompet is also the sound designer for Teater Garasi. The idea of art collectives spread to other cities at the beginning of 2000s, such as Common Room in Bandung and Ruangrupa in Jakarta.

Intermedia Practices and the Emergence of Sound Art

Early 2000 marked a widespread development of art hubs, collectives, and communities in Java. With the likes of Aksara, Forum Lenteng, Ruangrupa, and Serrum (Jakarta), Common Room, IF Venue, Tobucil, and Kineruku (Bandung), Kedai Kebun Forum, HONF, MES56, Viavia (Yogyakarta), Hysteria (Semarang), and C2O (Surabaya), there was a different kind of development than the idea of internationalism and installation art in the 1990s. After the Reformation of 1998, the younger generation started to focus on new concepts and concerns, such as freedom of speech, information sharing, and networking through technology, especially in the context of the emergence of Internet cultures in Indonesia. Common Room was established as a melting pot for creative ideas in Bandung, starting out as a platform organized by Bandung Center for New Media Arts in 2001, which has become well known for its creative activities such as exhibitions, discussions, and workshops. Regarding their interest in art and technology, in the introduction of the

Nu Substance Festival (2007–2012) book, Gustaff H. Iskandar, along with R.E. Hartanto, T. Reza Ismail, and Reina Wulansari, stated that the idea of Common Room came from "the need to establish an institution that can push the development of multidisciplinary art, particularly media and technology-based art practice in Bandung" (Iskandar 2012, Foreword).

Their idea of pushing the development of media- and technology-based art was then realized in a festival entitled *Nu Substance* in 2007. That same year, the ITB opened the Intermedia Studio. The 2007 *Nu Substance* festival was described as "the first regular program that is dedicated to encourage the development of electronic music and media arts practice in Bandung—Indonesia" (Resmadi 2012, 19). Events included the Experimental Instrument Exhibition, Digital Music Workshop, and multimedia performances such as Biosampler, one of the first experimental/improvisational audiovisual groups in Bandung. The media art festival went on until 2012 when Common Room, a year later, then decided to shift their interest to the idea of collaborations between urban and rural area in Bandung. This series of events not only marks a period when media- and technology-based art became prominent and institutionalized in Bandung, but also opened a wide spectrum of new artistic possibilities, including sound art.

From a visit to the United States in 2002, Aminudin T.H. Siregar, one of the important figures in the Indonesian art world as a historian and curator, was inspired to organize a sound art exhibition in Indonesia. During his visit as the Asian Cultural Council Research grantee in New York, he met several sound artists as well as Koan Jeff Baysa, the curator of an exhibition entitled *One Hand Clapping "The Interstices of Sound, Language, and Silence"* at the Smack Mellon, Brooklyn, New York. Siregar was also inspired to start a sound art festival/exhibition by the *OK.Video* festival held by Ruangrupa in Jakarta, saying that since video art was already celebrated and developed in an exhibition or city festival context in Jakarta, then Bandung might emerge with the idea of sound art (Triadi 2016, 123–5). To address the lack of events, let alone research, writing, and even the understanding of sound art, in Indonesia, Siregar collaborated with Koan Jeff Baysa to organize a specific sound art exhibition entitled *Good Morning: City Noise!!! Sound Art Project* in 2007. Held at Galeri Soemardja, ITB, the oldest academic/university art gallery in Indonesia (inaugurated in 1974), this was the first sound-based exhibition in Indonesia with all the works presented by using headphones. In the exhibition catalog, Siregar, who was also the director of Galeri Soemardja, ITB, until 2017, stated that "sound art is not music, but 'art' using sound itself as a medium, where the sound becomes the main subject" (Siregar 2007). He continued with a short history of sound art generally, starting with the Dada experiments with the spoken word and concrete poetry to John Cage and Fluxus. Meanwhile, Koan Jeff Baysa wrote specifically about earthquakes, which are very common in Pacific Rim areas such as California, Alaska, Japan, and Indonesia. He then described the work of five artists with the idea of earthquakes that he had selected for the exhibition: Marjetica Potrc (Slovenia), Bryan Zanisnik (United States), Stephen Vitiello (United States), Vargas-Suarez Universal (United States), and Erdem Helvacioglu (Turkey). Both curators also invited more than fifteen artists (from Indonesia, Germany, Malaysia, Australia, and Hong Kong) through an

open call system. The list of artists included Ade Darmawan from Ruangrupa, Achmad Krisgatha, who later explored the idea of light, Dimas Arif Nugroho and Muhammad Akbar, who become well known on the video art scene, and Bagus Pandega, who works within the realm of sound, light, and kinetic installation.

The project was planned as an annual or biannual event, but unfortunately failed to be realized until 2018, when Galeri Soemardja once again held the exhibition entitled *Soemardja Sound Art Project*.

Sound Art in Bandung

As one of the first major sound art exhibitions ever held in Indonesia, the *Good Morning: City Noise!!! Sound Art Project* certainly triggered a lot of responses. While most of the audience were shocked by the idea of sound art and the all-headphones presentations, for Hendro Wiyanto, a prominent art critic and curator in Indonesia, the exhibition was somehow problematic in terms of its understanding of sound art development in Indonesia. In his article entitled *Perkara Suara: Selamat Pagi, Seni Bunyi . . .* (In the Case of Sound: Good Morning, Sound Art . . .), featured in the *Kompas* newspaper in March 2007, Hendro questioned Siregar's statement that the exhibition was an attempt to "steal . . . a development" (Wiyanto 2007, 29). At that time, what he meant by "stealing" is that he saw the ongoing development of sound art happening in the United States, and hence he wanted to involve Indonesia while the idea was still developing in a global context. For Hendro, stealing developments (from the United States or even globally) should not be the main reason for a sound art exhibition to be successful in Indonesia. Hendro pointed out that

Pameran "Sound Art" di Galeri Soemardja, Bandung. Pameran pertama di Indonesia yang menggunakan tajuk itu, semuanya menggunakan medium bunyi.
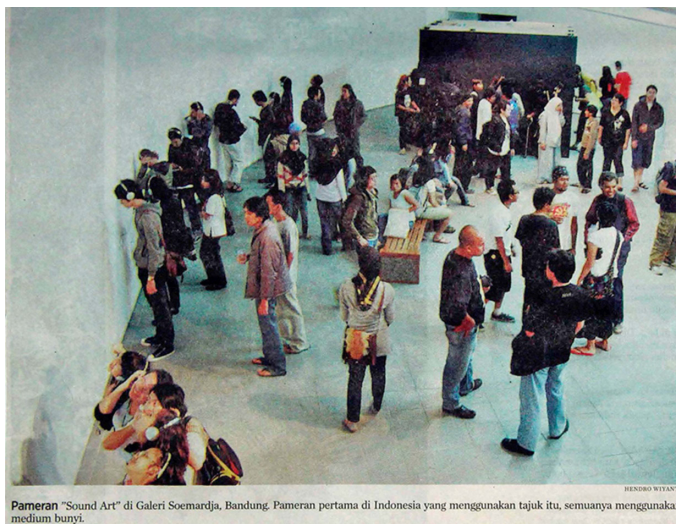
Figure 7.iv.1 Article snippet of *Good Morning: City Noise!!! Sound Art Project* exhibition held at Galeri Soemardja, ITB in 2007. Photo: Hendro Wiyanto, copyright © Kompas and Galeri Nasional, Indonesia.

the exhibition lacked a strong foundation for sound art to be a significant development in Indonesia, in this case the number of artists in Indonesia who really "understand enough" about how to explore the medium of sound (Wiyanto 2007, 29). But Hendro's argument is also problematic and not necessarily relevant, since he refers almost exclusively to artists from the visual art world.

Four years later, as a part of the 2011 *Nu Substance Festival*, Common Room came up with another idea for a sound art exhibition entitled *Derau: Pameran Seni Bebunyian* (Roar/Noise: Sound Art Exhibition). "Within the past years," they noted, "Common Room activists who are members of several communities do a lot of experimentation and exploration of sound, consciously or not" (Resmadi 2012, 147). Inviting ten artists from different backgrounds, *Derau* presented the idea of sound through objects, installations, and experimental instruments such as bamboo instruments. The exhibition featured works from Muhammad Akbar (who also participated in *Good Morning: City Noise!!! Sound Art Project*), Adityo Pratomo (now interested in the exploration of AI technology), Anggung Suherman (known as a member of the electronic music duo Bottlesmoker with Nobie Adzani), and Benny Apriariska (known for his activities on the noise music scene in Bandung). The idea of exploring the medium of sound also emerged in the realm of solo exhibitions such as Duto Hardono's *Good Love, Bad Jokes* at Selasar Sunaryo Art Space in 2010. Duto is one of the artists from Bandung who probably, to use the idea of "a sound artist requirement" stated by Hendro Wiyanto in 2007, "understands enough" about the medium and the idea of sound (though recently he has become more interested in performance art).

One of Duto's works in the 2010 solo exhibition, *Loop Study No. 1: Uber Feedback*, is worthy of particular notice. Resembling Alvin Lucier's *I Am Sitting in a Room*, in this piece Duto used two cassette players, each with a different function: one set to record the sound in the room with a microphone, and the other one to play back that sound through an amplifier that he put in front of the microphone. The idea was to make a real-time recording of the room and generate endless feedback as the playback, which is recorded over and over again. The conceptual approach in Duto's *Uber Feedback* is revealed in his past and subsequent sound works, such as *How to Perform John Cage's 4′33″ on A Tape Loop Delay as Demonstrated by a Band of Cacti* (2009), his collaboration with Meiro Koizumi entitled *Sync: Thank You* (2012), as well as *Popular Critics (Maneki-Neko)* (2012), *C.C. Records* (2013), and *Not an Event in Life* (2015).

In 2013, Ruang Gerilya (now known as Gerilya Artist Collective) held an exhibition entitled *5 Seniman | Suara | Ruang* (5 Artists | Sound | Space). Featuring artists such as Bagus Pandega, Etza Meisyara, Fajar Abadi, Ferry Nurhayat, and Haikal Azizi (also known as Bin Idris), the exhibition provided a unique challenge, as all the participants had to explore sound within different kinds of space in Ruang Gerilya, an old house that has at least four kinds of room characteristics. This exhibition also attempted to elaborate the term, definition, and history of sound art in general. As the owner of the gallery, Wibi Triadi, stated in an interview, the development of sound art in Indonesia, especially in Bandung, was still being ignored even though there was a lot of potential regarding the exploration of sound within the Indonesian art world. Unlike the *Good Morning: City*

Figure 7.iv.2 Documentation of Duto Hardono's *Loop Study No. 1: Uber Feedback*. Source: IndoArtNow.

Noise!!! Sound Art Project in 2007, or even *Derau: Pameran Seni Bebunyian* in 2011, the *5 | Seniman | Suara | Ruang* exhibition was obviously not a major sound art event (in terms of exhibition scale and publications), but it comprised ideas about sound art ranging from sound art history and various methods and interpretations to the importance of the sound-space relationship through a discussion between the artists, curators, and gallery owners.

One of the artists from the *5 Seniman | Suara | Ruang* exhibition, Haikal Azizi, along with Riar Rizaldi, then initiated a platform named Salon in 2015. From their visit (as both visitors and performers) to the *Asian Meeting Festival* in Kyoto, Japan, in 2015, they decided to build a platform specifically to sound and music in Bandung. They also asked Duto Hardono, who proposed the name Salon, and me as the writer/curator to develop the idea of their platform. A few months later, Salon held their first event entitled *Salon Vol. 1: Conversation in New Music* at Platform3, Bandung. The initial idea was to develop a sound and music platform for performances and discussion specifically in Bandung, but, in 2018, after six editions of Salon, they held an event at The New Mutant, Jakarta, entitled *Salon Vol. 7: Pan-A-Sonic*. Salon still persists, though, without a strict schedule of events. At the beginning of 2015, months before Salon was founded, an alternative space called Galeri 10 organized by Setiawan Sabana, one of the prominent printmakers in Indonesia, held an event entitled *SADA: Soundscape Presentation of 1950s Bandung*. This exhibition, performance, and discussion event was curated by Adrian Benn, a well-known sound designer from Bandung. Neither Salon nor *SADA* intended to focus entirely on the idea of sound art, but both marked the emerging spectrum of sound-related ideas in Bandung that led to the next major exhibition of sound art in 2016.

Selasar Sunaryo Art Space (founded in 1998 by prominent Bandung-based sculptor, Sunaryo), one of the infamous art spaces in Bandung and Indonesia, held their biannual event called *Bandung New Emergence* with a different approach in 2016. The event was held for the first time in 2006 with the idea of promoting young and emerging artists from Bandung. Cooperating with Sidharta Aboejono Martoredjo (SAM) Fund for Arts and

Ecology, the Selasar Sunaryo Art Space organized a medium-specific event entitled *Bandung New Emergence Vol. 6: Listen!* For the first time since 2006, the *Bandung New Emergence* event chose the curator and also the theme and ideas of the exhibition through an open call and, fortunately, it was the idea of a sound art exhibition that was chosen that year. Consisting of fourteen selected young and emerging artists working with sound, the *Bandung New Emergence Vol. 6: Listen!* explored a broad idea of sound/aural culture within a city through artistic explorations.

With the idea of dividing the aural culture in Bandung into three categories (Subversive, the Everyday, and Essential Sound), *Bandung New Emergence Vol. 6: Listen!* also invited Salon to help distribute the idea of each category through three special events of Salon (Volumes 3 to 5). Jack Arthur Simanjuntak, a professional sound designer who is also the Head of the Sound Design program at Universitas Pelita Harapan, Jakarta, was invited to co-curate the exhibition by giving workshops and presentations related to the methods of presenting sound in space and the understanding of acoustics. Artists were grouped within each of the three categories, two artists in Subversive Sound, nine artists in Everyday Sound, and three artists in Essential Sound. Each category had a different approach and perspective toward sound, which was realized in different areas of the Selasar Sunaryo Art Space. *Bandung New Emergence Vol. 6: Listen!* became the second major sound art exhibition held in Bandung after the *Good Morning: City Noise!!! Sound Art Project* in 2007. In 2018, eleven years since this first sound art project held in Galeri Soemardja, ITB, they held the third major sound art exhibition in Bandung entitled *Soemardja Sound Art Project*, this time on a smaller scale (national) but inviting more venues (four in total).

Figure 7.iv.3 Social media publication of 2016 *Bandung New Emergence Vol. 6: Listen!* held at Selasar Sunaryo Art Space, Bandung. Poster: Irfan Hendrian, copyright © Selasar Sunaryo Art Space.

The *Soemardja Sound Art Project* explained how sound art developed in Indonesia, starting with the phenomena of sound artist/musician and installation/performance artist, the understanding of sound collaborations and the physics of sound, to the idea of sound collectives and the sound-space relationship. All of the ideas were distributed through three different exhibitions and venues before being accumulated in one exhibition at Galeri Soemardja, ITB. The first event, entitled *Double-Coding Sonic Art*, was held at Lawangwangi Creative Space and included three artists with an interest in exploring both object/ installation-oriented works and performance-based works: Bandu Darmawan, Duto Hardono, and Riar Rizaldi. The second event, entitled *Immersed in Sonic Flux*, was held at the Institut Français Indonesia (IFI), Bandung and came up with the idea of an analog collaborative sound performance (without any amplification or electricity involved) to

Figure 7.iv.4, 7.iv.5 and 7.iv.6 Social media publications of 2018 Soemardja Sound Art Project's series of events held at Lawangwangi Creative Space, Institut Français Indonesia, and Spasial. Poster: Mirza P. Wardhana, Spasial, copyright © Lawangwangi Creative Space, Institut Français Indonesia, Spasial, and Galeri Soemardja ITB.

Figures 7.iv.7, 7.iv.8 and 7.iv.9 Social media publications of 2018 Soemardja Sound Art Project's main exhibition held at Galeri Soemardja, ITB, Bandung. Poster: Wibi R. Triadi, Gerilya Artist Collective, copyright © Galeri Soemardja, ITB.

present an idea of the physics of sound. The idea of physical sounds and their relationship to space was also emphasized and elaborated through the third event, entitled *Perceiving the Omnipresent Sound*, at Spasial. All of the sound ideas and events were then compiled in the final exhibition entitled *Soemardja Sound Art Project* at Galeri Soemardja with a large-scale experimental presentation.

The idea was to reach an ideal method of presenting various sound works in a space, not with headphones, but by building independent small spaces within the whole Galeri

Figure 7.iv.10 shows the *Soemardja Sound Art Project* exhibition views at Galeri Soemardja, ITB, Bandung. Source: Ardiles Klimarsen, Artdiles, copyright © Galeri Soemardja, ITB.

Soemardja, ITB, space. This experiment was realized by building 3 × 3 meter rooms (each constructed of multiplex panels with black fabric as a door for each room) to contain each sound work. The exhibition invited sixteen artists with eleven works presented inside independent rooms and five works presented in an open space. The result of the experimentation was not completely successful in terms of reducing the sound leaks from each sound work, but the idea of presenting various sound ideas and explorations in Indonesia provided by all of the artists was satisfying, from the relationship between traditional Javanese cultures and noise, to the sound phenomena of Indonesian politics, the speculative sound weapon, sound works with no sounds. The *Soemardja Sound Art Project* in 2018 extended the experiments innovated by the foundational event in 2007. In this, it was not only a development in the realm of sound art understanding, but also an experiment and a search toward the ideal presentation of sound artworks.

The Future of Indonesian Sound Art?

For the last decade, Bandung has shown a significant development in presenting the idea of sound art in Indonesia, not only in terms of the increasing number of sound art exhibitions but also the spectrum of the artists and the other sound-related events. From the 1990s until the early 2000s, the production of independent and experimental music also developed and strongly influenced the realm of sound exploration. Bands such as Pemuda Elektrik, A Stone A, and Sungsang Lebam Telak successfully blurred the barrier between noise music, experimental music, and visual art, especially in performance art. These kinds of efforts have been increasing in the last five years, not only in Bandung, but also in other cities in Indonesia.

The emergence of collectives and events across Java have revealed a significant interest in the idea of the expanding sound realm: Salon, BNE (Bandung Null Emergence, allegedly as a response toward Bandung New Emergence events held by Selasar Sunaryo Art Space), Opus Contra Collective, Mindzapp (initiated by Studiorama), *Divisi62*, *Alur Bunyi* (organized by Goethe Institut, Jakarta), and Forum Lenteng's *Sinyal Selatan: Soundscape Composition* and Sound Mapping Esion (MILISIFILEM Collective), all of them from Bandung and Jakarta; then from Yogyakarta, Lifepatch, Senyawa, Jogja Noise Bombing, The Instrument Builders Project, Ethnictro, Kombo, Teater Garasi (especially their *Gong Ex Machina: A Sonic Theater Performance* in 2018 at Gedung Kesenian Jakarta), Yes No Klub (a part of Yes No Wave Music, a nonprofit music label founded in 2007 by Wok The Rock), and Nusa Sonic; and *Bukan Musik Biasa* and *Serupa Bunyi* in Solo/Surakarta, *Toyol Dolanan Nuklir* and WAFT-LAB from Surabaya. There is also an interesting development from Samarinda (Borneo Island, East Kalimantan) with the likes of Jeritan, Sarana, and Theo Nugraha.

These recent developments have not only triggered and accelerated the production of sound-based artists, practitioners, and events in Indonesia, but also led to other kinds of forms and opportunities ranging from talks, podcasts, radio programs, to record labels. Other developments include *Sonic Philosophy* (started in March 2018), a monthly sound talks and discussions program/podcast developed by an online radio from Bandung called Norrm Radio; a series of talks called *Ngaji Bunyi: Does Sound Matter?* (started in December 2018), initiated by Yogyakarta-based artist, Julian Abraham "Togar," held at Masjid Sudirman and Cemeti Institute for Art and Society in Yogyakarta; and record labels such as Yes No Wave Music (Yogyakarta), Hasana Editions (Bandung, formerly known as Hasana Private Press founded in 2010 by Duto Hardono), and, most recently, Audial Plane (started in 2019), a subdivision of Orange Cliff Records from Bandung, which focuses on organizing as well as releasing sound art showcases/exhibitions and records.

With at least three major sound art exhibitions alongside a variety of other sound-related events and platforms in Bandung alone, one can anticipate a promising future for Indonesian sound art.

Sound Art in East and Southeast Asia

Historical and Political Considerations

Cedrik Fermont and Dimitri della Faille

Introduction

When it comes to understanding music, in one's mind things are usually really easy: there is Western or Asian music, academic or popular music, experimentation or outsider art. However, sound art in Asia blurs all these boundaries, as it does not fit these all too simple binary reductions well. It is, maybe, none of them and all of them at the same time. With the notable exception of Japan, there is little doubt in our minds that sound art in Southeast and East Asia has been under-documented, and also, perhaps, somewhat misrepresented. Despite today's hyper-connected world, writing and historic analysis about sound art outside Western realms remain scarce. Most publications and talks focus on Western Europe, North America, and occasionally New Zealand and Australia. Very few composers from the rest of the world are mentioned, whether from Cuba, Argentina, the Soviet Union/Russia, China, or the Philippines. This lack of documentation and research renders a part of history and its artists virtually nonexistent for the majority of people, including composers. In this chapter we will attempt to illustrate why sound art in (and from) Asia should be on the radar of any scholar or aficionado of the genre and why it must be framed as part of global art movements and global history.

In this chapter, we present selected historical events as they relate to sound art in and from Southeast and East Asia so as to highlight cultural, socioeconomic, and political factors. We attempt to present the connectedness of developments in the genre in the region in order to show that none of the region's scenes are the result of purely national characteristics. We adopt a broad understanding of sound art that extends beyond art and installations presented in galleries and museum so as to include, electronic academic music, noise music, and experimental music. The level of mutual aesthetic

influence and circulation of artists and social practices between sound art, academic music, and extreme music is so high that they can hardly be phenomena isolated from each other.

Considering the limited size of this chapter, we can only share a far too superficial overview of notable artists and organizations making and facilitating sound art in and from Southeast and East Asia. It is near to impossible to faithfully render the complexity of such artistic trajectories, much less so in the condensed form of a book chapter. This is a selection that focuses more on general history so as to give sense to the individual trajectories. It is based on our own research and our own interpretation. This chapter is, more than anything, a projection of some of our choices, ethical inclinations, tastes, and experiences.

How We Got to Know What We Know

The research for this chapter is mostly based on our many hours of conversations and observations, our participation in many events and music tours, and, more generally, the time spent with musicians from Asia (more specifically from Southeast and East Asia) in the region and abroad. Both of us are sound artists/noise musicians who have extensively traveled to Asia. Since 2004, we have traveled to the region on several occasions and constantly interacted with the local noise communities in and from Asia. We also base our research on the collection and analysis of many documents (fanzines, blogs, music reviews, etc.). Some information on which this chapter is based relies on our observations and on oral sources. Part of our research about Southeast Asia has been published as a book (Fermont and della Faille 2016). In our research of the past fifteen years, we have sometimes been confronted with issues stemming from a lack of archives, especially when it comes to Southeast Asia, however we have noted recently a general increase in the availability and quality of digital documentation.

Japan in the 1950s–1960s and the Development of an Art Practice

In sound art from Western Europe and North America, Luigi Russolo is often selected as a starting point of the history of noise and experimental music. This is thanks to his 1913 manifesto *L'arte dei Rumori* (The Art of Noise) and his noise devices called intonarumori. If Russolo is part of the global narrative on the history of sound art, including narrative from Asia, one should wonder if there is, conceptually, room to draw on other sources. For instance, Japanese gardens and their accessories—*chōzubachi* (手水鉢, water bowl/basin), *shishi-odoshi* (鹿威し, scaredeer or scareboar), and *suikinkutsu* (水琴窟, water koto cave)—combine

land art and topographically embedded sound sources. Could they be considered multimedia installations? Indeed, "Japanese garden design uses *specific* and direct landscape manipulations to elicit particular soundscape encounters" (Fowler 2015, 101).

Yes, the art of Japanese garden soundscape and the art behind Russolo's sound explorations belong to two opposite conceptual worlds. The first one is framed in the world of architecture and land politics and the second one in the world of experimental art. But, there are ways to reconcile them. With his water installation *Chijikinkutsu* (2013), Japanese sound artist Akamatsu Nelo (赤松音呂) clearly frames his work in continuity with Japanese garden architecture and places it in the realm of sound art (Ars Electronica 2015). Other contemporary sound artists from Japan and elsewhere have been influenced by the "plink plonk," "splash," and other "swish" from the classic gardens. While recognizing that sound art and sonic space in Japanese gardens are not functional equivalents, it is not a big stretch of imagination to conclude that the "art of sounds" has existed in Japan for hundreds of years. One could go even further down the path of classic history and invoke the aural landscape of Chinese classical gardens, which had a direct influence on Japan. The sound of the classical gardens has been carefully crafted as part of a sensorial experiment. An aural landscape that is faced with today's urban noise pollution, fostering some preservation initiatives in ways not too far from ancient art conservation (Zhao 2017).

Apart from the almost quintessentially Asian aural design, contemporary sound art in the region has broader and global connections. Japan can easily be selected as starting point for tracing back the history of sound art in East and Southeast Asia. From the early 1950s on, music related to sound art such as tape music, electroacoustic music, or musique concrète (in Japanese, 具体音楽, or *gutai ongaku*) emerged in Japan. That sort of music was not yet called "sound art" but there are well-documented connections with contemporary practices. Seminal artists include the cofounder of Jikken Kōbō, Akiyama Kuniharu (秋山邦晴—see "Piece B" and "Toraware No Onna" 1951), or Akutagawa Yasushi (芥川也寸志), Tominaga Saburō (富永三郎), and Fukai Shirō (深井史郎). They were part of a group of composers working independently from Jikken Kōbō and creating radiophonic works on tape (Kaneda 2007). Around the same period, some Japanese artists, after having studied with Pierre Schaeffer in Paris in early 1950s, founded the avant-garde group Gutai (具体), which challenged the then-rigid world of contemporary art. Founded by Yoshihara Jirō (吉原治良), it included artists such as Mayuzumi Toshiro (黛敏郎) (see "Les Œuvres Pour Musique Concrète X, Y, Z" 1953), Shimamoto Shōzō (嶋本昭三), Kanayama Akira (金山明), Murakami Saburō (村上三郎), and Shiraga Kazuo (白髪一雄) (Ming 2013).

In the 1950s–1960s, space available to sound artists and experimental musicians to perform was limited. However, Tōkyō Tsūshin Kōgyō studio (東京通信工業, known today as Sony) gave support to the members of the Jikken Kōbō (実験工房) to experiment with tapes. This led Shibata Minao (柴田南雄) and Takemitsu Tōru (武満徹) to hold the first concert for musique concrète and electronic music in Japan in 1952, at the multimedia performance of the Jikken Kōbō, 5th Exhibition (Fujii 2004). Between 1958 and 1971, the

Sōgetsu Center for the Arts appears to have played an important role in Japanese modern art and contemporary classical music, electronic music, and sound art pioneers. It is associated with artists such as Moroi Makoto (諸井誠) and Mayuzumi Toshiro (黛敏郎). In the early 1960s, the center presented a solo concert by Takemitsu that included an interactive musique concrète piece entitled "Water Music," produced with the help of the engineer Okuyama Jūnosuke (奥山重之助). "Water Music" is made of recorded and edited sounds of dripping water collected around Tokyo (Dietrich 2009, 194).

More sound experimentalists emerged in the early 1960s. This is the case for instance, of the Group Ongaku (グループ音楽, *ongaku* for music) headed by Shūkō Mizuno (水野修孝), Kosugi Takehisa (小杉武久) and Tone Yasunao (刀根康尚) who, around 1984, became the first artist to experiment with damaged CDs (Stuart 2003), and some of the colleagues from the Tokyo University of Fine Arts echoing what John Cage was doing around that time. It is also the case of Fluxus-oriented Takehisa Kosugi (小杉武久) with his piece *Micro I* (1961) (Dietrich 2009, 195).

The 1960s and 1970s and the Cold War

Parallel to developments in Japan, composers elsewhere in East Asia and in Southeast Asia started to gain a modest visibility in numbers but some importance in influence. The size and the vivacity of sound art in Japan was unmatched. This was also the case, for instance, for Filipino composers David Medalla in the 1950s ("Numerology" and "Antisyntax," 1959) and José Maceda in the 1960–1970s, or Taiwanese composers Lin Erh (林二) in the 1960s, and Wen Loong-Hsing (溫隆信) in the 1970s, or Indonesian composer Slamet Abdul Sjukur from the 1960s. If their legacy is important, they remain exceptions in the somewhat modest development of sound art in the region outside Japan between 1950 and 1970. South Korean artist Nam June Paik, who has had a global career, introduced aural exploration in his art (백남준, see "Hommage à John Cage," 1959). And in 1969, South Korean artist, Seok Hee Kang (강석희), who had studied in Berlin, founded the Pan Music Festival where he and Byeong Ki Hwang (황병기) performed a piece for daekum and tape (Everett 2004, 6). This fostered the development of new music in Korea.

It is perhaps interesting to notice that the promotion of sound art and modern music has to be read in relation to the Cold War. Indeed, it was often part of a global struggle against communism. In the 1960s communist and socialist militancy was very active in Japan. In 1961, just months after the public assassination by sword of the Japanese communist leader Asanuma Inejiro (浅沼稲次郎), Nicolas Nabokov (a member of the European Cultural Foundation) invited Iannis Xenakis to the 1961 Tokyo East-West Music Encounter (Fukunaka 2017). This event was organized by the Congress for Cultural Freedom, an anti-communist initiative sponsored by the CIA (Maekawa 2016, 98–9). At the same time, José Maceda, who was exposed to musique concrète during a stay in Paris (1958–1959), benefited from the support of the fiercely anti-communist and dictatorial regime of Philippine president Ferdinand Marcos. He organized some large-scale public sound art performances.

One of them "Cassettes 100" (1971) is a piece consisting of various instruments (gongs, buzzers, aluminum objects, horns, and many more) and voices recorded on a hundred tape recorders. Another, "Ugnayan" (1974), is a performance for twenty cassettes performed in public spaces by thirty-seven different radio stations to boost or amplify others. On its debut on New Year's Eve, thousands of people carried radios in the streets, parks, school grounds, and other public spaces contributing to the amplification intensity and diffusion of the piece across Manila and its suburbs (Tenzer 2003). If the contents of those pieces and those exhibited at the Tokyo East-West Music Encounter have, as can be imagined, little to do with anti-communism, then countries of the region emphasized, and often exaggerated, characteristics of national art and culture. It was, more often than not, framed in a modernist discourse. It is fair to say that sound art in Southeast and East Asia during the Cold War must be understood in its connection to global political and cultural dynamics.

The first World Fair Expo to take place in Asia was held in 1970 in Osaka. It was an important factor for an introduction to electronic music. Electronic musicians converged from various countries to Osaka. European composers Yannis Xenakis and Karlheinz Stockhausen and Japanese composer Yuasa Jōji (湯浅譲二) presented electronic and multichannel works to thousands of visitors (Loubet 1998).

To our knowledge, the early times of postwar electronic music saw very few connections in the region between Far East Asian artists. However, a noticeable exception is, perhaps, the connections cultivated in the 1950s–1960s between Chinese-born US composer Chou Wen-chung (周文中), a protégé of Edgard Varèse, and several Asian composers such as José Maceda, Mayuzumi Toshiro, Takemitsu Tōru, and Yuasa Jōji (湯浅譲二), which developed throughout the 1950s and 1960s (Chang 2006, 33–5). The late 1960s and early 1970s saw an intensification of connections in the region. For instance, in 1973, the Asian Composers League (ACL) was founded in Hong Kong with the aim of fostering contemporary music that used both Western and Asia-Pacific instruments and influences and the traditional music of the Asia-Pacific region through conferences and festivals as well as promoting mutual exchange between these countries. Following its first meeting in Hong Kong, almost yearly meetings took place in various Asian capitals, expanding to other countries such as Singapore, Indonesia, Vietnam, and even as far as Israel. But the league acted in the same way that most music conservatories and electronic music centers act. It is still today essentially a closed circle, reserved for the too-often middle and upper class that tend to exclude so-called popular music and popular approaches to experimental music or sound art.

The Agitated 1980s and 1990s

Even though Japan remained at the forefront of the Asian sonic avant-garde for a few decades, changes occurred, bit by bit, from the late 1970s throughout the 1980s to 1990s due to important political changes in the region. Some of these changes include Deng Xioaping's reforms in China (starting in the late 1970s and intensified in the 1980s),

the People Power Revolution against Marcos in the Philippines (1986), the Đổi Mới (Renovation) in Vietnam (1986), Chiang Ching-kuo's abolition of martial law in Taiwan (1987), The June Struggle in South Korea (1987) that led to the establishment of the Sixth Republic, the slow fall of Suharto's New Order in Indonesia (whose opposing forces grew stronger in the early 1990s), to name but a few. At the end of the 1990s, the retrocession of Hong Kong (1997) and Macau (1999) to China created a level of uncertainty for freedom in the arts that remains to this day.

Jeph Lo, a contemporary artist and music critic, remembers that time in Taiwan. "It's easy, now, to forget the social atmosphere of the martial law period. It was a time laden with all kinds of restrictions. Civilians' daily lives were subject to numerous checks and prohibitions—right down to bans on certain hairstyles. [. . .] There were also bans on public performances of Taiwanese music and theater; dance halls were made illegal. Songs, publications and even ideas were censored. This system of surveillance and inspection had a deep, lasting impact on all aspects of people's lives" (Lo 2019). Regimes where the conditions for creative freedom were barely met throughout the second part of the twentieth century changed, sometimes drastically. These changes lead to a certain level of freedom, not only in politics but also in the arts. It laid the foundations of what can be seen as a pan-Asian scene today.

With some exceptions, sound art and experimental academic music in Japan, South Korea, or other countries in East and Southeast Asia, have not received the level of government support that such music enjoyed from an early time in Europe and even in some parts of the Eastern or Communist Bloc. Due to a minimal or absent support, a Do-It-Yourself (DIY) approach characterized most developments in the region. Even in Japan (Fujii 2004), those first DIY experiments were carried out by professional musicians, mostly trained in (Western) classical music circles. This DIY approach was not inherently an Asian phenomenon, of course, as many composers from other parts of the world had to be inventive too—we can think of US composer Gordon Mumma or Soviet/Kazakh composer and synth maker Vadim Ehrlich among many others—it is the result of politics and socioeconomic factors throughout the 1950s to 1980s. From the mid or late 1980s and 1990s, new generations of composers came from very different backgrounds (from visual art to punk musicians, for example) and now constitute perhaps a majority of the artists involved with sound art. To this day, they still maintain a strong DIY approach.

It should be noted that various financial or logistic support from governments and connected institutions in South Korea, Japan, Singapore, Taiwan, and China have increased in the past years. This is especially the case of the Japan Foundation, but also various art centers, institutions, universities, and conservatories hosting projects, or departments dedicated to electroacoustic, sound art, and multimedia composition such as the Arts Capacity Development Funding Scheme of the Government of the Hong Kong SAR, Taipei Artist Village, Lasalle College of the Arts in Singapore, the School of the Arts Singapore, Seoul Foundation for Arts and Culture, National Chiao Tung University (國立交通大學) in Hsinchu, China's Electro-Acoustic Music Centre in Beijing, China Academy of Art in Hangzhou, Electroacoustic Music Center at Shanghai Conservatory of Music, Universiti

Malaysia Sarawak in Kota Samarahan, Hanyang University in Seoul, and Tokyo University of the Arts (東京藝術大学) to give a few examples.

Attempts to create communities or at least networks in the field of sound art and noise music reached the independent music communities in the 1990s. Some published music can testify to the already existing collaborations in the field. Published in 1994, *Eternal Blue Extreme: An Asian Tribute to Derek Jarman* (Various Artists, 1994), gathered nine noise, experimental, and industrial artists from Japan, Hong Kong, and Taiwan. Published in 1998, *Soundtracks for Bride of Sevenless* (Various Artists, 1998), gathered twelve noise and sound artists from Japan, Taiwan, and Hong Kong.

A Fluid, Connected, and Inclusive New Millennium

When active, the sound art communities remained small bubbles until the mid-2000s. They were often self-centered and often unaware of the existence of communities in the neighboring countries (Singapore versus Myanmar, China versus Vietnam, Malaysia versus the Philippines, Japan versus Indonesia, etc.). And, while very aware of and knowledgeable about global artistic developments, if they connected to other countries in the region it was through third countries in the West or Australia. Collaborations in the region intensified in the mid-2000s. We hypothesize that the more accessible Internet and communication technology contributed to create larger and longer-lasting communities. Interregional communities have probably not reached their peak yet.

The end of the 2010s has seen a tremendous increase in the networking of sound artists, events, projects, and festivals. Since around 2010, spaces, organizations, and festivals, specifically or partly dedicated to sound art, improvised music, electroacoustic, and experimental sound practice, have been flourishing and often transcending borders. Here are some of the ones outside Japan, which, to this day, remains probably one of the major poles of activity at the global level for sound art and experimental music. In South Korea, worth mentioning are the *Seoul International Computer Music Festival* (서울국제컴퓨터음악제), the international festival of improvised music, *Dotolim*, and *WeSA*. Relating to China, a series of events called *Revolutions Per Minute: Sound Art China* (RPM) was originally cofounded in 2013 by Wenhua Shi, an experimental filmmaker and assistant professor at the University of Massachusetts, Boston (United States). It is a traveling exhibition of sound art and audiovisual performance. Notable highlights of its nomadic experience include *RPM Exhibition Sound Art China*, 2013, in New York, *RPM Exhibition Hong Kong*, 2014, and *RPM Exhibition Shanghai West-Bund Biannual*, 2015. Other notable events and organizations include *Waterland Kwanyin* (2005–2010), *International Festival of Sound Emissions 01* (2011), *Sally Can't Dance Festival* (2008). In Taiwan, some events, spaces, and organizers emerging recently include 耳蝸 *Cochlea Lab*, *Lacking Sound Festival* (2007) or Ting Shuo Hear Say (聽說). In Hong Kong, Strategic

Sounds (策略和聲) is a venue established in 2011 in an industrial building. In Hong Kong and Macau, also worth noting is the *Kill the Silence Festival* established in 2013. In Indonesia, we can mention the *Yogyakarta Contemporary Music Festival* (2004) and more recently the *Nusasonic Festival* (2018), which bridges popular, experimental, and academic cultures. Other projects include, *Jogja Noise Bombing Festival*, *Samarinda Noise Fest*, *Selasar Sunaryo Art Space*, *The House of Natural Fiber* (*HONF*) or *Kolektif Hysteria*. In Malaysia, the *Kuala Lumpur Experimental Film, Video & Music Festival* (*KLEX*) has been a regional driver of experimentation in sound. In Vietnam, Experimen.TET and DomDom have been active organizations with regional and international reach. In the Philippines, Green Papaya Art Projects, WSK, Children of Cathode Ray and its members have facilitated a varied and strong scene in sound art.

Transregional and transnational networks in experimental music and sound art (Fermont 2016) are now active in almost all of Southeast and East Asia. Worth mentioning is the collective FEN (Far East Network) consisting of Otomo Yoshihide (Japan), Ryu Hankil (South Korea), Yan Jun (China), and Yuen Chee Wai (Singapore). They have all been collaborating and traveling throughout various countries including Taiwan, Japan, or Singapore. Another instance is the *Asian Music Network*, a festival dedicated to sound art, improvised music, and experimental music practices, which took place in Tokyo and Kyoto in 2015. To our knowledge, it was the first avant-garde festival in the region to include such a large variety of artists from East and Southeast Asia. The artists included illustrate very well the high level of regional integration. They were dj sniff (Japan/Hong Kong), Bin Idris, To Die, Iman Jimbot (Indonesia), Kok Siew Wai (Malaysia), Leslie Low, Yuen Chee Wai (Singapore), Yui-Saowakhon Muangkruan (Thailand), Nguyễn Hong Giang, Lương Huệ Trinh (Vietnam), Sachiko M, Shinobu Kawai (Japan) to name but a few. More recently, other emerging integrative projects include *Space Exchange*, *Yogyakarta Meets Yangon*, or *Đáo Xuân Festival* in Gam Troi Valley (Vietnam). In recent years too, exhibitions throughout Southeast and East Asia have featured a variety of artists from the region. And sound art has increasingly been featured as an integral element of contemporary art. For instance, in 2015, the *As((ear))n Project* (Asearn ประสบการณ์หู สู่อาเซียน) presented a collection of sounds to show the cultural and social diversity of the ASEAN region. The sounds presented were compiled into a sound installation exhibition at the Museum Siam in Bangkok. In 2017, a major two-site exhibition in Tokyo, *SUNSHOWER: Contemporary Art from Southeast Asia*, showcased eighty-six artists. It featured sound art by artists such as Ho Tzu Nyen (何子彦, Singapore), Kawayan De Guia (Philippines), and Ly Daravuth (Cambodia). In 2018, the prestigious M+ collection in Hong Kong presented *In Search of Southeast Asia through the M+ Collections*, an exhibition gathering twenty-eight artists from Southeast Asia, including a couple pieces with sonic dimensions.

As for today, it is difficult to imagine sound art in Southeast Asia or East Asia as a series of nationally specific and isolated scenes. "The fluid nature of this migratory history is familiar in South and Southeast Asia and often results in the exchange and adaptation of cultures, giving its participants a trans-geographic identity" (Yap 2012). Some geographic, sociopolitical, or socioeconomic factors, as well as the current circulation of people and information, especially in the twenty-first century, make it so that both regions are deeply

connected. These spaces, festivals, projects, and artists contribute to blurring the often artificial differences and boundaries between countries of Southeast and East Asia. According to Peter J. Katzenstein, "geographic designations are not 'real,' 'natural,' or 'essential.' They are socially constructed and politically contested and thus open to change and vulnerable to the twin risks of reification and relativization" (Katzenstein 1997, 7). Both regions have experienced radical changes for many years now.

And today's sound art in East and Southeast Asia is an inclusive scene that also sees fluid movements between various scenes and terms, such as sound art, noise, experimental, or electroacoustic music. If it remains a predominantly urban and male scene, our experience of it is that of one that is rejecting exclusory practices and fixed labels to define their art. A scene that goes beyond the geographic and political borders, perhaps still in search of its own identity. A scene that tends to sustain itself more and more yet remains very open to the rest of the world, and that generates its own perspective in terms of sound art. As we have attempted to demonstrate, sound art in East and Southeast Asia is linked with Western music and part of its history. It is Asian music, but not strictly. It has academic connections and foundations, but it is also linked with developments in popular music. It is at the same time experimentation and outsider art embedded in the global history of the twentieth and twenty-first centuries.

Part III

Come Closer . . .
Intimate Encounters as Sound Art

9

Kiss, Lick, Suck

Micro-Orality of Intimate Intensities

Brandon LaBelle

The following chapter originally appeared in *Lexicon of the Mouth: Poetics and Politics of Voice and the Oral Imaginary*. The publication examines how the gestural and performative qualities of the mouth can be understood to lend significantly to acts of both verbal and nonverbal communication. By focusing on the paralinguistic, kinesic, and gestural attributes surrounding speech, I have been intent on underscoring the mouth as an extremely vital focal point for querying voice and notions of the signifying body. In doing so, the mouth is considered a major site or arena through which to negotiate processes of identity formation and socialization. To do so, attention is brought to the fluid, quivering and, at times, stubborn architecture of the oral cavity. If voice is fundamentally an embodied oral action, what kinds of performative significations can be found in its flexed and sounded movements? Might important forms of communication be found within the yawn, the laugh, the grunt, or the sigh, and that by often exceeding the linguistic enable other forms of contact beyond the strictly human or apparent? And might deeper inquiry into the mouth lend to a greater critical view onto what constitutes voice and its social and political status?

To explore such questions, *Lexicon of the Mouth* sets out a series of chapters devoted to specific oral modalities or micro-oralities. My particular method throughout the publication has been to closely follow the qualities of a range of micro-oralities, giving critical attention to their physicality and expressivity, while associating each with specific cultural histories, theoretical positions, and related sonic and performative projects. The chapter on kissing, licking, and sucking presented here reflects upon what I term "the wet territories," which highlight the mouth as a channel or conduit for sensual contact. Kissing and sucking, for example, return us to primary oral experiences and, accordingly, are greatly conditioned by deep memories. From breastfeeding to the first kiss, the mouth is brought forward as an important means by which forms of sensual, erotic, and emotional attachments and detachments are performed, to generate a psychological framework by which a range of relationships are managed. Kissing, licking, and sucking

therefore greatly contribute to the ways in which we come to gauge the world and ourselves within it, and how we may nurture or shape our most intimate and erotic relations.

<p align="center">* * *</p>

As part of this lexicon there must be room for considering the mouth as a deeply erotic organ, an agile and agitating figure stimulating the intensities of sexual experience. These are the movements by which the mouth expresses itself fully, when orality surrenders to its corporeal nature and gives way to all those surrounding vocables—*syllables so fully abandoned*—that appear in these instances of sex, but also, the quivering and shaking movements that pucker the mouth, or send it toward wider expressions. While we may imagine other organs as central to acts of lovemaking, it is the mouth that may be highlighted, whose performances and behaviors are intensely multiple and multiplying of our sensual embraces and excitement.

In the midst of the many conversational and vocal expressions of social life, the mouth functions as a central site around which desire, longing, fantasy, and lust gravitate. It is onto the mouth that much of our sexual and loving imaginings are often placed; in the tiny instants of kisses, that condition the routine of relationships, through to the deep push of intercourse where the mouth is deftly operative. Discourses on the voice thus need to be filled (or flustered!) by these deep erotic charges surrounding orality and the spoken.

As an extremely articulated orifice, the mouth supports any number of erotic drives, giving way to an entire range of sexual and sensual enactments. The mouth appears across the entire spectrum of physical contact, from the delights of words to the erotic charm of lips and tongue, and to the various oral performances that send us shivering. In this regard, voice as that dramatic vehicle by which self and other relate is always already located within an erotic vocabulary—of sensual gesture and movement, lustful fantasy and desire, deep physicality and sex. How close are the choreographies of speech and sex, radically inflecting the mouth with such voluptuous excess.

Here we encounter a range of mouth movements, from licking and kissing, tonguing and sucking—these are the most obvious, the ones that can be named out of the plethora of sensual mouthings (what I might call the "hottest"). For it's important to remind ourselves that even throughout this lexicon the mouth presents a range of exercises and expressions beyond definition. These erotic movements appear as intensely sensual mouthings, locating lips and tongue against the surfaces and depths of others, and leading out to the relational fevers by which we learn to give pleasure, and to express love.

Moist

Accordingly, within this space of sensuality and erotic experience we also come closer to the sheer physicality and moistness of the mouth—its various physiological attributes become highly active, and these scenes of sensuality bring out the mouth as an assembly of deeply flexible parts. For instance, the tongue is such a *flexed thing*, moist and glistening, hot and gregarious, loving and enticing; it may extend, like a projectile, or sudden appendage, out of the mouth to break the seam of the lips. It may delight with so many subtleties, or unfix us with its sudden invasions. In this regard, it is one of the most expressive of bodily parts, full of life and vibrancy, full of knowledge of the dramas and secrets of bodily pleasure, and the tastes by which so many of our exchanges are driven.

To enter into the mouth, according to the performances of the tongue, is to recognize the degree to which moistness presents itself, as a condition. The mouth is deeply wet; it is full of saliva, that viscous secretion integral to bodily functionality, and which also comes forward when licking, kissing, and sucking. All such movements and gestures rely upon spit; this wetness of the mouth is a central referent when it comes to sexual excitation, and it is from such moments that we might learn the dynamics of the mouth, as an extremely wet space, a cavity whose reverberations are always conditioned by its dampness, or lack of. To lick is to essentially *give* wetness. In the throes of sex, our tongues race around, to moisten and draw excitement forward with its licking.

Licking is also central to the kiss. As the ultimate choreography of the mouth, the kiss brings the entire sensual life of the body there onto the lips. It focuses all energy onto this thin line, intensifying the pleasures of the oral by bringing two mouths together. The lips promise entry into deeper pleasures, deeper intimacy.

There are certainly many varieties of kisses, ranging from the small peck of the familial goodnight kiss to the broad spectrum of passionate kissing where the entire mouth and all its surfaces and muscularities participate in this moist drama, leading us into a deep labyrinth where the mouth may become an entire universe. There may still exist words here, but language certainly slips—even attempts at a semiotics of the kiss tremble when confronting its movements and all its scenes, its pleasures, its unfathomable wetness.

I understand the kiss then as the most erotic of mouth moves. I will elaborate on the kiss from this perspective, fixating on the most dramatic of kisses, the most passionate, where kissing gets carried away with itself. That is, where the world disappears within this wet contact. *Romantic kissing*.

Desire

As with the whisper, the kiss certainly brings us closer. It starts with closeness yet quickly takes a radical leap: the kiss is *breathlessness*—a double breath, shared breathing. It brings the entire body onto the lips, to dissolve into another. I am literally lost in you, navigating

according to your lips, and their responsive pressure, murmuring, and soft surrendering. The kiss is the absolute form of mutuality: it is to say, *there is nothing or no one else in this moment*, only you and me. In this way, the romantic kiss is the absolute collapse of distance; there is no perspective, only the movement of a vanishing point rushing in, suddenly, to overtake the self. What architecture can stand against the proposal that every kiss makes, that of creating an altogether perfect form of enclosure? In bringing two mouths together, the kiss creates its own dwelling, a privacy that always already exceeds itself. "I like the feeling of breathing someone else's space, sharing with them the basis of life, i.e., air" (Cane 2005, 25).

Within the space of two mouths together, along the touching of lips, language falters: there is literally no room to speak, for the mouth to find words, to even take a breath. The kiss is a form of drowning. Yet the movements and intensities of such disappearance also affirm an oral imaginary that speech secretly revolves around: love. Might the kiss articulate the very hidden core of all speech, that of longing? The wish to be finally enclosed within a primary warmth? Does not speech secretly aspire to raise one up *for* the other, as the object of desire? To find wholeness in the longing and desiring expressed by another, for oneself? How often speech longs to leap forward into a kiss!

Adam Phillips addresses kissing in this way, as central to our "oral education." Following Freud's analysis of kissing, Phillips understands the act of placing our mouth against another's as stemming from early experiences of "tasting the mother"—the fact that "our first and most foremost relationship to the world is an oral one." The kiss thus returns us to "the primary sensuous experience of tasting another," though in a way that also "disappoints" (Phillips 1994, 96). Again, in accordance with Freud's view, the oral intensities of tasting the mother, and experiencing her ultimate withdrawal, come to fill the mouth with an enduring absence. Aspects of oral gratification participate in negotiating this absence, this lack, yet the desire to kiss another seems to articulate, for Freud, not only a desire for the other, but precisely the desire for self-sufficiency, for wholeness. It is the removal of the breast that turns us toward ourselves, toward our own mouths, as the source of completion: of finding alternative means not only for pleasures, but also for supporting the fullness of our body. Thus kissing brings us back to the point of rupture, to the site of this primary absence, and this wish; it is in the mouth of another that we search for our own completion, where the emptiness of the oral cavity is forever haunted by the impossibility of kissing oneself. "Desire, [Freud] wants us to know, is always in excess of the object's capacity to satisfy it. The object of desire . . . is resonant, finally, because it disappoints; and because it disappoints it can be returned to" (Phillips 1994, 100).

Such perspectives of longing and desire underscore the mouth as lacking: a hole from which not only speech emanates, but also within which a mechanics of fantasy operates. As Lacan poses, it is from that which is missing—that symbolic cut—that we are brought into the dramas of fantasy, of representation, and in line with objects of desire.[1]

Along with the gaze, Lacan places the voice within the psychoanalytic repertoire of "drive objects" (which also include breast, faeces, urethra, and penis). As a drive object, the voice is intimately connected to the operations of desire, which perform precisely on the

level of the unspoken and the unspeakable—to that which cannot be articulated, and yet which surges forth. The voice as *petit objet a* is thus a negative, an empty or vacant space, an object that "represents the limit of that which is thinkable or expressible in discourse" (Lagaay 2008, 60). Lacan's enigmatic theory of voice is predicated on these operations of lack, signified through an emptiness, a nothing around which desire circulates, and is provoked.

While Lacan's theory understands the voice as object, I'm more interested in reinforcing the mouth as that point where the voice is most alive—both as a silence, an emptiness, as the unsounded, as well as the fully articulated body, the one that entices, prolongs, and excites the mechanics and oscillations of the erotic. In other words, as the zone that is most occupied by the fluctuations of longing. If the voice pokes and pricks me into being, into the pressures of subjectivity; if it empties me out, or overwhelms me, then it must be the mouth to which desiring productions turn and by which they proliferate—as the whole *and* the hole. In other words, by *lying in wait* for the voice, my attention anticipates a mouth whose movements may put me at ease, or which may anguish me further; a mouth that may open for me, or that may also close shut.

It is my argument that the voice, however diffuse, phantasmic, or acousmatic, is never truly without a body; even as an "invisible" presence it comes to *suggest* a body, an identity, an image, or a material thing. The voice, in other words, sets the scene for a body to come, and it does so by referring us to the oral imaginary wherein the voice finds so many expressions and animations—from experiences and memories of tasting, licking and biting, chewing, sucking, and crying, to the pleasures and pains words come to enact. It is the mouth that locates the voice so completely within a greater experience of orality and desire, politics and poetics, and to which we continually return—to sustain ourselves, to pleasure ourselves, to negotiate, and to surrender.

Rapture

Is not the kiss a first step toward greater sexual contact, toward the plenitude of fulfilled desire? By placing our mouths together, is not the kiss a voluptuous space boiling over with passions and wishes? The kiss as a choreography *in the making*, and toward which all our bodily rhythms and vibrations, fevers and hesitations are drawn, pushed back, and then drawn again, as an orchestration. Following Catherine Clément's work on syncope, does not the (first) kiss initiate a greater flow of passions (and disappointments) soon to follow, performing as a type of "musical" moment that draws us forward, suddenly, enraptured and in anticipation, where the lips literally unfold against a greater pull of longing for what is soon to disappear? Syncope, *fainting*: the musicality that "accentuates delay," immersing us in a duration or a time signature haunted by oblivion (Clément 1994, 81). Two rhythms meeting, two forces rubbing against each other, to produce a beating of hearts, a pulsing of imaginations, a rubbing of skins, which in their coupling seek out a figuration of harmony, a composition of intimacy. "Syncope always provokes this sensation of reunion" (Clément

1994, 256)—a beating whose movements, of ascension and descension, of oscillation, or counterpoint, are given form there on the lips, and in the small pressings of mouth upon mouth. Our speech, in other words, is so fully tuned to the heart and its rhythm.

In this way, kissing may be the horizon to which speech gravitates, when the mouth, as that point where subjectivity continually negotiates the meeting of in and out, is awash in the pleasures of intimacy, of losing one's own limits in the sensuality of togetherness. For is not speech always a searching for the other? A materialization of fear and longing though sublimated, literally articulated—that is, cultured into language, aiming for assurance and belonging, recuperation, and retrieval of the intensity of our *first kiss*, our first fainting.

Tino Sehgal's performance work *Kiss* may be seen to bring such intensities out in the open. Presented in 2010 at the Guggenheim Museum in New York, Sehgal's work occupied the main atrium of the museum throughout the day, presenting a couple stretched out on the floor kissing. As with much of his work, *Kiss* gently disrupts the normative operations of a museum space by inserting a live and temporal action. While kissing appears within any number of visual representations and media platforms, the physical presence of a couple kissing, holding each other, within such feverish sensuality, reverberates within the emptied-out Guggenheim with an extremely suggestive energy. As the critic Holland Cotter noted: "[Sehgal] thinks that production is ceaseless and technology destructive. His art is a response to these perceived realities as they play out microcosmically in the context of the art industry. His goal is to create a countermodel: to make something (a situation) from virtually nothing (actions, words) and then let that something disappear, leaving no potentially marketable physical trace" (Cotter 2010). *Kiss* can be appreciated to accentuate experiences of intimacy, locating that sense of closeness in the museum so as to deliver us from the pressures of consumption, artistic and other, and the mechanics that place value on that which is marketable.

Sehgal's work, and this sensual rebelliousness, finds complement in the writings of Franco Berardi, specifically on the level of the economic, through his attack on the "financialization" of social life and the subsequent loss of the erotic, social body.

> we have lost the pleasure of being together. Thirty years of precariousness and competition have destroyed social solidarity. Media virtualization has destroyed the empathy among bodies, the pleasure of touching each other, and the pleasure of living in urban spaces. We have lost the pleasure of love, because too much time is devoted to work and virtual exchange. (Berardi 2012, 89)

To recuperate the possibility of a new form of solidarity, in support of the "social body," Berardi's call for "the general intellect and the erotic social body to meet on the streets and squares" (Berardi 2012, 91) sets the scene for the power of the kiss: the kiss not only as the individuated act between two, but also a general movement of erotic freedom. To found a new form of sensuality, the sheer privacy of kissing may drive forward a radical invigoration of public space, and of public life. Kissing here, as the expression of a body in freedom, performs a resistance to the "financial mafia" and all the mechanisms that place emphasis on market forces.

Of course, Sehgal's *Kiss* (and other such ephemeral works—as well as the "erotic body" in general) also fully participates in the movements of the contemporary "creative economy," where "immaterial" productions are also inscribed within the market to support new forms of capitalism, and under which sexed bodies are extremely susceptible.[2] Yet what interests me about *Kiss* (and Berardi's proposals) is how it might refer us to a larger history, in which the closeness of mouths, and the spirit of intimacy, sought to enact a type of political demonstration.

Initially, we may return to earlier moments, for instance in the late 1960s, where the display of freedom and resistance found expression in gathered, sensual bodies. The tradition of the "love-in" embodies this erotic potentiality. First appearing in opposition to the Vietnam War in the United States, the love-in captured the social energy of the "sit-in," as a form of political demonstration, interweaving it with the "love-and-peace" ethos of hippy culture. The love-in articulated a greater position, also tied to notions of economy and capital, for as Abbie Hoffman sought to remind, the body and the expressions of love are first and foremost, free.[3] They are our own to give and to share with others, whose public display might be said to steal time and space, if not the air itself, from within the structures of moral (and capitalistic) society; and the expressions of intimacy, of sexuality, were primary articulations of such freedoms—that love and the sharing of the body could not be quantified, placed within the registry of the administrative system or the military complex. Especially, by locating such expressions in public, out in the open, kissing becomes an enactment of a primary transgression, as well as an articulation of hope.

Subsequently, the kiss is a particular mouth movement that may also carry the full weight, and potentiality, of a (collective) body in revolt; that is, the manifestation of a radical pleasure whose expressivity can be wielded as a tactic in the social struggles of contemporary politics. This was given more recent expression in the "kissing protests" held in Ankara, Turkey, in 2013. In response to transport authorities who castigated a couple kissing in a subway station, protesters called for "free kisses" and staged public kissing throughout subway terminals.[4] The passion of kissing is thus conditioned by a sociopolitical dimension found on the tongue, in between the lips and in the feverish charge of two mouths holding each other; and one whose shuddering and fainting musicality may also perform to reinstate the softness of a generous and intimate life.

Attachment

Returning to Freud's view on kissing, I want to move closer toward the act of sucking. While kissing performs a range of movements, bringing us into the finer choreographies of the erotic, with sucking we enter more fully into those primary oral experiences. As Freud suggests, kissing may be haunted by early experiences of tasting another, in particular that of the mother's breast; essentially, experiences of sucking. We might appreciate the kiss as a sublimation of the suck; with lips tracing over another's, the kiss elaborates not only those oral pleasures found in sucking, but also the simple and direct mouth movement sucking

performs. Even the word "sucking" brings us back down, toward a more base level—it is such a direct word, whose sounding immediately conjures forth a deep wetness. Hence the use of the word as an insult; to say, "You suck" leads us into an interesting twist, for the word slips from an act and toward a trait; it suddenly, and mysteriously, taints us. "You suck" seems to carry its vulgarity precisely by capturing us as "the one who sucks," as the one who occupies this lower level of behavior, marked by this primary and rather unspeakable oral drive.

Originating in the phrase "go suck an egg," "suck" as an insult brings us closer to the intensity of the act, as well as its lingering reverberations. To be at the mother's breast is an extremely deep form of attachment and immersion; it sets the scene for the primary dynamics we develop by which experiences of gratification and loss, love and destructive impulses, are formed. As Winnicott suggests, "Psychologically, the infant takes from a breast that is part of the infant, and the mother gives milk to an infant that is part of herself" (Winnicott, cited in Klein 1987, 77).

The psychoanalytic work of Melanie Klein elaborates this view by way of what she terms the "good and bad breast." It is precisely the experiences we have while feeding from the mother's breast that "initiates an object relation to her," oscillating between the good and the bad breast, that is, the breast that provides and that is always there, and the one that pulls away, or is absent. "The various factors which enter into the infant's feelings of being gratified such as the alleviation of hunger, the pleasure of sucking, the freedom from discomfort and tension, i.e., from privations, and the experience of being loved—all these are attributed to the good breast" (Klein 1997, 63). Of course, this relation is dramatically one of dependency, leading to feelings of fulfillment and plenitude, of attachment, as well as frustration, longing, and detachment.

Sucking comes to perform as an extremely vital channel for infant development, a literal site of "oral communication" that no doubt embeds itself not only in the balancing of "libidinal and destructive impulses"—the positive and the negative, that captures our psychosexual life—but also the feelings we have for the mouth, the body, and the oral. If it is through the mouth that we establish such elemental patterns, such foundational emotional structures, then it is from the mouth that a great many future longings and experiences are defined.

These elemental dynamics of the mouth are poignantly elaborated by René Spitz in his influential paper, "The Primal Cavity" (1955). Through his work as a psychoanalyst, Spitz investigated early infant development and specifically analyzed how the mouth functions as a highly active, if not essential, mediator—a constellation of "surfaces"—between the infant and the external world.

> these will be the first surfaces used in tactile perception and exploration. They are particularly well suited for this purpose because in this single organ, the mouth cavity, are assembled the representatives of several of the senses in one and the same area. These senses are the sense of touch, of taste, of temperature, of smell, of pain, but also the deep sensibility involved in the act of deglutition. Indeed, the oral cavity lends itself as no other region of the body to bridge the gap between inner and outer perception. (Spitz 1955, 220)

Interestingly for Spitz, this "bridge" of perception is expressed most profoundly in the act of sucking, and what he refers to as "the sucking reflex"—an innate action that, like clutching, "takes in" a surrounding material or object. Sucking appears as our first form of directed behavior; it provides the vital link between a newborn and a mother, conditioning perception and functioning as the mediator for distinguishing between what is inside and what is outside, what is good and what is bad. This "oral discrimination" performs an essential contouring to the emergence of subjectivity, as it will lead directly into "the separation of the self from nonself, of the self from the objects, and in the course of this road to what is accepted and what is rejected" (Spitz 1955, 221).

As Klein further outlines, it is through the act of sucking and feeding that a number of primary fantasies are formed. The absolute dependency on the breast locates us within a constant flow between the good and the bad, the offered and the denied, to such a degree that the impulses to love or to hate are unquestionably interwoven. In this way, fantasies of admiration and hatred circle around the breast, leading equally to libidinal and destructive impulses: "These processes underlie, I think, the observable fact that young infants alternate so swiftly between states of complete gratification and of great distress. At this early stage the ego's ability to deal with anxiety by allowing contrasting emotions towards the mother, and accordingly the two aspects of her, to come together is still very limited" (Klein 1997, 71). These contrasting emotions open out onto fantasies of "devouring the breast," of "scooping out the mother's body," as well as "diving in," of deep warmth and attachment.

The reflex of sucking and the primary dynamics of the oral are to be appreciated as forming the very basis for the delineation of the self; while for Lacan, the instant of recognition of one's body operates through the ocular, that moment of gazing at the mirror, signaling a certain break—a narcissistic wonderment at oneself as a separate animate presence[5]—the "oral discrimination" performed by the infant seems even more significant, and pervasive, as setting the conditions by which "recognition" takes hold. The mouth develops as the very point of physical and emotional negotiation by bringing parts of the world directly in while also rejecting others; and from which experiences of deep attachment are found, yet ones that are also prone to painful absence. Before we can even fully see the world, we have already plunged into the difficult movements of self and other.

Dream

These oral dynamics, as I've tried to suggest, appear as a weave of direct, physical experiences of matter and material—a certain pragmatic ground of corporeal work—and that of more imaginary constructions. The mouth, in this regard, captures the reality of all the substances it encounters, and transfers this—rematerializes it—within what we might call "oral dreaming." As Eric Rhode suggests, the mouth is also a "dream site"—a space of unconscious drive, a haunted space—wherein tongue and teeth replace the breast and the nipple, and the oral cavity itself performs as a maternal uterus. Within this uterine cave a range of creations are generated—words are magical productions born from acts

of insemination, where the tongue may penetrate the throat, and the teeth may provide nourishment for these birthed syllables. The infant may "claim its mouth, and not the mother's womb, as the site of procreation," thereby relating "the act of procreation with the ability to [orally] dream" (Rhode 2013). The mouth-dreamer channels acts of symbolization through the oral cavity: the profound coupling of mother and child, enabled through the breast, turns the mouth into a mythic stage; performances are dramatized, and narratives unfold that integrate teeth and tongue, saliva and breast milk, nipples and the mother's skin, casting them into a cosmology of attachment and loss, conflicts from which an infant may learn how to imagine and dream through acts of sucking and tasting, ingesting and digesting. Fantasy is thus fully regulated by oral contact.

Elemental

Returning to the fevers found in kissing, and the erotic sensations experienced in licking, it becomes clear the degrees to which the mouth acts as a central part of the body for *finding connections*, if not our most primary ones. All the movements and micro-oralities I'm exploring here lead us both to the heights of passion as well as the essential relationships by which we love and care, share, hold, and take.

Is not the mouth the very part of the body by which to negotiate that sense of wholeness found in primary experiences, as well as the projection of lingering fantasy? A part balancing the whole; a hole teased by the whole, and which continually expels and exceeds itself, even while trying to hold in? Here I'm reminded of the work of Monique Wittig, and her publication, *The Lesbian Body*. Written in 1973, the work radically unsettles language with the material force of a "body in writing." Paralleling the work of Hélène Cixous, and her notion of "écriture féminine," as a methodology for shifting the patriarchal ordering central to Western discourses, *The Lesbian Body* is rife with an unfolded or fragmented body—a body equally whole and fragmented, conjoined and at a loss.[6] It is a text where the personal pronoun is literally divided typographically as well as by an erotic charge, of lesbian sexuality, to locate us within a dramatic breaking point, a body pulled apart by love and oral dreaming.

> *I* have access to your glottis and your larynx red with blood voice stifled. *I* reach your trachea, *I* embed my/self as far as your left lung, there my so delicate one *I* place m/y two hands on the pale pink bland mass touched it unfolds somewhat, it moves fanwise, m/y knees flex, *I* gather into m/y mouth your entire reserves of air. Mixed with it are traces of smoke, odours of herbs, the scent of a flower, irises it seems to m/e, the lung begins to beat, it gives a jump while the tears flow from your wide-open eyes, you trap m/y mouth like a cupping-glass on the sticky mass of your lung, large soft sticky fragments insinuate themselves between m/y lips, shape themselves to m/y palate, the entire mass is engulfed in m/y open mouth, m/y tongue is caught in an indescribable glue, a jelly descends towards m/y glottis, m/y tongue recoils, *I* choke and you choke without a cry, at this moment m/y most pleasing of all women it is impossible to conceive a more magistral a more inevitable coupling. (Wittig 1975, 68)

As a reader we are forced into this linguistic and corporeal scene, tossed into a multiplicity that leaves us without a center, and that places the physicality of sensual life onto the page, to which the mouth is profoundly operative.

Such work opens up a territory imbued with an overlap of language and corporeality, discourse and fantasy; Wittig's literary work is precisely a language that moves through the body, dragged across the elemental passions and primary drives that always lurk within, and that fill and flush the oral and the spoken—to produce a *sticky* discourse. As Julia Kristeva poignantly states: "Through the mouth that I fill with words instead of my mother whom I miss from now on more than ever, I elaborate that want, and the aggressivity that accompanies it, by *saying*" (Kristeva 1982, 41). By saying, and also through an array of oral gestures and expressions that always rotate upon a highly erotic and sexualized axis. It is this axis—one steeped in the penetrative poetics of a *writing the body* that can equally be a *speaking the body*, and that figures the deep oral imaginary always already in the mouth.

Gender, Intimacy, and Voices in Sound Art

Encouragements, Self-Portraits, and Shadow Walks

Cathy Lane

Introduction

The voice is produced and shaped by a body. When heard, it also suggests a body. This tension between the relationship of the voice and the body has been a productive force in the creation of a variety of works within sound arts. In previous publications I have investigated how women sound artists have used voice, both literally and metaphorically, in their work to challenge contemporary historical and contemporary cultural assumptions about women's voices and the male normative within sound arts practice (Lane 2016). This was ignited by research into gender differences in the work produced by students of Sound Arts and Design at London College of Communication, a significant finding of which was that many female students used spoken voice in their work. Through an investigation of some of the ways that women's voices have been demonized and ridiculed within the public sphere and the analysis of how voice was being used in works by sound artists Hildegard Westerkamp, Janet Cardiff, and Jasmeen Patheja the paper went on to conclude that

> The act of using one's own voice and language in one's own way is a radical move within electroacoustic music and sound art and women sound artists use voices, their own and others, in ways that subvert commonly held historic, socio-cultural prejudices against the existence of women's voices in public spaces. (Lane 2016, 109)

In subsequent presentations (Lane 2017) this research has been extended and developed to consider some of the mechanisms by which some voices have been excluded from the sound arts canon through an uncritical acceptance of what Jennifer Stoever-Ackermann has termed our "raced, gendered, and historicized 'listening

ears'" (Stoever-Ackerman 2010) accompanied by an obedience to normative notions of attentive and "expert" listening. In recent work this has been further developed by investigating the ways that the separation of the voice from the body has offered ways of silencing women in the public sphere through likening them to animals, and also allowed artists such as Laurie Anderson to play with creating new persona through manipulation of the voice (Lane 2018).

Examining works by a variety of contemporary artists who work primarily with sound, this chapter aims to look at how the voice and voiced sounds, such as audible breathing and other nonlinguistic utterances, are used to both express and investigate notions of intimacy and their relation to gender. I have chosen to group the works together according to the category of sound used in the work, namely the sounds of female sexual pleasure, breath, and voice. In each case, these sounds are used by the artists to explore or express significantly different aspects of intimate experience and their relationship to notions of public, private, and political. Of course the works share aspects in common that transcend the choice of sounding material and where possible these will be discussed in relation to each other.

Notions of Intimacy

Intimacy between people always involves some form of closeness; this can variously be interpreted as affinity, rapport, warmth, or understanding, all of which can be understood in terms of the space or proximity between two or more beings. While a variety of forms of intimacy have been identified—including emotional, experiential, cognitive, intellectual (Kakabadse and Kakabadse 2004); recreational, financial (Tran 2017); spiritual (Tartakovsky); and aesthetic and unconditional (Kamal 2015)—the form of intimacy that most commonly comes to mind for most people is probably physical or sexual. At the root of sexual and physical intimacy are strict codes of space, proximity, appropriateness, and consent. These codes also apply to the sonic expression of sexual or physical intimacy.

The Sounds of Sex: Raimondo, Shetty, Lockwood

Brussels-based, Italian artist Anna Raimondo works across sound, performance, and radio. Much of her work questions and often transgresses notions of public and private space. *Féminisme quotidien #1—voyage au Maroc, 2017*, a work in the series *Daily Feminism*, consists of five screen-printed T-shirts, a series of photos, sound recordings, and wall texts. Each T-shirt broadcasts statements that sounds like a private thought: "If you find me provocative then look away"; "Your daughter's body does not belong to you"; and "I am not a piece of meat." The gallery exhibition featured a series of "tourist" photographs of

Raimondo posing at well-known sites in Rabat wearing these garments. Wall texts chosen by the artist extended the textual commentary, and the T-shirts were available for sale so that gallery visitors could "contaminate more and more the urban space with these sentences" (Raimondo, e-mail to author, August 25, 2018). The sentences were all from Moroccan women who had been invited by Raimondo to send her a sentence that they would like to share in a public space. This transgressive insertion of the women's private thoughts into the public space through the imprint of their words on the body of another woman publicly ventriloquizes and broadcasts them into the public arena. Whilst it echoes the long history of political and campaign-based marketing and publicity from many causes through slogan T-shirts (notable examples in the United Kingdom being Vivienne Westwood and Malcom McLaren's "God save the Queen" punk T-shirts from the 1970s; and Katharine Hamnett's political slogan "Choose Life" T-shirts from the 1980s) and the plethora of printed T-shirts sold by social and political groups, it differs from them in that these are not calls to action but expressions of inner private thoughts. The anonymizing of the original authors of the words and their journey from internal to external, from the body of a Moroccan woman to that of a European woman, potentially provides a safety net for the women concerned and allows the unfettered circulation of their intimate thoughts in the public realm.

In her 2014 video work *Encouragements*, Raimondo is seen traveling around the city of Brussels constantly talking into her mobile phone, loudly broadcasting "encouragements" gathered from women of different ages, origins, and sexual and religious backgrounds. The phrases sound as if they might have been said by women to other women in private. "You don't owe prettiness to anyone. Not to your partner, not to random men on the street. You don't owe it to your mother, you don't owe it to your children, you don't owe it to civilization in general. Prettiness is not a rent you pay for occupying a space marked 'female'" or "Women need to think of themselves as predators rather than prey. I want you to be a solid strong free women, one who trusts herself"; as well as some more clichéd or generalized sayings: "Every choice is a surrender" or "A life lived in fear is a life half lived." Around five minutes into the video the transgression ramps up as the intimate and still generally taboo, even among women, subject of female masturbation is mentioned loudly by Raimondo whilst sitting at a café table near two young men, "I also think women are denied masturbation even more severely than men, and that's another way of control," who obviously both find the whole conversation slightly uncomfortable. A little later in the video we see Raimondo pacing in the park close to a man and woman sitting on the grass with their three dogs. Just after she pronounces that "women have something really special to offer in terms of helping our society grow sexually" they ask her to go away—she has got too close, overlapped intimate spaces, and has intruded in their invisible private space physically, sonically, and emotionally. These public broadcastings of words, once offered in more intimate circumstances through the traveling physical body of Raimondo, offer incursions into other intimate exchanges taking place between people around the city, as her physical proximity interrupts their own expressions of intimacy, forcing them to listen to her telephone conversation or to engage with the words on the T-shirt by being asked to

photograph Raimondo. At times they also transgress what is acceptable in public by their subject matter.

This is taken a step further with the 2012 video work *How to make your day exciting*, in which we see Raimondo traveling through London on public transport. Despite wearing headphones, what she seems to be listening to can be heard by all around her and as she moves through these spaces she broadcasts a sonic composition made primarily from the soundtracks of pornographic films of women having sex. As these sounds infiltrate various forms of public transport we see most passengers studiously ignoring them, looking vaguely embarrassed but acting as if they cannot hear them at all. The sounds are ignored, denied, no one challenges her; it is as if they do not exist, but we the viewer are aware that they can hear them and act as witness to Raimondo's nonchalance and their discomfort with these sounds.

The sounds of sexual intimacy feature in a number of other works. Bangalore-based artist Yashas Shetty's *The Nine Billion Names of God* is a program that downloads pornography and looks for points where the participants shout out "god"—in the hope of collecting nine billion, and while it's doing that it uses all the tropes of artificial intelligence (AI) and machine learning to learn how to better identify the sound of the word across different voices and accents. The work takes its name from a 1953 short story by British science fiction writer Arthur C. Clarke. The story is set in Tibet where monks aiming to list all of the names of God rent a computer and Western computer programmers to help them with the task. They believe that once the task is completed the world will end. Shetty's program started collecting these invocations in January 2017 and he calculates that around 7,000 sound clips were gathered in the first 18 months. This work in progress is funny, which is relatively unusual in a work of sound art, but it also shows how often the same words are uttered in acts of sexual intimacy, or maybe how the pornography industry thinks people should verbalize and sound in moments of sexual intimacy. On listening to the sound files, which are collected and made available online every week, it is striking that around one in ten or less of the sound clips are from male-sounding voices, the vast majority being orgasmic expressions from female-sounding voices. This probably tells us less about gendered cultures of sexual intimacy than it tells us about who the main consumers of pornography are and how in these cases the female voice stands in for the image of a passive female who is being sexually pleasured and "driven mad" by a largely silent man in terms of the on-screen action, the sound file, and the consumer. These expressions of sexual intimacy are being performed largely by noisy women for consumption by silent men.

In their 1996 paper "Aural Sex: The Female Orgasm in Popular Sound," John Corbett and Terri Kapsalis ask:

> what do recorded female sex vocalizations become *evidence* of? Whose pleasure is being represented? On one hand, these vocalizations are conventionally designed to provide sexual arousal for a male listener. . . . As evidence of the truth of her orgasm and the truth of his/her ability to bring her to orgasm, the listener is offered the sound of uncontrollable female passion. Sound is used to verify her pleasure and his/her prowess. (Corbett and Kapsalis 1996, 104)

It is also one of the few occasions when it is desirable that women make loud sounds: "evidence of female sexual pleasure is usually deferred to the aural sphere, hence, within mainstream pornography and mass culture alike, where male sexual pleasure is accompanied by what Williams calls the 'frenzy of the visible,' female sexual pleasure is better thought of in terms of a 'frenzy of the audible'" (Corbett and Kapsalis 1996, 103), where the greater the volume the greater the imagined force of orgasm. Corbett and Kapsalis point out that "the vocal ejaculations of climaxing women are a prominent, perhaps *the* prominent, feature of representations of female sexual pleasure in main-stream porn and popular culture at large" (Corbett and Kapsalis 1996). They postulate that the lack of policing of audio does, in the authors' opinion, mean that female sex sounds constitute a "more viable, less prohibited, and therefore more publicly available form of representation than, for instance, the less ambiguous, more easily recognized money shot" (Corbett and Kapsalis 1996, 104).

Before moving on to expand this discussion of intimacy, voice, and gender within sound art I would like to consider a third sound work that uses sounds of a female orgasm. New Zealand-born, US-based composer Annea Lockwood's 1970 tape work, *Tiger Balm*, was created while Lockwood was still living in the UK. The work starts with the close-up sound of a cat purring, which is soon joined by a repeating gong or gamelan-like percussive riff; when the cat drops out something that sounds like a slowed down jaw harp or maybe a cat-like roar joins—then moves to take center stage, joined by breathing and moaning, which it is difficult to distinguish immediately as sexual. There are abrupt changes in proximity and perspective, the jaw harp/roaring moves into a background and is joined by something that sounds like rain. The breathing and moaning becomes more central at around 5′30″ and sounds more obviously sexual, sonically reflected by the cat sounds, so that it becomes slightly difficult to tell them all apart. At around 7′ the female voice sounds close to orgasm and then postorgasmic. It gives way to the sound of an airplane before returning to the percussive riff on which it ends. While very pleasing to listen to it is difficult to make sense of these sounds and their relationships to each other. The overall impression that the work leaves with me is one of sensuality, possibly sustained by the fact that the two most dominant sounds, that of the cat purring and the female sex sounds relate in ways that are not merely sonic—but also as expressions of sensuality and pleasure. This is not the orgasmic utterance of the porn film—a "frenzy of the audible," presented to titillate the male listener, indeed the male commentators on the work have not even recognized or named them as the sounds of sex. The advertisement for the album, which was rereleased in 2017, mentions

> a select palette of mainly unprocessed sonic elements chosen for their mysterious and erotic characteristics (a purring cat, a heartbeat, gongs, slowed down jaw harp, a tiger, a woman's breath, a plane passing overhead), presenting at most two sounds at once. As one sound flows organically into the next, their shared characteristics are highlighted, opening a space of dream logic and mysterious associations between nature and culture, the ancient and the modern. (Forced Exposure n.d.)

Writing about it in *Source: Music of the Avant Garde, 1966-1973* Bill Smith is a little more observant

> *Tiger Balm* (1970) begins with a recording of a purring tiger (a sound that should be familiar to any cat owner) over which other sounds—some produced by musical instruments, others not—are gradually layered on top of each other. About seven minutes in, the sound of a woman having an orgasm emerges seamlessly from the sounds of animals breathing and then recedes, just as seamlessly, into the sound of an airplane. It's pretty provocative stuff. (Smith 2014)

Tiger Balm came out of Lockwood's interest in the effects of sound on the body, specifically "the characteristics across cultures of music used in rituals in which trance is induced" (Cole and Lockwood 2018). Lockwood herself says that

> At the core of *Tiger Balm* is the merging of woman with tiger. Starting with the sensuous purring of an old cat, Carolee Schneemann's Kitsch whom I was cat-sitting at the time. . . . I began to assemble other sounds, which I found erotic. A form of vocabulary: a heart beating, the slow arc of a plane passing by overhead at just the right height—I still love that sound, a mouth harp slowed down, recording of tigers mating—a recording I had made at a workshop of people playing Carl Orff instruments in a gamelan like pattern, also slowed down. (Cole and Lockwood 2018)

At the time Lockwood was moving away from the kind of single material investigations that she had been undertaking in *The Glass Concert* (1967–1970) but decided to limit the piece to no more than two sound sources at a time "often just one in order to preserve the individuality of each sound source, and to structure its flow by a form of osmosis, that is, sounds flowing into each other via shared characteristics, such as the disappearing tiger's breath and the slightly rough and breathed arc of the plane flying overhead" (Cole and Lockwood 2018). Lockwood worked out the succession of sounds by dreaming the order "I completely trusted my dreaming mind to come up with a structure which would function the way I wanted it to" (Cole and Lockwood 2018). Whilst Lockwood does not explicitly remember *Tiger Balm* being composed as a feminist statement she does acknowledge that the "oncoming wave of revived feminism at the time was affecting me deeply, it was indeed empowering, becoming more so once I moved to the States" (Lockwood, e-mail correspondence, August 29, 2018) and that in the atmosphere of the time "Carolee's work, for me as for so many others, opened up the possibilities of being directly and openly sexual in one's work" (Cole and Lockwood 2018). In retrospect, however, *Tiger Balm* can be read as a both a concretely feminist provocation inserted into the male-dominated world of 1970s musique concrète and avant-garde music and an antidote, a quiet alternative moment of female-centered sexual intimacy, in sharp contrast to the loud and overblown female sexual vocalizations featured in the previous two works discussed. As such it is both transgressive and a statement of female power and sexuality.

  In their own ways each of these works highlights, on the one hand, the transgressive nature of the sound of the female orgasm in public space as well as, on the other, the sort of spaces, such as Internet pornography sites, where these sounds are welcomed and why. Of course it is not only the sounds of female orgasm that are not welcome in public spaces. I have already mentioned previous work in which I have discussed some of the mechanisms through which female (and other nonnormative) voices are demonized and silenced in the

public domain (Lane 2018, 2017, 2016) and how sound artists (including Janet Cardiff, Hildegarde Westerkamp, Jasmeen Patheja, Mark Peter Wright, Lawrence Abu Hamden, Laura Malacart, and Imogen Stidworthy) have worked to subvert some of these dominant cultural ideologies, but with the exceptions of the "intimate" voices chosen by Janet Cardiff and Westerkamp I have not focused on wider notions of intimacy within sound work.

According to psychologist A.C. Gaia (2002), descriptions of intimacy across all categories include: self-disclosure, emotional expression, support, trust, physical expression, feelings of closeness, and a mutual experience of intimacy. While the above discussion has concerned work that focuses on vocalized expressions of female intimacy, specifically sexual, I would like to turn to look at works that focus on different soundings of the physical body, specifically the breath.

Breath: Kaddal, Biswas, Bailey, Westerkamp

Ever since Henri Chopin's sound poetry experiments with the microphone and the internal workings of his body in the 1950s, sound artists, driven by a wide array of research and sonic imperatives, have used audio technology to explore the intimate workings and processes of the body and through this opened themselves up, directly disclosing their bodily responses and the physical expression of their emotional responses, through sound and vision.

Egyptian-born multimedia artist Khaled Kaddal's live audiovisual performances draw on his experience of the political revolutionary unrest in Egypt between 2009 and 2014, part of which is now termed the Arab Spring. Three performance works, *Trapped Sounds* (2015), *CODE3* (2016a) and *CODE20* (2016b), are informed by and expressive of bodily responses to the volatile nature of the sustained violent political protest that Kaddal experienced. In each of the three performances Kaddal wears a gas mask, fitted with a microphone, which allows him to both amplify and signal process his breathing. The three performances share other sonic elements including a "hammering" sound, not quite a heartbeat, not quite footsteps, but reminiscent of both, as well as the sound of police beating riot shields; media extracts commenting on the action; field recordings from protests; high, sine wave-like, synthesized sounds that remind us of both the operation of the nervous system and hearing loss associated with tinnitus; and other electronic sounds that call on sonic metaphors and cinematic soundtracks to both communicate and create feelings of tension. In each of these works Kaddal examines the effect of sound on the body in times of intense sociopolitical unrest and personal trauma and expresses and explores the relationship of the individual to society, the state, and the urban environment. The individual responses are communicated by the breathing and synthesized sounds and have the effect of putting us inside the mask, gaining an intimate and symbiotic relationship with his body in all its fight and flight experiences. The works also share musical and structural elements. These include repetitive and insistent sounds or patterns that have

slight variations in pitch and tempo, gradually speeding up or slowing down or changing pitch or timbre until they are almost imperceptibly transformed into something else; as well as extended periods of chaos when it is difficult to differentiate one sound from another, as a result of which the overall effect is often disconcerting and stressful. At times over the three performances we hear pulses throbbing and blood pounding and as if it is in our heads: sirens, helicopters, robot armies, and the bleeps of machines mainly encountered in hospital wards. In *Trapped Sounds* (2015) and *CODE3* (2016a) we, the audience, are taken on a journey as if we are inside Kaddal's body, we don't really know what or where that journey was, nothing is made explicit, but we feel that we have intimate experience of his physical and emotional reactions and states. In *CODE20* (2016b) the journey is made more explicit. The visual element of *CODE20* is less abstracted than the previous two performances and the conceptual underpinnings of the work are made more apparent.

> From the American police radio scanner codes, number "20" identifies an acute trauma case. The performance is a live multimedia representation that explicitly demonstrates different types of listening during political conflicts. On how violent sounds affects the body with physiological injuries and psychological traumas. The performance follows "Mapping Zones of Wartime (In)audition" from the book *Listening to War* by J.M. Daughtry, taking his concentric listening zones as a score to form the piece. (Kaddal 2018)

During the performance words are projected, they are a score for Kaddal but also a guide to the audience informing them about the journey that they are on, carried along by the intense, immersive sound experience. The piece starts with Kaddal's breath through and amplified by a gas mask. As we are enclosed by it projected words start to appear on the wall

> First, it starts with running!
> [In hale]
> [Ex hale]
> Heart beat
> "What are we running from?"
> "I don't know"
> "Hahaha." (Kaddal 2016b)[1]

We don't know whether these are instructions from him to him, from him to us, or from someone else to him, but we are implicated through the intimate enclosure in his breath as it responds to the sonic memory of the events to which the words allude. The breathing continues, the words continue describing states and, once again, possible instructions "Listening to: Conflicts, Seduction, Alert, Distress, Anxiety, Traumas, Violence Memories, Attack, Terror, Fear, Clashes, Authority, Warfare, Militant, Riots" (Kaddal 2016b) but the threat and the anxiety that creates them remain unspecific. As the sound builds we are given more of an idea about what we might be listening to. Text projecting the zone analysis identified by Daughtry (2015) takes us through four zones: Zone 1: The audible inaudible; Zone 2: The Narrational; Zone 3: The Tactical; Zone 4: The Trauma: "The skin listens, The chest listens, The hair listens, The viscera listens, The ear listens, The body listens" (Kaddal 2016b) and these are accompanied by two moving image projections. Sounds come and

go but we are always left with the sound of the breath and the electronic sounds. The performance ends with the high sounds, the breathing and images and sounds of a burning microphone popping, booming, and cracking like the sounds of gunfire and explosions.

Kaddal invites us to share these experiences with him, not through a vocal invitation but by immersively enveloping us in the sounds and responses of his body. We look at the same screen that he looks at—we see the same words that he sees, the words both trigger his emotional responses, and in turn ours, and guide us as to why we are feeling them. Kaddal offers us a degree of emotional intimacy—we are invited both to earwitness and to share in his trauma. In contrast with the seductive invitation that Janet Cardiff offers in works such as *Louisiana Walk 14* (1996) where she "begins by placing us in an internal environment and her voice immediately establishes intimacy through her tone, her words and her proximity. She whispers in your ear, a close friend or lover inviting you to follow and stay with her wherever she leads" (Lane 2016). Kaddal's amplified breath is not so much an invitation to, but an offering of, intimacy through the mediated sharing of his emotional experience. Investigating men's experiences and perceptions of intimacy, Patrick and Beckenback (2009) " posed the possibility that men use means other than stating feelings in order to express and receive intimacy in their relationships" and that " women are encouraged to focus more on relationship. Men socialized to focus more on task may, for example, complete a chore to demonstrate intimacy for their partner" (2009, 49). While we, the listening audience, are not intimate partners we recognize that Kaddal has completed a chore or rather a performative action that demonstrates intimacy for us.

The intimate experience of mediated breath and entrainment also occurs in a work by UK-based artist Ansuman Biswas. Biswas's practice encompasses music, film, live art, installation, writing, and theater, much of which is influenced by vipassana meditation practice and various methods of mind and body control. In common with Kaddal much of Biswas's work is "performative" in that his physical body is present and at the center of the work. Sometimes Biswas cannot be seen, he is hidden, but the event still centers around his presence. In *CAT* (1997) Biswas remained sealed in a light- and soundproof chamber for ten days. Nothing entered or exited the box and all the time that he was in there Biswas attempted to maintain continuous, detailed observation of all sensory phenomena. For *Manchester Hermit* (2009) Biswas spent forty days and forty nights alone in the Gothic Tower of Manchester Museum. He was physically isolated but visible 24 hours a day via a webcam.

Biswas' 1999 work *self/portrait* was also a durational performance in which he shared with us the minute fluctuations of the emotional and physical states of his body. In a week-long performance at the Now99 Festival in Nottingham the artist sat opposite a video screen onto which his image was projected, modified by the signal from an ECG, which measured his heart rate in real time.

> As my thoughts and emotions flow and change, along with myriad biochemical reactions, so my heart rate slows and speeds. The heart pulses like a bass drum around which all the other rhythms of the body organize. Small electrodes on my skin pick up this electrical weather and feed it into the computer. The view from outside is also fed into the computer via video.

The internal and external views are mixed together and projected onto the wall. (Biswas, e-mail to author, August 30, 2018)

Biswas transmitted and communicated three main emotional states (agitation, appreciation, and concentration), which correlated with particular physiological data and were mapped to processes within the video software. The system responded so that agitation created very abstract and chaotic patterns, and periods of calmness and concentration caused the image to become very clear and focused. Biswas was literally sharing every emotional and physical fluctuation with us, second by second, as we witnessed his attempts to entrain all his bodily rhythms through meditation and the breath. The work challenged the very idea of intimacy. On the one hand it fulfilled at least three of Gaia's (2002) features of intimacy, namely self-disclosure, emotional expression, and physical expression, but it also removed the subject from himself—making him an object of perusal or study, both by himself and by the audience. Biswas had made himself the subject of his own experiment and, while at once controlling and also disconnected from his own reactions, he opened himself up and placed those physical and emotional responses for him and us to study. Kaddal shared this approach when talking about *Trapped Sounds*, saying "At that time, I wanted to bring myself as a biological example, and start to reflect on our psychological experiences resulted from the political transformation in Egypt. Just like laboratory mice" (Kaddal, e-mail to author, September 13, 2018). In both cases Kaddal and Biswas chose to put themselves under scrutiny and bare themselves, physically and emotionally, to the audience. Patrick and Beckenbach (2009) have noted that, when examining gender-role socialization, women are more likely to negotiate situations from a relational context, while men adopt an autonomous stance with others. Kaddal and Biswas are both focused on themselves and their experiences, which they enact in front of us largely signaled by the sound (or the power) of breath. We are invited to witness and to some extent partake in an intimate sharing of these experiences through multisensory and multimedia means that by and large transcend the use of verbal communication.

London-based composer Ain Bailey's 2014 work *Breath* exists as both a fixed media and a performance piece. In common with Hildegard Westerkamp's 1990 work *Breathing Room*, one of three electroacoustic pieces with that title, it primarily uses the sounds of recorded breathing. However the similarity ends there. Westerkamp's three-minute *Breathing Room* is a series of musical deep breaths that nourish the listener and celebrate the ability to breathe within the natural world. Bailey's *Breath* was written in response to listening to the last breaths of her mother as she passed away "one of the most chilling sounds I shall probably ever hear" (Bailey, e-mail to author, September 9, 2018). These breath sounds are heavily processed and the work is open to many metaphorical interpretations—often full of an energy that it is difficult to decipher—sometimes angry, sometimes sympathetic. We are never quite sure whose experience is being expressed, that of the mother or the daughter, although we feel they are entwined and symbiotic. The piece starts with a long oscillating sound that moves transcendentally upward and away. Soon it settles into the breath sound that is central to it throughout—a mixture of a death rattle and a cry for help, which starts, occurring regularly, only to stop suddenly, falter, and then start again, losing and gaining

rhythm all the time. *Breath* is constructed from only one or two recorded breath sounds that frequently fracture into smaller grains and harsh ancillary rhythms, as if we are witnessing the transformation of the breath, and life itself, into smaller molecules. At times the sound is terrifying as if there are encounters along the journey; it is not smooth, but it keeps moving at an inevitable and unforgiving pace, full of tensions, its stops and starts marked by abrupt changes. "This sound performance transforms the entirety of the space into a breathing organism . . . an immersive experience of visceral wake work" (Akademie der Künste 2018). Bailey does not put herself at the center of this work. In performance her role is limited to the electronic manipulation of sound. The sounds are the central protagonist in the work. It is an intimate expression of grief, raw and pained, and at the center we can sense the relationship between the two women, mother and daughter, with all its inevitable tensions and contradictions. We are never sure whose experience is being expressed, it feels like an amalgamation of the experience of the dying mother and the witnessing daughter, and we earwitness both these experiences at the same time, in relation, and totally intertwined.

These works, which each focus on the breath in different ways, have invited the audience to share as powerful an experience of emotional and physical intimacy as might be expected from sound. In each case we have been enveloped in the experience—on the one hand, with Kaddal and Biswas, the enactment and reenactment of intimate physical and emotional reactions and experiences, and, on the other, with Bailey, a powerful emotional trauma and tribute that has both invited us to witness the multifaceted nature of grief, life, and death and the mother/daughter relationship.

Voice: Hojo, Corringham, Karikis

Of course sound can used be a tool to reflect on the intimate relationships of others as well as representing the artist's own intimate relationships and experiences. This can be particularly pertinent for the investigation of gendered communication.

Tomoko Hojo's 2018 work *I am listening to you*, is both a live performance piece with a score, and an installation. The work,[2] is based on an interview conducted by Andy Peebles with John Lennon and Yoko Ono on December 6, 1980, for the UK's BBC Radio One. We now know that the interview was in fact conducted two days before Lennon was shot and killed in New York. The performance starts with Hojo sitting behind a microphone and a music stand facing the audience. She is still and quiet. After about 17 seconds she looks directly at the audience and makes a small vocal sound "nn," after another ten seconds or so she repeats it, slightly differently. The performance progresses like this with Hojo interjecting small quiet vocal sounds into the room on average around every ten seconds. Once in a while she says a few words, "I was in the basement," "No No," "I was preparing before the opening," "Indica gallery" (the London gallery where she first met Lennon in November 1966), "No no," "He didn't explain it really," "He just sort of kind of" (Hojo 2018a) but mostly they are small interjections and a few small laughs

Ono was often muted and mostly accompanied his speech by laughing with high soft small voice. In Japanese society, people insert "aizuchi"—a sort of backchannel such as "huh" or "yeah"—quite often during the conversation, to let the other speaker know that they are actively listening. Although Ono seems to inhabit this specific behavior, there is equally an absence, a meandering in a different time and place. Listening becomes the act of imagining unspoken words, and gradually shifts into a fluidity between listening and speaking, and voiceless voices hidden under discourses would become audible. (Hojo 2018b)

This continues for around eight minutes, at which point Hojo gets up and leaves the stage and starts to manipulate four small lo-fi playback devices scattered around the performance space among the audience. Each device plays back different sounds including breathing, laughter, and little bits of the speech that are also featured in the original performance. These sounds are free to pervade and inhabit the space until they are turned off after about six minutes. This subtle work can be read on many levels. On the one hand it is notable that in the space of the eight-minute first section of the interview that Hojo has used, Ono sounds only thirty-eight times—each sounding being very small and many of them no more than a faint breath, which, if listened to carefully, merely denotes that she is there. She says less than seventy words—none of them in full sentences. This is not necessarily noticeable within the original interview, which is very much dominated and moved along by the force of Lennon's personality but it becomes much more apparent when Ono's sounds are isolated and inserted into the silent performance venue where each interjection seemingly "echoes" or resonates through the silent space and time surrounding it. In the second half of the work the recorded segments sound and resonate through the space and occupy it much more fully, on the one hand reinhabiting the space, on the other emphasizing how very little, both in terms of amount and the content, that Yoko has been able to say. Ono's interjections into that conversation, now so long ago, ventriloquized through Hojo's contemporary presence, somehow add a poignancy to the work, We, as contemporary listeners, know that two days after these utterances Ono would never again be able to talk to Lennon, her husband and close collaborator. Removing them from Ono's recorded voice and transferring them into Hojo's performing voice allows us to consider them as objects, which add some sort of commentary on the relationship, or at least the public manifestation of it. The visible presence of Hojo as a young woman artist from Japan operating within Western Europe also invites thought and comparison about the nature of both race and gender historically and contemporarily.

US-based sound artist and vocalist Viv Corringham also revoices other people's words. In her long-standing series *Shadow-Walks*, she invites local people to take her on a walk that is special or meaningful for them in some way. Apart from being a good way of engaging with the geography, history, and culture of an unknown place, this methodology is a shortcut to intimate exchanges with relative strangers as, in the course of the walk, they divulge aspects of their lives, thoughts, and feelings to Corringham. "Walking with someone is an act of intimacy. You walk close together, your steps start to match, you move forward together. Yet you both look ahead, not making much eye contact, so embarrassment is minimal" (Corringham, e-mail to author, September 6, 2018). The process usually starts with Corringham asking the person where they are going and why the walk is special to

them " that brings forth loads of personal information" (Corringham 2018). This is not a sharing of intimate information, "I try not to talk much but to just listen to them and encourage. But I'm always willing to answer anything they ask or to share things. In fact people rarely ask me about myself, and when they do they are almost always women. Maybe women feel less comfortable with or used to the attention and being listened to" (Corringham 2018). So far *Shadow Walks* has been conducted with around 120 people in almost 30 different places including Greece, Hong Kong, the United Kingdom, the United States, Portugal, Italy, Canada, and Australia. After walking with the subject and recording the walk—the conversations with the walker as well as the sounds of place carrying on around—Corringham retraces the walk on her own, guided by the memory of the previous walk. As she does this she revoices her sonic memory of the walk, channeling parts of the conversations with people as well as other sound events heard during her previous journeys along that route. The initial walk usually produced an almost immediate intimacy between Corringham and the walker, "Sometimes I feel things people say are so personal that it is as if they are talking to a close friend" (Corringham 2018). In the examples of intimate things that people that she barely knows have discussed with her, Corringham gives examples that are much more confessional, "A special walk triggers a lot of personal memories and reflections" (Corringham 2018). These might range from disclosures of guilt, mental health problems, frustration, or shame, things that would not normally be shared in an hour's conversation with a stranger. She does not necessarily use all that material in her repeated iterations of the walks, but as she retraces the steps that she took with her walker on her own she relives that exchange through an embodied memory:

> Everything on the walk triggers my memories. Just walking the route again reminds me where things were said, and often the exact words used. I often remember a shape to the walk in terms of mood or events and try to use that. I find I don't have to try to trigger memories—just taking the walk again at a similar pace to the original does that. Walking pace is quite important. Once I slow down (usually that's what brings me to the pace of the original walk, especially with an older person) I stop being just me out for a walk. (Corringham 2018)

She repackages the exchange and even makes it safe through using her own voice and sound making for a public audience, "I'm often careful how much I use of these as I wonder how they would feel if they heard their words in a public performance or on radio" (Corringham 2018).

Both Hojo and Corringham are revoicing the voice of another, someone they have shared some kind of private intimacy with. In Hojo's case it is an older Japanese experimental artist and musician who is also a very well-known, iconic woman, and, in Corringham's, a series of intense but short and finite relationships that have involved intimate exchange. Both artists go through a process that involves listening and internalizing what they hear, then passing the words and sounds through their bodies in order to revocalize them. In this way they both act as mediums, or transducers, with their voices as the medium through which the original sounds are broadcast in the formality of a performance. This process involves a number of degrees of a kind of physical intimacy ranging from what we imagine or hear, and the temporary closeness of intimacy that each artist has with their subject, to

the taking sounds into the body—absorbing, retriggering, and revocalizing them. These revocalizations are imbued with the vestiges of that intimacy, they have left one body and been absorbed by another, then reframed, and re-sounded. They gather, in Hojo's case, a poignant gendered reflection on the relationship between John and Yoko, which somehow holds empathy and criticism at the same time; and, in Corringham's case, they mark and to some extent validate and formalize intimate experiences and relationships to place that are normally private and enacted in the body or maybe shared with friends or close family members.

A related intimate revoicing can also be witnessed in Mikhail Karikis's video work *Sounds from Beneath* (2012) made with members of the Snowdown Colliery Male Voice Choir, a group of former coal miners from the county of Kent in England. The colliery was closed in 1987 in the aftermath of a long and bitter battle between workers and the government to save the UK coal industry. The soundtrack of the video work is entirely based on the sounds that these former miners have carried in their bodies over the last fifteen years or so, the varied industrial sounds of the working coal mine now recalled and vocalized for this work. In the video we see the choir perform the composition at the site of the ex-mine in ways that remind us of both the traditional formality of a performing choir and the formations of picket lines during the long running Miner's Strike of 1984–1985, which preceded the final decline of the UK coal mining industry mentioned above. The revocalized sounds speak of an intimate relation with place and labor, and the visual setting of the work in the former colliery, combined with intimate camerawork, often focusing on the faces of these now elderly men, extends this expression of intimacy, once again into a poignant and gendered relationship between the viewer and the lost sounds of people and of a history of past industries. Much of Mikhail Karikis's recent work shows different aspects of intimacy, again not the intimacy between long-term friends, colleagues, or lovers, but an intimacy that reveals itself in work that can only have been produced through an intense relationship of trust and sharing. Karikis has long been engaged with exploring the voice as a sculptural material alongside notions and performances of masculinity, society, and politics, particularly in relation to place and labor. His projects, often video-based, have, over the last seven years or so, become less theatrical and "composed" and focused more on the groups of people that he has been working with. In *Ain't Got No Fear* (2016) Karikis worked with a group of teenage boys living the Isle of Grain in Kent. The Isle of Grain is not an island but a peninsular at the southern mouth of the Thames estuary as it reaches the North Sea in the southeast of England. It is a site that has been historically and industrially significant but is now a militarized postindustrial marshland, and a site of both economic and cultural deprivation. In the film a group of 11- to 13-year-old boys from Grain travel around their area using their voices as if to embed their own experience on the now ruined but historically charged landscape that they inhabit. They perform a rap song with sounds made from the long-term demolition of the local power station—the 244 meter-high chimney of which is the largest structure to ever be demolished in the United Kingdom, a deconstruction of the past that still saturates the landscape and their lives—field recordings, and words that they wrote working with Karikis. Their words reflect on lives lived so far in this shadow:

> Now I am at the age of thirteen
> Sitting around playing FIFA 16
> Sometimes talking about Black Ops
> Hanging around the local shops
> The street's no life but it is ours
> We go and play for hours and hours. (Karikis 2016)

and the place that the landscape might play in their future lives

> Hope to be sixty years old
> Thinking of days long ago
> Dreaming about the fun and pain
> Enjoying the times on the Isle of Grain. (Karikis 2016)

"The project reveals a way in which industrial sites are often re-imagined by youths with a form of spatial justice defined by friendship and play, the thrill of subverting authority and evading adult surveillance" (Karikis n.d.). But more than that, the film offers a different view of intimacy in the form of an invitation for the listening viewer to have an intimate experience with the six protagonists. It is difficult to say how this happens. On the one hand it is produced by their gender—we have a rare glimpse into the some of the things that matter to a small group of male adolescents, they have bared their experience and performed it to us, and it is presented in such a way that the sharp contrast between the physical "proto-masculine" adolescent swagger and bravado that they exhibit as they move through the landscape and the expressions on their faces as they look directly at us, the listening viewers, emphasizes their vulnerability. On the other hand, as they look as if speaking directly to us we both witness and partake in the obvious trust that they have built up with Karikis who is behind the camera. The result is that we feel that we have had an intimate exchange—they, working with Karikis, have managed to combine self-disclosure, emotional expression, physical expression, and their obvious closeness with Karikis, and this is transmitted through the work to us, giving us the impression and experience of having had a brief intimate experience with these boys.

Each of the works discussed in this chapter has dealt with some form of intimacy through the primary use of the voice or other body sounds. Although I have grouped the works discussed through the primary sound that they feature, the works share many things in common with each other. Through these works this selection of artists has at once critiqued and transgressed what can be said or sounded, particularly by women, in public space; revealed the commodified ubiquity and gendered nature of the oral expressions of sex in mediated pornography; invited us to make sense of and share the traumatic and sensual experiences of others who bare themselves and their feelings to us; and offered us new intimate perspectives on people. We, as listeners, have been invited into a variety of personal and public spaces, and offered or witnessed situations that have involved self-disclosure, mutual trust and validation, emotional expression, physical expression, closeness, and mutual experiences of intimacy, empathy, and acceptance.

11

Sonic Intimacies

The Sensory Status of Intimate Encounters in 3-D Sound Art

Sabine Feisst and Garth Paine

I am looking and listening—all around me—enjoying the flora and fauna at the Rio Verde, or Verde River, a large perennial stream running through the Tonto National Forest in Arizona. I am seeing the bright blue sky and from time to time the calls of small birds passing by is making me conscious of the wide-open sonic space that envelops me. I am surrounded by lots of willows, reeds, and cattails and I am listening to their voices: the gentle weeping of the willows and the delicate rustles of the reeds and cattails in the breeze. I am also witnessing voices coming from the ground: a chorus of humming crickets, occasionally punctuated by the soft sound patterns of human footsteps up on the sandy bank behind me. I am turning my attention to the murmuring river water, which is inhabited by such fish as the Gila chub, mosquitofish, and Sonora sucker. Sometimes I am hearing a splash of a fish jumping in the water. I am thoroughly present in this place, aware of the scale of place, and the density, and even the temperature of the air—until I am looking down and the absence of my feet from the sandy river bank is reminding me that I am actually not there—I have no feet, no legs and now I am realizing that I don't have arms and hands either—I am floating in this place. I am remotely present, wearing a virtual reality headset and a pair of high-quality headphones. The "Tonto National Forest Sojourn" (2013) is part of an ongoing series of virtual reality (VR) experiences, under the title *EcoRift*, that allow the audience to feel intimately present in pristine and remote natural environments—often not readily accessible to people.[1] *EcoRift* fuses two sensory domains, the visual through 360-degree photography and the auditory through a matching dynamic 3-D sound field created through high-order ambisonic field recordings. It invites the audience to turn away from their everyday surroundings and to have intimate, that is private, personal, and somatic responses to the environments they discover. Here art is no longer an object isolated from the audience for their individual or communal observation, but an immersive environment that is dynamic and affects its audience's body and mind in individual and different ways.

Such sound art forms for VR have offered new experiences for audiences that facilitate what the phenomenological philosopher Maurice Merleau-Ponty and, more recently, philosopher Don Ihde called embodied relations.[2] They involve audiences in a set of unique relationships with technology that leads to an embodied engagement with the world that could not occur without the technology. The special case for *embodied relations* is that we are momentarily not aware of the role of the technology that facilitates that interaction because we embody the technology. Traditionally such technologies as eyeglasses and walking sticks are commonly used by humans and easily incorporated into their body schema, and so we understand their phenomenology. The *EcoRift* VR experiences are a post-phenomenological example where the experience is mediated digitally and believably engages the user with environments not readily within reach.

When the Oculus Rift Kickstarter came online in 2012 and promised the development of full immersion in sight and sound via a VR headset, it was immediately obvious that a new approach to intimately experiencing places, otherwise inaccessible, would become possible. Upon delivery of the first Oculus Rift headset in 2013 we began to create content for this technology. We had been working with communities in national parks across the American Southwest to record the sounds of a series of sites each month in order to track climate impact. We had engaged local communities to monitor changes in the sonic environment and develop environmental stewardship in their local communities and had started to build a growing, publicly accessible sound archive of geo-located and geo-tagged high-quality field recordings.[3]

It soon became clear that we could also make VR captures of these places using 360-degree photography and video and ambisonic audio recording (360-degree spatial audio capture), and thus we started the *EcoRift* series of VR nature sojourns. At first it was necessary to hard-code these environmental experiences and, as Unity3D and other gaming development tools started to provide VR visual solutions, we teamed up with Blue Ripple sound (UK) to create ways to link ambisonic audio with the visual field. This process provided a groundbreaking experience—the calculation of the visual perspective and the listening perspective in real time so that the audience could receive full 360-degree auditory cues from the environment. This new version, featuring nature sojourns in American Southwest deserts, was launched at the 2014 conference South by Southwest Eco (SxSW) in Austin, Texas.

Sound, of course, tells us much about what is happening all around us—outside our restricted visual field. Our actions in the environment are often led by sound. We hear a bird and look around in order to see it. We hear car tires screeching outside our visual reference field and turn around to find out what is happening and to discover whether we are in danger. This process is referred to as sensory fusion. The fusion of the auditory and visual stimuli allows us to construct a sense of the world around us—even in our sleep.

VR offers a unique opportunity to explore and manipulate sensory fusion, sensory depth, and sensory breadth in an intimate way, because donning a VR viewer and headphones cuts some of our senses off from the outside world and presents us with a simulated world with us at its center.

Sensory Fusion

Two experiences of *EcoRift*'s nature sojourns brought this point home. In the initial developments we made two scenes for testing. One included an ambisonic recording made in Joshua Tree National Park, which is marked by a rocky desert landscape. At the initial development stage, imagery for this scene was not available, so we used a set of images from another location that was not dissimilar in its makeup of large rocks and gravel on the ground, but much smaller in scale. The recording was made in a wide-open valley, essentially a large-scale open space. We found that audiences sensed the difference between the visuals and the sound pertaining to scale. People asked if the sound and the imagery they were experiencing were from the same place. They sensed a disconnect between the auditory and visual domains. It was hard to understand what exactly they picked up on, but they understood that some qualities of the sound did not match the visual experience. These reactions point to a very highly refined human perceptual ability: (a) to seek out change and to understand the validity of sensory fusion taking place in the real world; (b) to sense distance and openness from reverberation characteristics; (c) to understand reverberation coming from harder or softer surfaces (as examples, a hard surface reflects more high frequencies and a soft surface, such as plant foliage, absorbs high frequencies); and (d) to match the aural data to what is being seen. These aspects show how our senses provide a global environmental awareness while also focusing in on specific local events. Again, sound tells us where specific events take place and how close they are to us. This is achieved through amplitude, frequency response, and reverberation.

A second learning experience in human sensory acuity in VR occurred after the recording of both the ambisonic sound and visuals at the edge of the Rio Verde in Arizona's Tonto National Forest. The audiovisual materials were formed into a VR scene and shared with a variety of users. Audiences then found that the closeness of the surrounding trees and sandbank behind the viewer conjured a claustrophobic feeling. Furthermore the audience did not find the VR scene credible because the horizon was too close and they failed to have a sense of the space beyond the close and immediate features. These reactions prompted us to rerecord and photograph the site with the recording only a few feet from the original so that a clearer sky could be seen and the "outside" perspective became more accessible. This small change in the perspective of the capture made a substantial difference in experience for users who now found the scene credible and enjoyed being remotely present at this site.

A continuing point of interest to *EcoRift*'s authors is a site captured in the Coconino National Forest in Northern Arizona. The scene places the audience on a large grassy plane with crickets jumping from tuft of grass to tuft of grass. It was recorded in the midst of the cricket-breeding season when large numbers of these insects flew, jumped, and chirped and provided fascinating and highly directional sound events around the listener. They quickly attuned listeners to the three-dimensional quality of the sonic space. The sound events also attune the audience to the various scales of perception available in such a VR scene, from the close and highly defined, fragile, and small-scale cricket sounds to

the wide-open horizon and the large, open, clear blue sky. After a few minutes in this environment, a crow flies across the sky from far right to far left. The crow is in the middle ground—not very close, but not really distant. The sound of the crow's wings are audible in this quiet environment and the call of the bird occurs regularly as the bird passes across the horizon.

The images used for this scene are fixed photographic images—stitched into a 360-degree environment and aligned with the compass direction of the sound recording. No bird appears in the static imagery, yet many people report seeing the bird flying across the sky. Even when told that there is not bird in the photograph, they continue to believe that they "see" the bird at the location where they hear the crow's vocalization.

Although formal experiments have not been undertaken, it has become clear that the 360-degree auditory cues play a very important role in convincing the audience that they are present in the remote and virtual place they are experiencing. The strength of this perception is underlined by the many users who look down and are surprised to find out that they do not have legs. This reaction suggests that they felt sufficiently present in the virtual environment to suspend disbelief, to understand from their immediate senses that they were indeed present—the discovery of missing arms and legs in the photography then comes as a surprise if not a shock.

Sensory Depth and Breadth

The *EcoRift* nature sojourn series (2013–) now comprises more than twenty sites in the American Southwest, Mexico, and Germany. In each instance audio footage of up to twenty minutes in length is paired with 360-degree photographic panoramas from the same locations to create aesthetically stimulating and flexible human perspectives. The sites include locations in Organ Pipe Cactus National Monument at the US-Mexico border, Joshua Tree National Park in California, the Beaver Creek Biosphere Reserve Watershed in central Arizona, the Mojave Desert National Preserve, the driest area in North America, and the Tonto and Coconino National Forests, both nature sanctuaries in Arizona with great biodiversity. While the idea of a virtual reality is commonly associated with technological hardware, artist-theorist Roy Ascott theorized in the early 1990s that nature

> is the first virtual reality—in which the pure data of an undifferentiated wholeness are programmed, shaped, and categorized according to our language, fears, and desires. We have always placed it in opposition—to culture, the city, technology. Its strength has lain in this opposition, as much a refuge as a force. But now the binary opposition of town and country, for example is disappearing.[4]

Ascott opined that, thanks to new telematic systems, "the country can no longer claim a hegemony of pure and authentic natural processes."[5] He proposed that artists working in the electronic space will ask "what nature might *become*?" and "how we interact with a proliferation of separate realities?"[6] The idea of a virtual reality that does not exist physically,

but in the form of a dream or imagination, for instance, may be as old as humankind. The concept appeared in print probably for the first time in Antonin Artaud's *Le Théâtre et son double* (1938) describing the illusory aspects of theater, its spaces, objects, and characters. It also appeared in Damien Brodrick's science fiction novel *The Judas Mandala* (1982) before it was popularized by Jaron Lanier and others in the technological realm in the late 1980s.[7]

Paine's *EcoRift* nature sojourns build on Ascott's ideas. He pondered whether in the foreseeable future, due to climate change, some forms of nature as we know them today may only be experienced in the form of time and space capsules in virtual reality archives.[8] In virtualizing sites in nature preserves, Paine transcends both Euclidian space and Newtonian time, whereby users can immerse themselves in these remote places instantly, be it for the purpose of intimate pleasure, relaxation, therapeutic benefits, or scientific observations.

EcoRift nature sojourns combine two media, visual and aural, but listening is the focus. As Ascott emphasized "the auditory space is more pervasive than the visual space in the electronic present" and "in the ratio of the senses," sound may come "to count for as much as the image."[9] Perhaps it may even count for more than the image as the ear can go where the eye cannot. The immersive static photography provides the listener with a mere visual context for sound. In the *EcoRift* series, still photography has been found preferable to moving images (which emphasize the sequential or successive character of the visual mode and were used in *EcoRift*'s developmental stages). In developing *EcoRift*, we found that, more often than not, video imagery was approached as visual task to be solved (finding and counting the animals in moving images), taking up most of a user's cognitive capacity. The value of the fixed visual image lies in the user's ability to explore active listening—paying attention to the interrelations between the visual and sonic worlds. Thanks to dynamic spatial binaural cues, the sensory experience can be self-directed by the user who is fully immersed in a representation of a place. The head tracking of the headset is linked to roll, pitch, and yaw varying the visual point of view and rotating the ambisonic sound field providing full 3-D auditory-visual cues. Listeners can move their heads to determine auditory spatial coordinates as they would experience them in the real world—in Ascott's words "the acoustic experience has become more focused as the environment becomes more intelligent and responsive to us."[10] Thus, unlike with other fixed media works, here listening and viewing are not limited by the artist's narrowly chosen aural and visual perspective, which often suggest linearity and narrativity. Here, in the words of Marshall McLuhan and Harley Parker, the user no longer has to "encounter all things through a rigorous storyline."[11] The audience freely carves their individual, intensely private perspectives from a given environment. Perhaps due to their vivid and temporal nature *EcoRift*'s sounds often prompt the impression of visual movement not actually represented in the photography.

Since 2014 *EcoRift* experiences have often been exhibited at national and state parks, museums, and festivals and audiences have commented on the deep immersion, intimacy, and strong sense of presence in these remote places afforded by the VR experiences— although they cannot sense them with their feet, hands, and skin.

   EcoRift's nature sojourns suggest the concepts "remote presence" and "telepresence," the latter advanced by cognitive scientist Marvin Minsky in the early 1980s when he discussed the "importance of high-quality sensory feedback" received by users of remote-control robots in an industrial environment.[12] If presence is the experience of one's surroundings mediated by "some or all sensory channels," telepresence implies the perception of a temporally and spatially remote environment that is in addition to one's physical surroundings and mediated, for instance, by VR technology. Telepresence is experienced when, thanks to powerful sensory stimuli, the remote environment takes precedence over one's physical environment.[13] *EcoRift* users often feel telepresent because they perceive the mediated environments as real, vivid, and rich due to sensory depth and breadth realized through craft and high-quality technology. Sensory depth in the auditory domain is achieved in that the high-order ambisonic sound field provides full 3-D auditory cues that respond to the user's movements via head tracking. For example, in the above described "Tonto National Forest Sojourn," the auditory scale of the site comprises ground-level sounds of crickets, human footsteps on the sandy bank behind the listener, and water in the river. The scale also includes sounds in the range of the upper human body and higher such as rustling trees and the sounds of small birds flying above. Sensory depth is also realized through carefully chosen human perspectives in the high-resolution photography (see Figure 11.1), which meticulously matches the sonic environment. Sensory breadth is accomplished by the combination of two domains, the auditory and visual.

   EcoRift is a work in progress. Further VR experiences are in the planning stages and will be made available online via Web VR technology as navigable 360-degree photographic panoramas with navigable spatial audio. In addition, we are working toward making it possible for people to create their own VR captures of places in nature they love to inhabit, as a way to share the personal importance of both preserving the impression of a site and
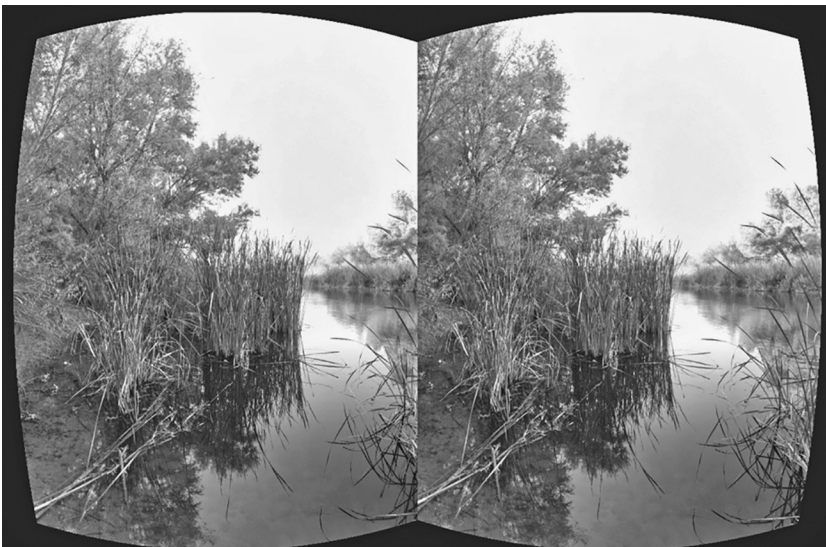
Figure 11.1 Photographic excerpt from *EcoRift*'s "Tonto National Forest Sojourn" (2013).

affording a sense of presence in that environment. One might ask if *EcoRift*'s desert sojourns are a kind of Nature II, and what listening to and being in nature might mean to present and future audiences. The portability and affordability of forthcoming stand-alone VR headsets support increasingly wide distribution and engagement with experiences such as *EcoRift* and may, in the longer term, contribute to a potential twenty-first-century return to participation in outdoor nature experiences. Conservation may also be served. *EcoRift* presents fragile sites—too fragile for human visitation—but virtually accessible to the public. Distant communities and mobility-impaired people can also become present in these places. We might argue that *EcoRift* democratizes access to those pristine places that are out of reach for many people. Furthermore the personal and communal benefits of being in such places are currently applied and tested in therapeutic, wellbeing, and ecological monitoring contexts.

Conclusion

The burgeoning VR market has contributed to great improvements of the VR headsets' technological quality and facilitates the proliferation of VR experiences, which promise to become a dynamic force in current and future artistic practice. When considering the emerging interactive art of the 1990s, Christa Sommerer and Laurent Mignonneau wrote that "the art work . . . is no longer a static object or a pre-defined multiple-choice interaction, but has become a process-like living system."[14] As far back as 1977, Myron Krueger stated that

> In the [responsive] environment, the participant is confronted with a completely new kind of experience. He is stripped of his informed expectations and forced to deal with the moment in its own terms. He is actively involved, discovering that his limbs have been given new meaning and that he can express himself in new ways. He does not simply admire the work of the artist; he shares in its creation.[15]

VR can be seen as an evolution of these earlier artistic practices. *EcoRift*'s nature sojourns can be understood as a collection of eminently intimate places where the user or audience become momentary creators of their own experience, of the artwork itself. The VR space is not one that simply documents or presents something, but a space that simultaneously allows for creation. It is an exploratory space affording intimate physical and mental experience at its core.

Steven Feld alluded to this moment when he discussed presence in the great rainforests of Papua New Guinea and the phenomenology of sensing place. He eloquently points to the recombinant nature of sensation and placemaking, saying: "as place is sensed, senses are placed; as places make senses, senses make place." Placemaking is a contract between environment and perceiver. The VR space is also a medium in which Feld's notion of acoustemology can be truly explored: "one's sonic way of knowing and being in the world"; both testing out and reveling in "how sounding and the sensual, bodily experiencing of sound is a special kind of knowing."[16]

This "special kind of knowing" is a crucial aspect in design considerations. It is possible to load the VR space with information, with interactive tasks, but we found that cognitive load is a critical consideration in how the designer leads the user to different kinds of experiences. We sought to direct the user's attention toward listening. Through listening we have found that the user experiences a sense of context and presence that affords the security to relax and appreciate the richness of these nature environs, often stereotyped by passing visitors as barren or "empty." In fact nothing could be more misleading—with time, these environments reveal themselves as rich with species, many at a scale not perceived when swiftly passing through them. As mentioned above, by contrast, when video was used to represent the visual world, we found that users saw animals and then turned the experience into a task, seeking out and counting birds and other animals, losing their overall sense of place, of presence, and, ergo, their sense of value of that environment. Our design objective has been to bring these valued natural environments to a broad audience, to democratize access, and to build a sense of stewardship, to defend and protect these nature sanctuaries from a position of personal experience, to understand something of what could be lost through climate change. How else can urban dwellers understand the value of these environments if they have never experienced them?

Critical to designing believable nature experiences is a consideration of interaction as an a priori condition, not one of scenes or states, but a continuous dynamic morphology of experience. The users' discovery of their explorations form into a kind of simulacra, a gestalt of all states that form a common perception of the environment. However, they are able to use their gaze to navigate through new environments, so they understand the mediated experience as a kind of portal into a collection of experiences comprising *EcoRift* and its interactive potential. The quality of their haptic/sensory engagement with the interface (their directed gaze), the feedback loop formed by somatosensory and listening phenomena, forms a techno-somatic dimension[17] that informs and shapes both the elements it links (user and technological mediation) and, through an awareness and sensitivity to the potential and latent agency of the relationship, between *soma* and *techne*, a materiality can be defined that is fluid, viscous, and porous, inviting the user to be present, to suspend disbelief and to feel free to venture across the globe and revel in the wonders and value of these often overlooked natural environments.

Intruders Touching You

Intimate Encounters in Audio

Holger Schulze

I am alone with this woman now. I do not know her. I was assigned a place to sit down and told how to behave. The door has been closed. Firmly. She is sitting somewhere in the back of the long concrete room we are in. The lights are low. I feel, well, slightly uncomfortable. I feel insecure, a bit aroused, frankly, but also anxious, under pressure, sensing some expectations of correct or appropriate behavior on my part. Is this situation coercing me into awkward interactions, maybe personal, even intimate activities with a person with whom I would, well, not feel too comfortable to interact? Am I now a sort of intruder here?

Now the woman turns to a cassette player. She looks closely at the controls, at the tape, putting the tape carefully in—I am now more imagining, reimagining all these details I experienced earlier, much earlier. She pushes the right button and music starts to play.

Today, when I started writing this, I no longer really remember how I actually got there, to that place, to that woman. I do not even remember how and where I read the announcement for it. It might have been an online announcement, maybe in a mailing-list, as this was still the preferred means of dissemination for public events in the first decade of the 2000s. Or did I simply pick up a flyer at some other gallery opening or club night? I really do not remember anymore.

My wife and I decided to attend the performance on the day, I believe it was a Friday afternoon. Beforehand we had to sign up to a list and decide when to make the appointment, a fixed time frame of maybe around twenty minutes or so? Then we went to the location. We waited a bit, in a room before the other room. We were not really sure what to expect. I remember that we knew at least that the performance we would attend was a solo in a double sense: a performance by a solo performer for a solo audience member. So, after the previous audience member left the room, I was invited to come in and take a seat; I was the next on the list.

When I try to remember this performance now, twelve years later, I have a hard time remembering the specific elements of it in their precise order. I do not even remember a lot

of specific details about the room in which this performance took place. Also, I do not really recall the costume the performer wore, nor do I remember the precise sequence of actions and movements the performer executed. Now, while such selective memory loss is an example of a rather common phenomenon regarding the analysis of individual performances, it becomes even more of an issue if there is, as there in this case, hardly any documentation in any form, let alone a recording or even a score for this kind of performance. Whereas other performances can be documented on video or maybe through reviews and writings, in the area of theater studies or art history, this is almost impossible in this case—and not simply because of the ephemeral character of such performances. In the case of highly individualized performances for an audience of one, the only individuals who could document and record this performance would be the performer and the one audience member; but if neither performer nor audience member record anything, there will be no documentation in the material sense. There remains only the memory of the sensory traces, the sonic traces, the experiential effects this performance had on the participant and the performer. These remaining and scarce sonic and sensory traces I—having been a participant—can still recall, and thus I try to follow them here in my writing, in my tiny and growingly intense *sonic fiction*,[1] my sensory fiction.

Coming back to this intense and somewhat undefined situation of me sitting on a chair and awaiting a solo performance, to be performed specifically for me, I recall mainly this insecurity—as always with a mix of various desires, absurdist scenarios of extreme transgression, as well as horrifying and petrifying fears regarding exactly the same scenarios, transgressions, and coercions. Before I entered the room, I had to choose a musical piece from a long list. On this list, if I remember correctly, were various shorter classical pieces and jazz pieces, mostly songs and tracks rather than longer suites, as well as some recently released music. On that day, I chose a quite frank song. A song that really spoke to me and had touched me many times before; it was my intention to experience what the performer would make out of this. I chose the song *Maps* by the band Yeah Yeah Yeahs: "Pack up; I'm strayed. Enough. Oh say say say, oh say say say, oh say say say, oh say say say, oh say say say" (Yeah Yeah Yeahs 2003, track 9). What did I expect? Why did the performer put this song on the list? And what happened next?

Delimiting: *For You* by Julie Tolentino

In August 2006, Julie Tolentino began a performance series in Berlin that lasted for eight days. The performer danced the whole day and the gallery space was turned into her personal living room and bedroom. Previously, Tolentino had worked together with performers such as Bob Flanagan, Ron Athjey, and Madonna; before and after this performance series she focused on various queer and feminist projects, recently for instance the performances *.bury.me.fiercely.* (2018), *After the Future* (2017), and *Raised by Wolves* (2013). The performance series of 2006 offered an individual performance for only one audience member and, as such, thus represented an extreme form of performance, as the audience member taking part in this performance does not know beforehand what

awaits her or him. Because there cannot be the usual gossip or definitive reviews afterward (as the performance can always be different next time), there is a less fixed and more open, perhaps also anxious and insecure, set of expectations on the side of an audience member. On the other side, the performer, Julie Tolentino, is more in charge as she can more freely decide how to shape and tailor the performance for each individual audience member. By inviting visitors into her space, she is also somehow becoming an invited intruder into their intimate spaces.

> Behind a membrane made of thick, transparent plastic strips, which is often used as dust and temperature protection in industrial warehouses and production halls, stands a simple, white bed in which the performer sleeps in an almost empty room bathed in bluish light. While a video projection shows erratic impressions from nocturnal tunnel journeys, and a soundtrack composed by the artist spreads its own, utterly distinctive, atmosphere, the registered visitors are permitted take a seat on the bed (Anders 2006, 108, my translation).

Whereas in traditional performance settings, the performer might feel on the weaker side of the stage as he or she needs to perform accurately and impactfully in order to achieve the satisfaction in the audience that will grant him or her the desired accolades, the applause, and the praise afterward, here the balance of power is inverted. Through the narrowing of the audience size to one spectator, the performer is no longer the focus of attention but rather the audience member. He or she is the one who will be insecure and unsure of what to expect. He or she will be visiting, will be doubtful about what to expect, and will likely constantly be reflecting on whether or not he or she has gone about things in the right way. Are they standing in the right place in the right way? Are they sitting on the right piece of furniture, at the right and expected distance from the performer? In this case, the performer is in charge. She is very familiar with the location, its props and design, its furniture, and how the performance may or may not proceed. She is in charge of everything that is to happen in this room. It is virtually her performance home for the time she decided to offer these performances on a daily basis.

Therefore I, as the only witness to the performance I attended, cannot speak for all the other performances by Julie Tolentino in this space experienced by other visitors. They might be rather similar. They might be radically different. They might only be slightly different. Or they might consist of some similar elements (movements, statements, sequences, lighting, staging)—slightly or radically changing between performances. As a single audience member, I simply do not know. I am left in the dark. And with my experience of this performance in the year 2006 now buried under all these other memories, thoughts, and experiences I have had since, it is an almost ridiculous task to try to remember what I experienced then. This is more like a task of invention to reproduce my long-forgotten experiences from the knowledge I have now of the performer—and from my current research interest in certain aspects of performativity and sound art.

> It begins identically for each visitor—but it ends differently: depending on the piece of music individually selected when registering for this private performance, to which Tolentino will move at the end of the performance (Anders 2006, 108, my translation).

Such an intimate performative encounter of such a blurred and easily unsettling character, though, is at the same time one of its defining traits and also part of its aesthetic challenges and goals. This is the specific and insurmountable challenge that connects ethnographic research and its accounts with the issues faced by any performance analysis: The temporality and presence of the researcher in the ephemeral situation is necessary to do research at all; yet it is precisely the ephemeral character of the situation and the necessity to take actually part, to perform the almost impossible double task of participation and observation at, more or less, the same time that brings research to its limits.

So, what did I supposedly experience in the year 2006? I remember, as narrated in the introduction to this chapter, foremost an affect of insecurity and of being lost in the not-yet-familiar format of this cultural artifact, the *One-on-One-Performance*, the *Performance for One Audience Member*. This insecurity, this lability of my self-perception, this being anxious and uneasy, is characteristic of the undefined framework of this performance experience. Will I attend a sort of theater piece? Will I be subjected to a transgressive happening? Will the course of the upcoming performance be defined solely by my reactions, my expectations, my actions, inactions, articulations, or movements? Or will the performer follow a strict score of dance moves and performative actions? I am unsure what to expect. Yet, this account of an audience member's insecurity is part now of this performance analysis: It is, supposedly, also the material with which the performer works.

This precarious situation and the radically shaped relation between performer and audience member in this case leads to the second characteristic of the performance: the corporeal proximity. The tangible closeness to the performer also makes an audience member aware of their corporeal experience, their sense of the situation, of the state their body is in right now, of their desires, fears, obsessions, aversions: the *felt sense* (Gendlin 1992; Schulze 2018, 145–50). It is not so much that the performance takes place only on a stage or a more distant dance floor. To the contrary, the performance also takes place in the corporeal sensibilities of the audience member, their *sensory corpus* (Schulze 2018, 136–59). The performer is legitimately invited to perform this intrusion. While this might indeed take place in any sort of performance, it becomes crucial and generative for such an intimate performance.

The performer and the audience member are not in a public or semipublic situation. This unusual framing makes most people rather uncomfortable as they are forced into an intimate situation with an unknown person. But this framing also generates unusual effects. This is a situation that opens up a variety of fears and expectations in its participants; it is an *intimate* situation if we follow the more recent reflections on intimacy by François Jullien. Jullien states that the concept of intimacy needs to be regarded as specifically European as it embodies an almost eschatological promise of existential transformation: "the revelation of a possible infinity within the innermost self [. . .] the possibility of overturning or a great change" (Jullien 2013, 69, my translation). This transformation is fostered precisely by an unsettling, sometimes disturbing, but surely also alluring and attractive encounter with another person: To encounter the "other," the other as such and

unique: the other who, because at first perceived as completely outside, through his penetration into our inner space brings to light an inner being of oneself and from then on serves as the only reliable basis of this "self" (Jullien 2013, 69, translated by Holger Schulze)).

Obviously, this sensation and desire is—in the situation just described—probably also triggered by the framing of a performance being "For you!" and by the songs to be selected. The song I selected focuses on this even more, "Maps" by the Yeah Yeah Yeahs, written and performed by Brian Chase and Karen Lee Orzolek, including the lines: "Wait—they don't love you like I love you" and "Oh say, say, say!" (Yeah Yeah Yeahs 2003, track 9).

Disorienting: *The Walks* of Janet Cardiff and Georges Bures Miller

Janet Cardiff started her works on the *Walks* in 1991 with *Forest Walk*, an audio walk in which she narrates a certain situation that someone listening to this sort of artistic audio guide might encounter. One listens to the voice of Cardiff and one is guided into the imagination of this artist and the actual, material, and situated environment at the same time. This amalgamation of imagination and materiality, of situatedness and reflection, remains the core of these experiences and the reason for the lasting impression these pieces had, and continue to have, on their listeners—and viewers, in the case of the later *video walks* that she started to work on in 1999: between 1991 and 2014 she produced and exhibited nineteen audio and six video walks. Through their composition as dense, multilayered sensory experiences, these pieces achieve a presence and a connection to the audience that other pieces do not often achieve. A viewer or listener is actually drawn into the very situation that was being recorded and filmed—and they indeed are able not only to imagine themselves being and acting in this situation, but they are also, in some way, actually teleported by the presence of all these sounds and sights. Presence here is not a merely conceptual framework, but an actual lived experience. An experience that is at the same time alienating as it is epiphanic and exceptional or even erratic.

One classic video walk is the *Alter Bahnhof Video Walk* from 2012, recorded and staged in Kassel, Germany: the city of the *documenta* exhibitions, recurring every four or five years, as a sort of overview of the state of the arts from a global perspective. This video walk is also produced for *documenta (13)*—and the Alter Bahnhof (Old Train Station) is one of the venues where the *documenta* stages the works of this exhibition. Being a prominent location for presentations intended for the global art market, the "art world" (Danto 1964; Dickie 1969) and the critical discourse on art and aesthetics, the city of Kassel, and even more so this old train station, frames any artwork filmed or staged there in a special way. Therefore the production of a video walk as well as the reception, the perception, and corporeal experience and assimilation of this video walk

obtains a specific mixture of expectations, experiences, and effects. The bodily experience of artist and viewer or listener are disjointed—yet in experiencing the resulting artifact, the video walk, it intensifies the experience. Janet Cardiff conceives and produces her works together with Georges Bures Miller, in the form of an *artist couple*; and when they are "recording and quite often talking along with the walking" (Walsh and Enright 2001), the situation of production and the recording of the production seems as one: though, actually, the conceiving of such a walk is obviously done in advance and then recreated for the recording device. This disjoint becomes then even stronger regarding gender and clothing and footwear, as Janet Cardiff explicates when asked who does the recording, who holds the camera: George does. I can't handle it. He wears girl's shoes so they sound like my shoes. . . . you have this woman's voice saying, okay, turn to the left, and you assume the footsteps you hear are hers, but they're actually his (Cardiff, in Walsh and Enright 2001).

While it is a common experience by visitors or viewers to become entirely immersed in these video walks and thus to assume that one would experience the situation depicted by the recording precisely as the artist, Janet Cardiff, would have experienced it, it is this core element of the experience that is a prepreparedand carefully staged and manufactured form of intimacy. Cardiff also is an intruder into the imagination and the intimacy of a viewer and listener. This experience of intimacy is, on the one hand, prearranged in a similar way to a score. One is inspired by visiting the site earlier and developing events, encounters, observations to be narrated and staged for the spectator and the listener. The site and its idiosyncrasies, its specific material and its historical and topographical qualities provide the material Cardiff works with. Or, in her own words: "The site gives me ideas" (Cardiff, in Walsh and Enright 2001). In some cases—as in *Alter Bahnhof* 2012 or *Ghost Machine* from 2005—certain estranging and fantastic events and encounters are staged and prearranged for the video recording; in other cases (e.g. in the first *Forest Walk* 1991, *Münster Walk* 1997, or the *Jena Walk* 2006) it is Cardiff's vocal narration and sometimes even the artificial recreation of a whole environment—as in *The Muriel Lake Incident* from 1999—that actually creates a specific environment for the audience. So, it is not easy to say what strategy the artists pursue here: do they cover the audiovisual recordings of an environment with their imaginations to connect with an audience—or do they use this environment as a stage to present their imaginations? Both can be the case and maybe both are the case, their strategy oscillating between both approaches. This very ambiguity contributes to the prolific energy and inspiration that radiates from these pieces.

Also, the technology they use is intrusive and corporeally anchored. They use a binaural recording system with an artificial head, or *Kunstkopf*, for these audio and video walks to record the sonic experience in situ. An artificial head allows for the recording of sound events with the angle, reflections, spatial orientation, and even at least some formants of human bone conduction that characterize corporeal humanoid listening. This recording device then produces recorded sound artifacts that can be listened to with headphones in a way to make it seem as if the sounds actually occurred in the vicinity of the listener. It is

still the most corporeally intensive and situated sound-reproduction technology today, despite being patented in 1925 and used widely in radio productions during the 1970s. While this technology is intended and actually manages to situate a listener right in the actual location where a radio play or audio recording took place, Cardiff and Miller use it to disorient, to deterritorialize, and to subvert the listeners wish to be in charge of his or her listening experience. This is especially the case with the video walks. The double exposure of experiencing corporeally, kinaesthetically, proprioceptively a certain environment, on the one hand and, on the other hand, seeing on screen and hearing on headphones other activities and other sound events taking place in precisely this same physical environment—this paradoxical overlay generates an amalgamated experience out of imagination and material reality that is not easy to synthesize for the audience. The synthesis is willfully subverted and frustrated by the artists, so you are more fully aware of this double nature of this work:

> the video walks, where people are concentrating on the screen and what's happening there, become the reality and the real world becomes secondary . . . it's very disorienting; it's not just off there. Our whole body has become part of it (Walsh and Enright 2001).

Listening to these walks, even more so watching and attending to the video walks, one indeed experiences a deep vertigo effect: one can feel the ground shaking. My knees started to shake, I felt nauseous and trembled. The ground slipped beneath my feet. While these are, at their core, understood to be audio works, or audiovisual works, these video walks are effectively kinaesthetic and tactile works:

> This tactile enactment can be said to mobilize the *Alter Bahnhof Video Walk*'s walker insofar as those who undertake the video walk are asked to move their eyes, head, and body to take in what is around them and not simply rely on internal representations of the world (Ross 2013, 218).

Whereas a video work usually can only represent an environment visually and sonically, the spatial entanglement the viewer, listener, and walker experiences is actually a corporeal event of extraordinary intensity. "Spatial concepts are born in kinaesthesia and in our correlative capacity to think in movement" (Sheets-Johnstone 2010, 167). This intensity though is, obviously, a highly constructed one:

> I like the idea that we are building a simulated experience in the attempt to make people feel more connected to real life (Georges Bures Miller, in Wayne Baerwaldt 2001, 142).

The continuous movement, the kinaesthetic and mimetic relation that needs to be established when attending a video walk/performance on a video screen, this bond, generates a specific and intimate predisposition. Jullien describes this predisposition toward intimacy as follows:

> In the intimate, in the intermediate zone opened by it, everyone is inseparably active-passive . . . by opening a common field of shared intentionality that maintains tension with the other, everyone gets lost (Jullien 2013, 186, my translation).

Sexualizing: The Artifacts of Audioporn

You hear a rustling, very slightly. Not far away, too close almost. Almost unbearably close. A slight groan, it gets stronger; now other materials can be heard, clothing, furniture, jewelry; they are set in motion, rhythmically—immediately you might recall sounds of the most bizarre porn productions of the 1960s or 1970s: Squeaky bedsteads, dull blows on eiderdowns and on skin. But then, almost inaudibly, a quiet breathing, a moan, a sigh. You seem to hear the sweating, the wheezing, almost whispering, and then breathing again of someone, their eager and longing movements. As soon as one's body is addressed and constantly up-front in personal reflection through sound, the desires and vulnerabilities, the lacks, and the fears are also on display, constantly. You can hear these desires and you immediately, mimetically, recall your embodied sexual desires and experiences. You might even tend to perform them in your body. The complex, intricate, powerful, and often quite unsettling sexual encounters are teleported into your body and your experience, almost immediately. A true corporeal intrusion takes place here.

At this very moment, however, I am looking at and listening to a gray, not very animating website. A long list of audio files are on offer here with titles such as: *French Canadian Couple Anal*, *French couple with sex, moans and shivers*, *College kids fucking*, *Masturbating multiple orgasms*, *Cute boy moans*, or *Quiet Girl*. None of these files is adorned by a meaningful, arousing, or obscene picture, as would be expected on pages that provide pornographic images or movies. We see gradient bars, stylized keys for starting and pausing the sounds; the background is beige, close to a light skin color, violet standard fonts are used for all the titles. The almost neutrally descriptive filenames and their presentation are as reduced as the recordings presented. At the same time, they focus on the constituents that are apparently crucial for a certain sexual preference or fetish. The genre presented here is known by the name of *audioporn*.

In the early twenty-first century, pornography research has now been flourishing for over a decade, and exemplary of this is the journal *Porn Studies*, founded in 2014. The visual language of pornography, the patterns of narration and of non-narration regarding the depicted sexual acts, the mere functionalities of amateur porn websites and Point of View-Virtual-Reality applications, today determine large parts of the everyday life of web users much more than they are perhaps willing to admit. The continuous everyday patterns of life revolving around pornography, its distribution, its production, and not the least the lifelong trained and skillful self-practices and refined pleasures of its selection and consumption, all of this needs to be acknowledged as a fundamental core constituent of (at least) modern and contemporary anthropology. Yet, while the undeniable force of pornography, in general, as a major driver of a global economy and culture, and especially the development of ever more sophisticated web services, must be regarded as a given fact of research (Williams 2004; Jacobs, Janssen and Pasquinelli 2007; Taormino et al. 2013; Smith, Attwood, and McNair 2018), the subsection of audioporn still seems like a pariah, if not a more quirky and forlorn stepbrother of *videoporn*. Indeed, the latter requires no

epithet because this is what porn is mostly thought of as being these days: visually arousing and sexually exciting depiction of all sorts of sexual practices, including all sorts of fetishes and deviant desires.

The area of audioporn has, nevertheless, developed in recent years—with the help of ubiquitously and cheaply available technology and distribution media. However, this scene still operates far below the level of the large industrial companies of the traditional porn industry and the more recent porn-hosting platforms and at best can only fantasize about their gigantic profit margins. Hobby podcasters and amateur video makers still dominate audioporn today. The corresponding websites therefore resemble more private archives than consumer services. Barely designed, with little advertising, and hardly monetarized, only a few of the pages are au fait with the classic pornographic language of file descriptions and the visual tropes of videoporn: images of naked women, often with headphones, stories of inexhaustible sexual desire of women, and the obviously inexhaustible erectile ability of men. Largely, heterosexual scenarios are addressed with rather bleak but usually materially exact filenames such as: *Double vaginal*, *Sound of Creampie*, *fingers . . .*, *"God, you run out,"* *Lingam-Massage*. Sometimes framed by the situated sexual activity such as *Fucking Myself With My Toy*, *Monday Morning Sex*, and the usual and unusual abbreviations for relevant sexual practices and keywords attached (e.g. "[Wet sounds] [Moaning] [Whispering] [Orgasm] [Short]"; "[F4M] [GFE] [French Accent] [Intimate] [Quickie] [Riding] [Blowjob] [Kisses] [L-bombs] [Sensual] [Whispers] [Gentle Moans] [Heavy Breathing] [Half Asleep] [Appreciation] [Cum Inside Me] [L-Bombs] [Orgasm]").

The sounds are less staged—aside from the occasional male or female actor voice who performs a monologue in a pulp fiction style. The sounds of sexual activities without any visual representation are closer to a form of documentation than to a glossy staging. Often they bear a great similarity to recordings in physiological or medical studies. The recordings truly make the sonic traces of sexual activities audible; be they executed alone, with one or more partners. But are listeners attracted, aroused, or even sexually triggered by these recordings?

Following the observations and reflections regarding the kinaesthetics, the material transduction, and the mimetic disorientation in the previous sections of this chapter, it seems safe to say: the intimate situations of closeness, of undefined and open relations, and of a kinaesthetic bonding provide ways of relating to one another in a more moving sense. In all these cases, the body and the voice of an artist—here, a female artist's— carries the viewer and listener into these situations. The situations themselves provide then the grounds for a sonic transduction along the lines of sonic materialism, encounters that resembles a sort of *sonic flux*, that is the notion of sound as an immemorial material flow to which human expressions contribute but that precedes and exceeds those expressions (Cox 2018, 2).

This interpersonal and even transpersonal sonic transduction is a corporeal, again a kinaesthetic, and a resonating transduction. It is an effect of a physiologically, a tactile, an interoceptive resonance that, obviously, is triggered by erotic and sexual mimesis. A listener hears these sexual activities, and if they are not too clichéd or too stylized, then they

recognize, remember, and physiologically and imaginatively reenact certain similar, comparable, or completely unrelated sexual acts. The buried sensory memories, sexual memories as well as memories of desire and longing, are rematerialized in the body of the listener. I felt this desire then. It is undeniable that this desire here also longs for a "revelation of a possible infinity within the innermost self [. . .] the possibility of overturning or a great change" (Jullien 2013, 69, my translation).

Affecting: The *Audio Smut* of Kaitlin Prest, Mitra Kaboli, Sharon Mashihi, Phoebe Wang, and Jen Ng

Between 2015 and 2017, Kaitlin Prest and her four collaborators Mitra Kaboli, Sharon Mashihi, Phoebe Wang, and Jen Ng produced and presented the award-winning podcast *The Heart*. In these three years they published, all in all, sixty-five episodes. The individual episodes are between a bit over four minutes (e.g. "mr claus + mrs claus,"[2] published December 23, 2015) and almost forty-seven minutes long ("hands on the wheel," May 19, 2016). Most of the regular episodes though are around ten to fifteen minutes long. The prehistory of *The Heart* began in 2008 with a "radical sex positive podcast" by Kaitlin Prest, called *Audio Smut*, a radio show from McGill University's campus radio CKUT 90.3 FM in Montréal. *The Heart* then won several awards: it was Peabody Finalist 2017, won the Third Coast International Audio Award for Best Doc 2016, and the Prix Italia 2015. While Kaitlin Prest served as the head of this whole endeavor, one must acknowledge that the impressive achievements of this podcast are the result of a collective effort, bringing together the minds, crafts, skills, and imaginations of five women. Yet, the driving force of *The Heart* remains a certain quest. In the last sentence, I enjoyed playing with the multiple meanings of this word, the heart, which can serve in this context as the reference to the podcast series as well as a reference to the metaphor for sensibilities and affects. This play with the layers of meanings and references stands at the start of every single podcast episode. Kaitlin Prest says the words: "Welcome! To The Heart."

As a listener, one immediately understands that Prest is welcoming the audience to this episode of the podcast—and at the same time she is also inviting them to join the complexities and intricacies, the idiosyncrasies and absurdities of affection and sensibilities. Intrusion is desired. The podcast starts, hence, with this ambiguous switch between a formal gesture and an intimate opening. The individual episodes then investigate "intimacy and humanity" from the perspective of a "community of badass writers, radio makers and artists who make personal documentary work about their bodies and their loves." The nine seasons of *The Heart* focus, for example, on an adolescent's doubts about how quickly to proceed into a sexual relationship, on unsettling and repressed memories of childhood abuse, on the fears and errant movements in and around an intimate, a romantic, or an exclusively sexual relationship. And each individual episode stages an encounter between

the author, the protagonists, and the listeners. The protagonist is often the author and her friends, lovers, partners, or acquaintances—but also other guests and collaborators are at the center of the episodes. This encounter is then even more enhanced by the listening situation that consumers often choose for such a podcast: most of the listeners indeed listen to such a delicately produced and sonically intriguing podcast on headphones—be it at the desk, on the couch, or while exercising, or running, or cooking. The situation is then already an intimate one: the narrator is calmly or even tenderly speaking if not whispering in my ears, shortly after I have been enraptured and affected by a driving soundtrack, some orchestral excerpts, a repetitive ambient piece or the many sounds of a recording situation, throwing me with my entire imaginary listening body, my sensory corpus, right into the situation where the original audio was recorded. The vocals play a strong role in this, but also the whole sound design and the podcast's dramaturgy carry a promise of the intimate:

> The amplified voice through podcasting as an intimate aural medium carries with it the possibilities for a deep affective experience for both the creator and the listener. The sound of one's voice carries with it traces of age, sex, gender, sexuality, culture and many more facets of collective and individual identity (Copeland 2018, 209).

The encounter with *The Heart* is an intimate encounter—yet definitely not solely in the pornographic sense that now has so much influence on the concept of intimacy. Obviously, intimacy always enters the area of highly desired and fearful self-reflection including, without doubt, a large part of one's sexual persona, sexual experiences, ambivalences, and desires. Nevertheless, they do not necessarily constitute the only center of an intimate encounter. The intimate in these situations is, to the contrary, performed more along the lines of the reflections by François Jullien. He understands the concept of the intimate as a genuine European one, a term

> in which 'the innermost essence of' and 'an intimate relationship with' find each other, i.e. where the deepening of one's own inner being simultaneously proves to be an access to the other (Jullien 2013, 46f., my translation).

While this might seem trivial in the context of European culture and thinking, this is not so much a triviality regarding the multiplicity of cultures and societies. This experience of the intimate, the concept, and the desires around it, the fear of exposing oneself to the wrong audience or listener, and, at the same time, the wish to find out if this audience and this listener might also desire to hear and perform a similar intimate encounter—all of this is genuine and definitely not a transcultural and not an ahistorical concept. Even more so, the specificities of performing and experiencing an intimate encounter become an issue for *The Heart*. Maybe it is the central heart-related issue. The producers of *The Heart* focus on precisely such intimate encounters—and they manage to create them, to keep one's attention, and also to guide one from more comfortable and pleasurable sections of an episode into the most unsettling and fear-inducing sections through material effects. These are the sound practices I would like to focus on toward the end of this chapter.

Each episode of *The Heart* combines a sequence and also an amalgamation of various sound sources and production techniques. Most of the time it presents some narration—by

Kaitlin Prest—over music. Allusions to the corpus of Hollywood soundtracks as well as interjected sound effects and incidental audio (e.g. of footsteps, laughter, water at the shore, groups of people . . .) accompany the narration. It is often unclear if these recordings are actually original footage, if they are staged, or recorded later. Sometimes Prest's voice enacts a bit of vocal mimicking, approaching a diversity of different gender roles and timbres. The collective around Prest also uses original footage, voices of other speakers. The main sound source is, though, an almost unending, constant stream of music playing underneath the narrating voices. This stream only stops when original footage—to which the introductory parts of an episode guide the listener—is played. This footage is then left raw. Without any soundtrack or music. The sugarcoating of soundtrack-like music always leads the listener to these rough and shameful, painful and unsettling passages. Long passages of original documentary footage accompanied only by Prest's calm, precise, and largely diagnostic, if not analytic, voice. She performs a sensible, a friendly, and compassionate analytic.

The tone of Kaitlin Prest's voice is therefore the tone of reflection, enriched with undertones of doubtful self-confession, now and then, and also of daring and risky confession at times. This vocal performance is, apparently, trained by examples of comparable voice tones in US radio, calmly yet sensibly narrating the story of a documentary. The voice performs not in an intensely agitated way, it does not perform extreme hesitation or excitement: these modes of vocal performance are often left to the voices in the original footage. The role of the vocals on the earlier versions of this podcast, the radio show *Audio Smut*, performed more in these extreme registers. The small review *The Heart* released before it went on a break after 2017, documents the range of vocal tones, sound effects, and musical choices so characteristic of the early podcast. However on *The Heart,* it is not the voice of the contributor, or the sound effects, or the soundtracks that incessantly touch the listener. All of these sound events provide the environment in which the listener can focus on the stories told. They lure me in, they induce in me a wish to focus, to listen, concentrated, but serenely, to those speaking about their intimate self-reflections, opening up to us, the audience, and hence making me ready for an intimate encounter of self-reflection:

> The things you whisper. The things you do in the dark . . . or light. The things you feel but you don't know how to name. This is a radio show about all of those things. It's about the triumphs and the terrors of human intimacy, the bliss and banality of being in love, and the wild diversity of the human heart. (The Heart Radio 2014)

Sonic Extimacy: Material Encounters with Sonic Personae

While listening one might encounter another in an intimate way. This can also take place, obviously, when employing visual or textual means of expression. However the time-based structure, the relational and highly responsive dynamics, as well as the rather

closely corporeal source of many of the sounds one articulates as a humanoid alien, all of this brings an encounter through sonic performativity very close to an intimate encounter: two sonic personae encounter their individual specimen of corporeal performativity—through sound. Though this *sonic intimacy* (Pettmann 2017) is also constantly performed through one's voice, including articulations of agency and intention, its affective effects are not reducible to vocal performativity and not the least to articulated propositional sentences. Grunts and moans, stuttering, and insecure coughs, and the whole spectrum of mouth-pitched and body-pitched noises is contributing to an intimate sonic performativity.

But how can *sonic personae* (Schulze 2018), who are represented and articulated in these performed and recorded sounds, encounter each other at all? And how then is an encounter that enters the realm of the intimate at all possible? The artifacts and artworks discussed in this chapter perform and demonstrate a number of aspects of intimacy. This spectrum now allows us to excavate the specific qualities in these interpersonal and mediated encounters. Whereas Tolentino's performance aims at a *delimiting* of a relation between performer and audience member, the performance artworks of Cardiff and Miller provide a *disorienting* of their audiences, both through specific sound practices (Maier 2012, 2020); the various examples from the field of audioporn promote, unsurprisingly but indeed corporeally and materially, quite an intriguing and pervasive *sexualizing* of all sorts of sounds and noises, of *sonic traces* (Schulze 2018, 111–12) and of *sonic bodies* (Henriques 2011). Finally, the example of Kaitlen Prest's podcast, *The Heart*, includes and transcends my understanding of all of the aforementioned approaches and strategies regarding intimacy. Prest promotes a sort of *affecting* through sound that delimits and disorients at times, through means of overly close and kinaesthetically challenging sound productions as well as through a sexualizing of all sorts of sounds, which could serve as an ideal demonstration of the effects addressed by sonic materialism: These sounds do not challenge our hermeneutic desire, yet they definitely challenge our sensibility and corporeal imagination. We might not search for their overall and comprehensively metaphysical meaning. But we are most definitely touched by them, physically, personally, even intimately, and this experience brings us into a state that can be as surprising as it is unsettling and even desired. We feel the materialization and the existence of our

> contingent body of perception, the 'sensible sentient' that sees and hears not a positive, transcendental object separate from itself, but perceives things through their common simultaneity within the world. The fleshly body sees things through being seen and touches itself touching others (Voegelin 2014, 128).

Listening to these sound artworks and artifacts one experiences oneself as *fleshly body*— and this encounter with oneself is already almost a massive intrusion, performed by the producers and performers of these pieces. Yet, the moment of intrusion even goes one crucial step further, as these sound works also demand your contribution as a listener, bringing in all your kinaesthetic memories and experiences regarding specific erotic or sexual experiences, encounters, and practices. This all gets actualized and addressed in these pieces. At this point, it might become necessary even to drop the rather often misconceived and easily misunderstood term of intimacy for another term. The term

extimacy—as proposed by Jacques Lacan—seems to cover indeed more accurately the experiences related to these encounters. With this term Lacan is basically rejecting and going beyond the traditional psychological distinction between exteriority and psychic interiority or intimacy (Pavón-Cuéllar 2014, 661).

One's sonic encounters with Julie Tolentino or with Kaitlin Prest are indeed "intimate to us while being exterior at the same time" (Pavón-Cuéllar 2014). This double character conceptualizes the event of being touched and being physiologically addressed that is at the core of many theoretical approaches to sonic materialism, to interpersonal events of intimacy, and to material, sensory experiences (Cox 2011, 2012; Voegelin 2012; Schulze 2018). It is precisely this *extimate experience* of an encounter that is, at the same time, intensely personal, intimate, and nothing to share, all taking place within a cultural form, an artifact, or a social situation that is thoroughly public, or at least semipublic, that marks the quality of these sound works. They are intrusive in a way that seems to further one's understanding of sensibilities, of self-perception, and of all sorts of intimate relations to other sonic personae. One could regard these works as yet another way to demonstrate and to embody the famous *Uses of the Erotic*, claimed by Audre Lorde in the late 1970s, as a "well of replenishing and provocative force" (Lorde 1984, 88). Sonic personae are actualized, materialized, and, indeed, replenished through such intrusive encounters.

Part IV

De-Institutionalize!
Institutional Critique as Sound Art

13

Inquiring into the Hack

New Sonic and Institutional Practices by Pauline Oliveros, Pussy Riot, and Goodiepal

Sharon Stewart

We are the hackers of abstraction. We produce new concepts, new perceptions, new sensations, hacked out of raw data. Whatever code we hack, be it programming language, poetic language, math or music, curves or colorings, we are the abstracters of new worlds.

<div align="right">McKenzie Wark, A Hacker Manifesto (2004) [002][1]</div>

Multiplicity extends into all these dimensions of instituting, as far as possible into all the folds of the spatial surfaces and temporal continua: there is the multiplicity dispersed over a plane, which is condensed and composed in the moment of instituting (event, incision, break), and there is the continual multiplication of instituting along a timeline (stream, process, persistence).

<div align="right">Gerald Raunig, "Instituent Theatre" (2016, 15)</div>

Pauline Oliveros, Pussy Riot, and Goodiepal[2]—artists, activists, and artistic identities. Each uses sound, albeit revealing widely diverse sonic signatures, as a primary tool to abstract new territories—often through sociomusical acts—within extant social and political structures, within music industries and digital platforms, among communities. Each of these artist(ic bodie)s takes the institutions in which they are embedded and finds ways of folding the inside toward the outside: blowing bubbles of radical transformation within the institutes, from which the innovative event emerges and the social is constructed.

In order to combine these three highly divergent artist(ic bodie)s and their work within a textual fabric that remains somehow coherent, I will be weaving with the concepts of hacking and instituent practice. With hacking I'll be shuttling back, to the origins of the term in the 1960s, and forth, to the hack as an act of abstraction within current vectoralist societies, as conveyed in McKenzie Wark's *A Hacker Manifesto*, extending an invitation for us to revel in the hack(er)'s nature to engage in the "relentless abstraction of the world [. . .]. Abstraction may be discovered or produced,

may be material or immaterial, but abstraction is what every hack produces and affirms. To abstract is to construct a plane upon which otherwise different and unrelated matters may be brought into many possible relations" (Wark 2004, [002], [008]). If the notion of hacking is the weft yarn, then the warp yarn would be the idea of instituent practice, as developed in Gerald Raunig's contribution to the publication *Turn, Turtle! Reenacting the Institute*. Developing from Antonio Negri's concept of constituent power (1999), which ostensibly rejects any philosophy resulting in an institutionalist outcome, Raunig nonetheless outlines what instituent practice might be, a self-instituting that "goes through two temporalities that also make up its two components: on the one hand the component of what is evental in the instituting, on the other the component of persistence, of insisting on repeatedly starting again." This multiplication of and perpetuation of the event of instituting is the essence of an instituent practice that continually forestalls "an authoritarian mode of institution" and works against "the closing (in) of the institution" (Raunig 2016, 15–17; see also Raunig 2007).

The field of sonic engagement—musical affect, vibration, and waves—is in continual flux, and we are always already engaging with this continual emergence. Perhaps even retroactively, if you accept the Black Quantum Future (BQF) paradigm of time, rooted in Afro-diasporian perceptions and experiences of time, as "assumed to be perfectly symmetrical," the enfolded potential of events lying within each point in spacetime, offering a "moment/nanosecond of collapse when future reaches back to blend into the present" (Phillips 2015, 25, 19). We emerge continually with the music-tech teme machines (Blackmore 2009) that shape our bodymind, resonating from and through us, from and through others, including our mediated forms. Our thoughts, sensations, doings— exchanges with (un)fixed moments of positioning, gridding, or being gridded—"emerge" for a moment within the "processual indeterminacy" (Massumi 2002, 8–9); our manifestations of these exchanges deposit object-statements in the empirical field. When I undergo the transformations that sound enacts in me while collaboratively performing a *Sonic Meditation* by Pauline Oliveros, when I hear Goodiepal say "I believe every single number is alive" (Goodiepal 2008, 1:09:57), when I wince at the soil striking the faces of Masha and Nadya as they are buried alive in Pussy Riot's *I Can't Breathe* (2015), when I engage with the various media, platforms, voices, images, texts, I also enter an "*environmental mode of awareness*," open to the "making-felt of a co-compositional force that does not yet seek to distinguish between human and nonhuman, subject and object, emphasizing instead an immediacy of mutual action, an associated milieu of their emergent relation" (Manning and Massumi 2014, 6).

In the coming paragraphs I will be investigating various works—or performative sites— of Pauline Oliveros, Pussy Riot, and Goodiepal, teasing out what happens when these works are examined in terms of hacking, abstracting new planes of interaction, and instituent practice: the incision, the break, and the persistent perpetuation and multiplication of the event of instituting.

I am writing this while we are still moving.

Inquiring into the Hack

Hacking most likely developed on the campus of the Massachusetts Institute for Technology (MIT) in the 1960s. Students at the electrical engineering labs performed pranks, termed "hacks" at MIT, and gradually these inventive, secretly created, and publicly presented pranks migrated through the practice of electrical engineering to be expressed primarily through computing, demonstrated through virtuosity with code (Wark 2006; MacManus 2012). Besides virtuosity, the hack needed to demonstrate a certain style and recognition of shared goals among peers: an awareness of the need for information to pass freely in this competitive social and academic process. "Hacking was at once an aesthetic and an ethic, in which cooperation among hackers was achieved through their mutual desire for recognition, achieved via improvements or modifications to each other's programming code" (Wark 2006, 320–1).

Jérôme Rastit, cofounder of Hacker House Startup Marseille, was very explicit in stating (private conversation, December 31, 2017) that the hackers he works with see hacking primarily as a way of restructuring the use of an object or code or cleverly hiding information that someone else needs to discover, operating according to a deep curiosity of how information systems work with an underlying conviction that information should be free to flow. Breaking into private or corporate computers or systems for the purpose of inflicting damage or for personal gain is understood in these circles as pirating or cracking, not hacking (see also van Busch 2015; Bazzichelli 2013). In an interview with Melissa Gregg, Wark states: "'To hack' has always been an ambivalent term—that's what I like about it," noting that the term is opening up at the bottom, with its associated vocabulary being used in "all kinds of creation, re-purposing, garage projects, and so on," thus becoming one of the "few images we have of what the new kinds of labor might be now" (Wark 2013, n.p.).

"Any domain of nature may yield the virtual. By abstracting from nature, hacking produces the possibility of another nature, a second nature, a third nature, natures to infinity, doubling and redoubling" (Wark 2004, [075]). How did sound and human musicking (term introduced by Christopher Small in *Musicking*, 1998), become available for the hacker? If we agree with a "core tenet of bio-musicology," that "musicality is deeply rooted in human biology, in a form that is typical of our species and broadly shared by members of all human cultures" (Fitch 2015, n.p.), then music-making abilities, or musicality, have (pre)historically developed as part of the intrinsic "nature" of human beings, both *ontogenetically* (developing throughout the life of an individual human organism) as well as *phylogenetically* (as part of the human evolutionary history of acquisition and modification of this trait). Considering the more recent development of sound reproduction and its subsequent digitalization, in which ways is this "natural" musicking being hacked to provide a virtual layer of information and data; what potential is offered by current musical forms and their production and dissemination systems?

As Jonathan Sterne points out and amply illustrates in *The Audible Past* (2003), the historical development of sound-reproduction technologies did not move forward with an a priori understanding or knowledge of the possibility of *transducing* sound waves—converting the energy of the sound waves into another form—for transferal or storage, to be followed by a subsequent, perhaps immediate, *transduction* back again into audible sound waves. What was necessary for this was a historical process of "isolation and reproduction of the tympanic function" in which the "functioning of the tympanic membrane (also known as the diaphragm or the eardrum) in the human ear [became] the model for the diaphragms in all subsequent sound-reproduction technologies" (Sterne 2003, 22). It took significant experimentation throughout the late eighteenth century and the nineteenth in order to develop a conceptualization of hearing as "a mechanical function that could be isolated and abstracted from the other senses and the human body itself" (Sterne 2003, 23). Whereas many philosophies of sound had "considered their object through a particular, idealized instance such as speech or music," the "notion of frequency took hold in nineteenth-century physics, acoustics, otology, and physiology," and speech or music were reduced to "special cases of the general phenomenon of sound" (Sterne 2003, 23). The technological developments that afforded recorded sound, synthesized sound, and the digitalization of sound were inextricably intertwined with historical and cultural developments that enabled the conceptualization of sound waves as a thing in themselves—an abstraction—that could be transduced into another form and back again. To get where we are today, which was not necessarily a given, the process of invention both turned to and simultaneously invented the tympanic function of the ear as model for both "listening" device—a microphone membrane—and, surprisingly enough, the "loudspeaking" device—the membrane of the vibrating cone or diaphragm of a speaker. Alexander Graham Bell and Clarence Blake, among others, hacked the human ear (see, for example, the description of their ear phonautograph from 1874 [Sterne 2003, 31–33]). Frequencies, sound waves, and even the idea of hearing as an isolated function were abstracted from the natural, embedded hearing and listening sensorium of the human body, and this virtuality, the potentiality of the listening human ear, became available for development, sharing, and eventual commodification into sonic property.

With sound waves conceptually and technically abstracted as sonic material, they become available for combination with all manner of synthesized sounds and effects in the act of creating sonic works. In her book *Listening through the Noise* (2010)—which presents an aesthetic theory of experimental electronic music since 1980—Joanna Demers emphasizes the extent to which this concept of sound as material has developed within the genres she addresses, stating that "the origins of sound" in electronica do not matter as "much as the metaphors that portray sound as malleable material, the product of construction, reproduction, or destruction" (Demers 2010, 14). Further, she presents genre as "a sort of social contract between musicians and listeners, a set of conventions that can more or less guide the listening experience," drawing upon what she understands as a premise of Theodor Adorno's *Aesthetic Theory* (1997), "that musical material engages in a dialectic with surrounding society, never completely reflective while never completely

autonomous, either" (1997, 10–11). What is of importance here is that, as many authors before me have stated in various ways (in relation to art worlds in general: Becker 1982; Bourdieu 1980; Wolff 1987; and to music improvisation in particular: Cobussen 2017), a live or online sonic experience is a multidimensional exchange among: the sound itself in a particular acoustic space—including headphones and earbuds—and the actual listening possibilities; the person, group, and/or institute, all along the production chain, who make the listening experience possible; the technology that affords the sonic experience; the historical relationships of all actants—including the nonhuman—within the listening exchange; and the association of the sonic work with other sonic works, events, writings, visual representations, and any remakes, remixes, or rip-offs; etc. As you might imagine, each of these realms offers possibilities for a hack, for an abstraction of the virtuality that the various relationships and their differences provide.

> To the hacker there is always a surplus of possibility expressed in what is actual, the surplus of the virtual. This is the inexhaustible domain of what is real but not actual, what is not but which may become. [. . .] The nature of any and every domain may be hacked. It is in the nature of hacking to discover freely, to invent freely, to create and produce freely. But it is not in the nature of hacking itself to exploit the abstractions thus produced. (Wark 2004, [074], [075])

If YouTube, SoundCloud, Bandcamp, Audiomack, iTunes, Tidal, Google Play, Vimeo, and Spotify are some of the most obvious (Western-oriented) online abstractions of music production companies—relying on the hack of Internet and social media—that support the commodification of sound works and enable, to a greater or lesser degree, the artist's own distribution of their own sound as well as access to the value that that online sound-presence creates, then what becomes interesting is what can be further abstracted from the virtuality of these platforms. A hack might not only extract information regarding the potential reach of these systems, in terms of numbers, but is also aware of the profiles of fans, knowledge of which allows the artist to play upon popular tropes and marketing strategies, if desired, in order to reach particular audiences with an extramusical message. This requires walking a very fine line between using and hacking the system while being understood by fans as remaining artistically authentic, if that is what is desired. As I will present further in this chapter, I observe that one part of the artistic entity called Pussy Riot consciously uses the framework of a highly polished YouTube production in order to create space for a political and social dialogue; that Pauline Oliveros has assumed partial control of the publication of her work through the Deep Listening Publications (label) as well as generating an artistic practice that, as process, continually and successfully defies commodification; and that Goodiepal has generated an assemblage of hacks, from traditional music property hacks, outrageous repetition of the most mundane electronic music tropes, institutional hacks, and hacks that continually challenge the concept of property or monetary exchange.

Sonic work, musical labor, hacking of the music production industry . . . to what end? Calling forth activism, building community, or simply opening up a field of possibility?

When Is it a Hack?

When is a performative act a hack? When is a score a hack? When is educational material concerning computer music a hack?

On February 21, 2012, five members of Pussy Riot, plus videographers to film the action, entered the Russian Orthodox Cathedral of Christ the Saviour in Moscow and, at a certain moment, climbed onto the soleas and began performing their "punk prayer." The Punk Prayer opens with a melodic hymn-like chorus, "Virgin Mary, Mother of God, put Putin away" sung by a pious-sounding choir, which suddenly transitions to the punk-style—belted and screamed, accompanied by drum and electric guitar—verses, which textually weave oppressive agents and acts of the political state of Russia with overtly religious speech, all of which is summed up as "Shit, shit, the Lord's shit" (Freedom Requires Wings 2012).[3] As many writers have pointed out, this punk-punctuated simulated act of worship was in no way banal hooliganism; their text details, using precisely chosen language, a web of immoral and corrupt relations between the Russian Orthodox Church and the Committee for State Security (KGB), including the Church's blessing on Putin's access to the country's corporate wealth and a plea to the Virgin Mary to take on her role as a feminist (Tayler 2012, n.p.). One might say that Pussy Riot employed a simulation of worship in their act of protest that—when considered in terms of values considered to be at the core of Christianity, such as the rejection of worldly goods or power—revealed itself to be more authentic than the accepted rites of worship.

This performative act, a simulated act of worship, exposed the hegemonic sacred as less holy than the seriously sacrilegious. Punk was hacked to become a vehicle for sacred revelations, and the church's soleas was hacked as the site of a new feminist liturgy. Perhaps functioning similarly to Baudrillard's simulated hold-up (Baudrillard 1988, 178), this act had to be pulled forcefully into the real—defined by the Khamovniki Moscow District Court as hooliganism motivated by religious hatred (Criminal Code of the Russian Federation, Article 213, Section 2, Columbia University 2012, n.p.)—in order to be tried and punished by the repressive apparatus; otherwise it would reveal the impotence of law and order. "Parody makes obedience and transgression equivalent, and that is the most serious crime, since it *cancels out the difference upon which the law is based*" (Columbia University 2012, emphasis in original). Additionally, the song was performed on the dynamic site of the Cathedral of Christ the Saviour—consecrated in 1883, dynamited in a Soviet public spectacle in 1931, allocated as site of an open-air swimming pool under Khrushchev, and finally resurrected by Mayor Luzhkov in the 1990s, complete with a parking lot and gift shop. Considered as a social hack, the claiming of a new possibility for this cathedral's space and function occurred by means of conflating architectural scandal with performative scandal—"the cathedral itself is the incarnation of scandal; in its designs, redesigns, demolitions and reconstructions, it is not just an appropriate site for conceptual art—it is conceptual art performed in extremely slow motion; it is not just a site of scandal, to many it is itself a scandal" (Borenstein 2014, n.p.)—just long enough for identities to come under question, perhaps even long enough to set some people thinking, permanently.

For a few hectic moments that realized their full potential in the press coverage that followed, Pussy Riot hacked the virtuality of this contested site and took their place as the most logical and worthy heiresses.

From 1967 to 1981 Pauline Oliveros taught at the University of California, San Diego (UCSD). She included a course for the general student called The Nature of Music, and she headed the university's Center for Music Experiment from 1976 to 1979. In the late 1960s and early 1970s, impacted by the violence and social unrest of American society, the assassination of Martin Luther King Jr., the atrocities of the Vietnam War, and the self-immolation of a student on the campus plaza of UCSD, Oliveros turned toward an introspective moving, listening, and sounding practice, shaping the text scores that came to be called *Sonic Meditations*. In her own words:

> I became more and more interested in listening to sounds rather than in manipulating sounds. I discovered that interesting changes occurred in long sounds if they were present long enough. Not only that, I could feel my physiology responding in ways that I liked. I began to be calmer in the midst of the terrible effects of violence in the world. I somehow realized that I was crossing into new territory. I started to work with breath rhythms and long tones. It occurred to me that this was meditation. (Oliveros [1984] 2015, 184)

But this "returning to very basic ways of sounding" was not only a solitary act. Motivated by a desire for "people to be able to have significant experiences with sound in a communal way" (Barry 2013, n.p.), Oliveros developed her *Sonic Meditations* through active iterations of practice and sharing with two groups. The first was the ♀ Ensemble, a group of women graduate students at UCSD who met weekly from 1970 to 1972 for nonverbal evening meetings in Oliveros's home, engaging in "kinetic awareness" exercises and a selection of text scores (Mockus 2008, 39–41). The second group consisted of twenty participants for her nine-week Meditation Project at UCSD during the winter of 1973.[4] The group of participants, both musicians and nonmusicians, engaged in daily two-hour explorations "of mental and physical exercises in concentration (or attention) and awareness, in their relationship to the techniques of rehearsal and performance of music" (Oliveros [1984] 2015, 158) in order to develop receptivity.

In the light of the above, I would like to focus on the *Sonic Meditations* as an influential hack of the Western concept of musical score. The arc of the Western process of notating music, as it is generally taught, emerges from the ocean of prehistoric and ancient sound; becomes systemized through Greek thought; solidifies through the various systems of shorthand for notating Catholic plainchant to oratorios, Protestant psalms to chorales and Passions; acquiesces itself to the consolidation of a standard instrumentarium for orchestra as well as the various scientific developments that imposed standardization on the exact frequencies of pitches, including the (de)tuning of the entire tonal system as well as the precise temporal placement of notes; and somewhat implodes or explodes with the hyper-precise—in terms of dynamics, pitch placement, and metronomic accuracy—traditional scores of the early 1900s.

Alongside these developments functions the governance or disciplining of Western musical notation. In its inscription, traditional Western notation has involved a process of

abstracting sound into a graphical, symbolic language, whose symbols need to be retranslated into sound-producing actions or gestures in order to be rendered audible (as music). The process of arriving at an accepted interpretation of these notational abstractions implied by a score was, and still largely is, embedded in long-standing cultural and institutional systems of governance—moving through the church and the royal courts into the modern conservatory—that evaluate the production of music from notation, disciplinary structures that extract, so to speak, proper music and its performance, rarefying it from the noise of our daily environments.

However, the twentieth century brought further technical developments—the most relevant here being the third and fourth wave of data-driven computational modeling and audio recording devices, oscillators, and sound synthesizers of all generations, analogue to digital—which, as alluded to above, led to a requestioning of the boundaries between music and the rest of our sonic environment. This new instrumentarium, both reproductive and generative, also demanded the creative reworking or deconstruction of the traditional score by all means possible: graphic scores,[5] Fluxus event scores, aleatoric scores, text scores for improvisation, the burning of pianos, or the playing of cities.[6] With the further development of computing, artificial intelligence (AI), and electronic music, the paradigms for imagining computationally driven scores are continually evolving, and the divide between noise, ambient sound, sonic works, and music has been bridged and contested in countless ways for several decennia now.

Pauline Oliveros's *Sonic Meditations*, published by Smith Publications, entered the field of musical works in 1974. While Oliveros had worked and composed within some of the top electronic music studios of her day and had been developing the Expanded Instrument System (EIS), an evolving electronic sound-processing environment, since 1965, these works were remarkably direct and often technology-bare. They often took place outside or relied on carefully constructed indoor lighting and sonic environments. They often included the imagining of sounds or the mental dwelling on a single tone. Some included telepathic transmission of sound, mind-to-mind improvisation across the globe or interstellar. The virtuality of the score was hacked. Rather than using the score as a vehicle to transfer a sonic construct that could be measured or externally analyzed—governed according to some aesthetic standards—the score became a vehicle for exploring more internal and intersocial questions, the unfathomable workings of perception and consciousness, questions also addressed by then-extant scientific and psychological experiments and research. These *Sonic Meditations* and her life practice, which she came to refer to as Deep Listening®, were concerned with listening to listening, with developing as many ways as possible to understand and reflect upon the workings of the individual's perception—most often explored within a group or community—of sound and (musical) reaction to sound.

Of *Teach Yourself to Fly, Sonic Meditation I*, Oliveros asks, "Is it possible to observe the breath cycle without disturbing it? [. . .] Perhaps participation in *Teach Yourself to Fly* is to experience Heisenberg's principle of uncertainty" (Oliveros [1984] 2015, 150). In a later talk from 1978, "Software for People," she discusses the "two major modes of human processing as attention archetypes": "Sequential, or Linear, Processing, which involves

focal attention; and Parallel, or Non-Linear, Processing, which involves global, or diffuse, attention," complementary processes that are both "necessary for survival and for success in our activities" (Oliveros [1984] 2015, 185). Pieces such as *Willowbrook Generations* (1977) drew upon a report within Ulric Neisser's *Cognitive Psychology* (1967) and addressed reaction time: allowing the performer to practice complete mental openness in the face of a significant musical challenge—nearly immediate tone production response to a cue— and observe the body react according to which neural pathway the stimulus initiated a response from, either traveling through the brain—taking more time—or through the motor center—more direct (Oliveros [1984] 2015, 187).

Oliveros's work returned again and again to phenomenological explorations, experiments in how the ear-body relates to the vibratory world, examining sound/silence and spatial relations, the difference between hearing and listening, multidimensional listening, and the impact of listening habits as well as our imagination and memory on our immediate and contingent listening experience (Oliveros 2005, 15). While she was certainly not the only musician busy with sonic explorations of mind, sonic material, space, and time— Alvin Lucier and Bernhard Leitner immediately come to mind—through the scope and reach of her text scores, Oliveros performed an irreversible hack of the musical score. The score became, also, a vehicle for explorations of perception and self-reflective processes of sonic interaction with other humans and environmental actors.

The Sonic Hacker in a Vectoralist Society

How does the above tie in with McKenzie Wark's view of the hacker as the new laboring class within vectoralist societies? In *The Hacker Manifesto* we read that, just as geological earth-space was abstracted into the concept of a parcel of land— the privatization of property, an agricultural hack—that allowed the landowners, the pastoralist class, to glean the profits from those who worked the lands; just as raw materials and the means for their production—including the commodified life and time of the worker—were abstracted into factories and consumer products whose surplus value, profit, was gleaned by the capitalists; so, in the information age, ideas, knowledge, systems, insights, models of poiesis and praxis, etc., are abstracted by hackers, the laborers, who, in turn, hand over (with more or less resistance) the value extracted from their work—its surplus profit—to the emergent ruling class of our time, the vectoralist class, who control the centers of information production and the streams of its dissemination (Wark 2004, [026]–[031]). "That the vectoralist class has replaced capital as the dominant exploiting class can be seen in the form that the leading corporations take. [. . .] Their power lies in monopolizing intellectual property—patents, copyrights and trademarks—and the means of reproducing their value—the vectors of communication" (Wark 2004, [032]).

Of course, the story is not so clear-cut or universal as I present here, and Wark's presentation of his thoughts as a manifesto explicitly asks for flexibility and ingenuity in

the application of the ideas presented. That being said, each of the artist(ic bodie)s mentioned here has maneuvered within and explicitly negotiated with the systems in our vectoral world. In 1970 Pauline Oliveros's *New York Times* article—"And Don't Call Them 'Lady' Composers"—jolted the music establishment with its demand both for acknowledgment of the artistic contributions of women as well as the programming of new music (Oliveros [1984] 2015, 48–9). One of her works in her *Anthology of Text Scores* is a humorous, handwritten "IMPORTANT NOTICE" parody of an advertisement section, which includes all manner of musical wordplays and allusions to the attachment of value, or not, to creative musical output (Oliveros 2013, 13). Oliveros also established independent platforms—such as Deep Listening Publications—to publish her works and support other artists, complaining, "The innovative composer finds herself in the minor stream because publishers have long jammed the music world with old music [. . .] Must we be a bunch of musical pack rats?" (Oliveros 2015 [1984], 99).

In the process of carving out an activist identity—extracting themselves from their more secondary roles within the art group Voina and transitioning through a single conference appearance as Pisya Riot—Pussy Riot soon realized that besides hitting the streets, (online) media was the place where they needed to stake out territory and launch their counteroffensive to the prevailing constructs of the Russian police state. They created their first viral clip "Free the Cobblestones" in November of 2011 and made sure that each action was followed by timed and orchestrated video or photo releases under their control, leading to magazine interviews and photo shoots (Gessen 2014). As of mid-2018, YouTube views of their clips rose from a few hundred thousand for "Free the Cobblestones," released on the YouTube channel *Гараджа Матвеева* (Garadzha Matveeva or Matveeva's Garage), to a few million views for "CHAIKA" and "Make America Great Again," released on YouTube channel *wearepussyriot*, ostensibly under the artistic leadership of Nadya Tolokonnikova. Of course, YouTube views in no way indicates or guarantees that a similar number of people grasp the intricacies of an artist's message, yet it can, as I will propose in more detail later, function as a freely available platform and an opening within society, especially a society in which media channels are monopolized by the state—a superimposition of the state onto the vectoralist class—to convey a message.

Unlike the artists mentioned in the previous paragraphs, Goodiepal often specifically identifies what he is busy with as hacking, and his approach to and distribution of (non-) musical artifacts continually reveals and explicitly presents challenges to the vectoralist systems dominating the global exchanges of popular music production as well as state-funded and prioritized channels of art knowledge dissemination, such as museums, art schools, conservatories, or academies. Taking advantage of a position on the Faroe Islands, outside the copyright-enforcing reach of the European Union, he created the *Brand Archive* series entirely from stolen sound files burned on DVDs. In an interview with journalist Aram Yardumian he says that his "musical output is so cheap and so stereotypical that people don't consider it music" and that he is "looking deeply into musical cliché, turning it inside out and thereby maybe coming up with something maybe worthwhile—like turning a plastic bag inside out" (Yardumian 2012a, n.p.). This repurposing of library samples or marketing jingles can be heard as a direct confrontation

with the homogeneity and conformity within pop music and its enslavement to commercial interests.

Directly related to this topic is Goodiepal's *Mort Aux Vaches Ekstra Extra*, a sonic tour de force designed to help the electronic musician break free from the dogmas of the computer music and media art educational industry. The entire 1 hr 21 min 10 sec, educational musico-verbal work is embedded in a field of background music that is designed to be "a cliché of computer music" that reveals to us "the state of computer music!," "the metaphors!," the stereo-normative, 4/4 beat-anchoring gridlock of the digital audio workstations (DAWs) that have become the tools that define music production norms, their parameters becoming "the shape that we have fitted all our ideas into" (MAVEE 2009, 3:33). There is a moment in *Mort Aux Vaches Ekstra Extra* (MAVEE 2009, 39:13–43:00) when—following a long and vocally dynamic explanation of the background, concept, and ways to hack his educational program so you can get all the materials for free—Goodiepal switches to something like an American accent and starts talking business, claiming that the musical objects that are made should sell quite easily, reimbursing the participant for any money expended on the educational program. What might be heard within this moment, embedded within frenetic background beats, vocalizing, and laughter, is a sort of implosion of all the voices that demand for the monetization of musical and artistic output: artists themselves, record labels, Spotify and Apple Music artist cuts, festival contracts, music recording contracts, teachers and institutions who feel obliged to train students to somehow survive financially after their studies, collaborative art agreements, music awards, costs of file hosting, royalties for radio or TV, commissions, etc. One part of the painful joke here is that everyone realizes that for quite a while now "[p]atents and copyrights all end up in the hands, not of their creators, but of a vectoralist class that owns the means of realizing the value of these abstractions" (Wark 2004, [021]). The other part is that music, like air, seems to be something that most people expect to breathe for free, and perhaps rightly so, leading us to Goodiepal's underlying question: "And do you actually, ha ha, believe in the concept of money, anyhow?" (MAVEE 2009, 40:30).

Within that implosion I also hear the echoes of the implosion of Goodiepal's identity as a certain kind of electronic musician. In fact, since this sonic work was released in despair (WFMU 2012, 45:00) in 2009, much has emerged to back up his statement "*Jeg er ikke musiker*" (I am not a musician) (TGE 2017, 3:34). His inability to relate to or step into the environmentally damaging life of a high-profile "rocker"—flying from one continent to another for a festival, being taxied from hotel to venue to bar to hotel, and flying back after a couple of days—led him to stop flying and build his velomobile and transhuman form *Kommunal Klon Komputer 2* to travel and meet friends. This led to a more nomadic lifestyle and the subsequent and performative giving away of his possessions at the 2012 transmediale festival (transmediale/art&digitalculture 2012) as well as the book *El Camino Del Hardcore—Rejsen Til Nordens Indre* (2012), which in turn led to a permanent exhibition of his creations at the National Gallery of Denmark (Statens Museum for Kunst) in 2014 (Bruun 2014), which he later decided to use as a storage base for his personal belongings once the museum started charging entrance fees (TGE 2017, 53:00). As he says while showing filmmaker Sami Sänpäkkilä what it is like following the correct procedure to gain

access to his belongings within the museum: "Institutions around art are reaching the point where they no longer make any sense. The protection of artworks is so much bigger than the actual collection. Then the protection and the guarding of the artworks become the real art and not the works themselves" (TGE 2017, 56:21). Each of these performative actions is a hack, drawing upon the virtuality of a work and its multiple points of attachment to and within a larger system.

Before I turn to a broader introduction of Goodiepal as an artist and what I frame as an institutional hack of the Royal Academy of Music in Aarhus, I consider, below, the spaces opened up by the sonic works of Pussy Riot and Pauline Oliveros: mediated and corporeal spaces for the potentialities of interaction, community, and activism.

The "Space of Appearance"—Institutional Emergence

In September 2011, philosopher Judith Butler held a lecture entitled "Bodies in Alliance and the Politics of the Street" at the 54th Venice Biennale for "The State of Things," organized by the Office for Contemporary Art Norway. In this talk she offers a theoretical consideration of "the body" in relation to the Occupy movement—most specifically referring to the occupation of Tahrir Square—discussing how "space and location are created through plural action," critically examining Hannah Arendt's "space of appearance" (Arendt 1958, 198–9) in terms of the theoretical divide between the private (given) body and the public (active) body and noting that the (live-streamed) body at risk at a scene of opposition and violence is at risk specifically due to its access to media and its threat to the "hegemonic control over which images travel, and which do not" (Butler 2011, n.p.). In the following paragraphs, these ideas have inspired my thinking with regard to the artistic manifestations of Pussy Riot and Pauline Oliveros and the "space of appearance" they co-create with their audiences and how this space creates new playing fields for challenging institutions: "No one body establishes the space of appearance, but this action, this performative exercise happens only 'between' bodies, in a space that constitutes the gap between my own body and another's. In this way, my body does not act alone, when it acts politically. Indeed, the action emerged from the 'between'" (Butler 2011, n.p.).

Who is Pussy Riot? Before their appearance at the Cathedral of Christ the Saviour, as mentioned above, Pussy Riot had appeared with their brightly colored balaclavas and tights in a handful of street-based, situationist-like guerrilla performances that were met with enthusiastic, not implying purely positive, media attention. Drawing inspiration from the riot grrrl movement of the 1990s, Pussy Riot emerged as an anonymous fake punk band whose dress and tactics could be assumed by other women anywhere in the world. Performing "Free the Cobblestones" on top of an electric bus and in metro stations; crashing a fashion show for "Kropotkin-Vodka," which was also shouted out in stylish boutiques and on top of a luxury car's Plexiglas case; bellowing "Death to the jails,

freedom to the protests" on top of a garage across from Special Detention Centre Number One, where activists and leaders of opposition groups were being held in the days following the Snow Revolution of 2011; and appearing on the Lobnoye Mesto on the Red Square (Gessen 2014)—Pussy Riot was always performing illegally and always recording, and all their uploads can still be viewed, with the exception of "Pussy Riot—Punk Prayer," on the YouTube channel *Гараджа Матвеева*. Pussy Riot inhabited both Moscow's public space as well as global digital space, and the necessity of creating digital records and traces was considered vital. In a joint interview with Marina Abramović for *TimesTalks*, Tolokonnikova states:

> Imagery, of course, is really important. Documentation is really important. Uploading things on Internet is fucking, super important, especially if you are living in a country like Russia where [. . .] all your documentation can be taken away from you, just in a second. All our artworks were stolen from us by our investigators, and our judges, and a policeman, but we still have something on YouTube, so it can be a good lesson. (Tolokonnikova and Abramovic 2018, 49:26)

Russian opposition leader Alexei Navalny concurs: "Probably you can call me a person of the Internet [. . .] It was a lifesaver not just for me but everyone else who suddenly found themselves under censorship" (Kim 2018, n.p.).

The anonymous nature of the group was disrupted by the trial mentioned above and the ensuing rise to worldwide notoriety of the three women involved: Katya Samutsevich, Nadya Tolokonnikova, and Maria Alyokhina,[7] whose names and faces had become, perhaps irreversibly, superimposed upon the identity of the group. While Samutsevich's sentence was suspended in October 2012, Tolokonnikova and Alyokhina remained imprisoned for nearly two years, to be released on December 23, 2013, as the Olympic games at Sochi approached. Upon leaving prison, where both had at various times turned to hunger strikes to bring attention to the mistreatment of their fellow prisoners, they set up the NGO Zona Prava (*Зона Права*, Justice Zone), which "provid[es] legal and informational support to prisoners and criminal defendants" (website Zona Prava, EN), and in 2014 they launched MediaZona (Медиазона), an alternative news agency, now highly successful, dedicated to providing independent information on and awareness about injustices in Russia's courts, law enforcement system, and prison system. Of this work, Alyokhina says "It's a huge responsibility. But it must be done, otherwise everything else was in vain" (Alyokhina 2016, 3:44). Tolokonnikova said at a LOGIN conference on digital empowerment, "A lot of people accuse us right now of building institutions. Yes, we are trying to build institutions. And I think that the real punk right now in Russia is to build free and independent institutions. We are doing it through social networks, we are doing it through [online] media" (Tolokonnikova 2016, 7:42).

However, even the membership of Tolokonnikova and Alyokhina within Pussy Riot became contested in February of 2014, following their appearance at an Amnesty concert, when anonymous members published a letter on the official Pussy Riot blog stating that the involvement of the two with institutions and paid concerts was in direct conflict with the all-female, separatist, anti-capitalist, anonymous identity of the group whose appearances should always be illegal and freely distributed (Pussy Riot 2014, n.p.).

Tolokonnikova and Alyokhina rejected the claims of this letter at the time (Michaels 2014, n.p.), however, by 2016 Alyokhina said, in an interview with Inna Denisova, "I don't think Pussy Riot can be called a group anymore" (Alyokhina 2016).

The reason I am detailing this here is that it becomes obvious that Pussy Riot is a polymorphous body, and I am making a choice in the coming paragraphs as to which part of Pussy Riot's work I will speak about here in relation to sonic presence and impact. As a very clear display of the power of presence on the Internet, I will be turning primarily to the *wearepussyriot* channel, which has amassed tens of thousands of subscribers and includes many documented works and actions to bring attention to the incarceration of dissidents or activists, police violence, and the mistreatment of (political) prisoners as well as other abuses of power within the Russian political system. A notable example of the latter is the music video *CHAIKA* (February 2016), drawing extensively upon the investigative work of the Anti-Corruption Foundation (ФОНД БОРЬБЫ С КОРРУПЦИЕЙ), whose 2015 documentary video details the criminal connections and activities of the Russian Prosecutor General Yury Yakovlevich Chaika and his family. Tolokonnikova may not be able to sing or play guitar professionally, which she openly states herself, but she has proven herself in recent years to be extremely competent in coordinating talented musicians, directors, and actors and orchestrating popular YouTube videos that match often rap-like text, professionally mixed with dark or satirically swinging studio music, with images that deliberately disrupt expected gender roles, while mapping out a precise portrait of the abuse of power within theatrically stylized scenes of disturbing, yet often simultaneously sexualized and arousing, simulations of blood, torture, and police violence.

wearepussyriot's videos continually serve both as a provocative invitation to consider their message as well as to get personally involved through another space of appearance: video comments. The term "third space" has been applied by political science scholars to refer to online media platforms—networked, physically distributed, yet shared, hybrid spaces—that afford informal conversations where (political) collective identities and the meanings of protests, for example, can be negotiated in a process of public reflection and opinion sharing (Weij and Berkers 2017). Yet, the question remains: besides stimulating latent political participation by offering a public platform in which people can express personal opinions concerning political topics related to a music video, do YouTube comments function as a site of actual political participation, arising in that space between the bodies' online textual presences? The study by Frank Weij and Pauwke Berkers referred to above uses "computerized methods of topic modelling and semantic network analysis to study both quantitatively and qualitatively how Pussy Riot's punk protests afford political participation by (Western) YouTube users" (Weij and Berkers 2017, 1) and provides an excellent overview of the literature addressing the interrelations of music, politics, and activism and how impact might be understood and measured in terms of the "relevance of political music for people in mainstream society and on the link between latent and manifest political participation" (Weij and Berkers 2017, 14).

While the pitfalls for the videos of *wearepussyriot* might be that their videos trigger disdain or disgust, causing viewers to distance themselves further from the (perceived) radical actions of the group, or that their music videos have become so sleek and professional

that they are primarily consumed as entertaining eye candy rather than heard as calls to action, I would also argue that with each upload they are producing a new watering hole in third space around which the norms and practices of the Russian judicial system can be questioned, defended, criticized, or laughed at by viewers who are engaging in order to produce a collective political dialogue, which could, from a blatantly optimistic point of view, function as a space of appearance, where a fluid transnational "body politic" arises and from which political action emerges. While Weij and Berkers state that it would take more research to determine what kind of correlation there might be between the online interactions and political or activist involvement by media audiences, I agree with their conclusion that we can no longer "ignore the more latent forms of political participation music can lead to" and that "the political music of Pussy Riot thereby serves as a vehicle to discuss politics beyond the protests themselves" (Weij and Berkers 2017, 1).

Where is the blossoming of the communal within the Deep Listening practices of Pauline Oliveros? In my 2012 article, "Listening to Deep Listening," I speak of the somatic listening encounter that can take place within the Deep Listening practice as "the structure of a happening: neither sound nor body, but the story of the sound-with-body encounter" (Stewart 2012, n.p.), a largely internal experience. Here I would like to consider the compositional and institutional work of Pauline Oliveros, from which the communal listening encounter—the shared listening and sounding experience, resulting in a feeling of connection, release, and nonverbal understanding—can emerge. It is my experience that these encounters continually resist commodification.

Before I briefly address one specific work, I would like to offer a sweeping feel for her prolific musical output, which can be easily expanded by examining the Pauline Oliveros (.us) or Deep Listening (.org) websites. In 1961 Oliveros wrote one of her last conventionally notated pieces, *Trio for Flute, Piano and Page Turner*, and through the 1960s Oliveros worked extensively within electronic (tape) music centers and studios, as mentioned above. The 1970s saw her developing her *Sonic Meditations*, resonating with the women's movement through "To Valerie Solanas and Marilyn Monroe in Recognition of Their Desperation" (1970), and exploring the musical-theatrical aspects of large-scale works, such as *Crow Two* (1974) and *Crow's Nest* by Elaine Summers, involving one hundred singers in a line, spiraling up the Guggenheim Museum (premiering January 1980). In the 1980s she turned her full attention to composition, creating her first recordings as a soloist for the album *Accordion & Voice* while living "in an A-frame house in a meadow just below Mount Tremper at Zen Mountain Center" (LP liner notes), developing the opera *Tasting the Blaze* (1985) with choreographer Deborah Hay, premiering *Echoes from the Moon* (1987)—which conceptually involved telephoning sound (including audience participation) to huge antenna dishes and relaying the moon's returns back by telephone line to the performance site, finally fully realized in 1996—and recording the album *Deep Listening* at the Fort Worden Cistern in 1988, among others; through the 1990s this recording experience developed into the Deep Listening Band and the use of the term "Deep Listening" to describe her lifework and compositional practice. Another large-scale work arising in the 1990s was "Njinga the Queen King: The Return of a Warrior," a play with music and pageantry, written and directed by author

and playwright IONE, life partner of Oliveros since the mid-1980s, and in 1991 the first of yearly Deep Listening Retreats with IONE and choreographer, dancer, and T'ai Chi instructor Heloise Gold took place on Rose Mountain, New Mexico, affording an intense sharing of Deep Listening practices. In 2001 Oliveros became Distinguished Research Professor of Music at Rensselaer Polytechnic Institute, New York, establishing the Telematic Circle with Jonas Braasch to develop applications for telepresent music performances, continuing Deep Listening Retreats, furthering the development of the Adaptive Use Musical Instrument (AUMI) with students at Rensselaer Polytechnic Institute, "enabling children with extreme physical and cognitive disabilities to play music and improvise with each other" (deeplistening.org website: History), and expanding upon her ideas concerning the sonosphere and quantum listening.

Another of her drives was to critically analyze institutions and create the incision, the rupture for institutional and communal emerging. In a 1979 essay she had already defined the need for something she termed "Alternative Spaces," new research facilities for music and related arts (Oliveros [1984] 2015, 194). And in 1981, Oliveros decided to leave her tenured position as Professor of Music at the University of California, San Diego, to focus on composition and performance. This also opened up the possibility of setting up the Pauline Oliveros Foundation in 1985 in Kingston, New York, (which became the Deep Listening Institute, Ltd. in 2005 and merged with RPI to become The Center for Deep Listening at Rensselaer under the direction of Tomie Hahn in 2014) to "support projects by artists who challenge notions of what art and music is," "artists who are walking along the edge, trying to take some risks and chances" (Freeman 2016, n.p.).

Working on the borders between sound and consciousness, searching for ways to expand the concept of listening through corporeal, telematic, technology-aided, architecturally inspired solo and ensemble experiences, as well as searching for new modes of interaction among people of all abilities, Oliveros, a master at bolstering sonic agency, continually sought to expand the ways people can access and utilize their own sonic awareness and creativity.

Where is the space of appearance within the communal sounding experience? To give an answer, I turn to one of her Sonic Mediations, "Lullaby for Daisy Pauline," an intimate work that was composed for her niece, born 1979. This work was offered and performed during a presentation she gave at the Walker Art Center in Minneapolis, Minnesota, in 1980, entitled "MMM: Meditation/Mandala/Music" (Oliveros [1984] 2015, 221)[8] "Lullaby for Daisy Pauline," as printed in her 2013 *Anthology of Text Scores*, is comprised of a mandala of letters above a seven-line text score. At the center of the mandala is an O surrounded by M's. This is in turn encircled by four M's, alternating with the remaining English vowels: E, U, I, A. The instructions include: "Sing *MMM* the sound of pleasure. Sing *MMM* to your favorite infant or to yourself. [. . .] Sing *MMM* and play with *MMM* by singing vowel sounds between each *M*. [. . .] Sing independently, remaining aware of others. Sing until the lull is complete" (Oliveros 2013, 177). This piece lends itself well to Deep Listening sessions and would generally be performed by a group of participants sitting or lying in a circle. In my experience this work touches on many profoundly moving aspects of life: intergenerational relationships, such as a person's relationship with their parents,

their ancestry, children in their care, or their own inner child; gendered patterns within a family; personal, societal, and cultural norms regarding expressions of tenderness; vibrational sensations within the body; feelings of belonging to a group; and safety to express vocally and to receive vocal expression. Experiencing all these revelations, images, and sensations while being held in a shifting, swelling interplay of human hums, lovingly sung, can pierce one to the core.

This is one space of appearance for a listening and sounding togetherness, utterly personal and, thus, utterly political: a sonic *Software for People*,[9] a sounding social algorithm that affords nonverbal interactions anchored in the practice of nonjudgmental listening. Writer Martha Mockus interviewed Oliveros in 1997 and 2005, asking the question at some point, "So for you, how does music have an ethical trajectory?" She answered:

> Well, it's very important to *me* to help facilitate creative process in others, to empower people to understand and use sound as a force in their lives and in their realization of who they are, creatively and spiritually. And in this way, you build community. You build a community of understanding based on sounding and listening, but it's not about controlling and regulating. It's a different approach. Very different. It's very important to me, and it's also fairly recent that I can even articulate that, in the way that I just have. (Mockus 2008, 164–5)

Goodiepal and the Institutional Hack

As I am approaching the artist Goodiepal—the Anglicization of Gaeoudjiparl and dominant version of numerous aliases (see "Goodiepal" on Discogs) for Parl Kristian Bjørn Vester—through an investigation of the artifacts available online, it would be counterproductive here to try to separate Goodiepal, the individual, from Goodiepal, the personage(s) behind his artistic emanations. Indeed, biographical information found online sometimes appears to be blatantly and humorously contrived, which can be read as a sort of embedded commentary on the chimerical nature of online content that is, certainly within the field of artistic (self-)promotion, often primarily designed to function within the capitalist system to generate added allure—translated into value—to the artist's appearances and outputs. Moreover, separating Goodiepal from his artistic output proves to be just as difficult. Together they form a swarm, an assemblage, a field of enmeshed actions and actants, with artifacts even deliberately obscured, hidden, or distributed among various identities. Filmmaker of the feature documentary *The Goodiepal Equation*, Sami Sänpäkkilä, writes that for most of us he is also beyond comprehension and imagination. "You will feel like Alice in Wonderland having a conversation with the Cheshire Cat" (Sänpäkkilä 2017, n.p.).

One tactic that seems well suited to attempt to convey a feel for the assemblage that is Goodiepal('s output) is the paratactical list, a form of speculative writing that author Matthew Fuller proposes in *Media Ecologies*. "The inventory," he writes, "opens up the space of a system of objects arranging itself in composition with as yet unknown combinatorial potentials. [. . .] Elements in a paratactic list always open up into a matrix of immanent universes" (Fuller 2005, 14).

So, Goodiepal is, in arbitrary order: a mechanical bird in a glass bell jar that he blows spirit into and that has been known to whistle all by itself; a self-built bike, his giant robot form, called *Kommunal Klon Komputer 02*, which generates and stores electricity to power his (or others') electronic music; lectures that turn into performances and performances that turn into lectures, all of which he calls concerts; a collection of, sometimes participant-generated, images called *Snappidaggs* that are spread over the Internet as a didactical tool for interested students; a gentleman's war on the Royal Academy of Music in Aarhus (Det Jyske Musikkonservatorium, DJM, Århus) and the Danish Institute of Electro-acoustic Music (DIEM); an exhibition in the National Gallery of Denmark that developed into a storage space, with complicated access, for most of his possessions; a brick-based compositional language; an interim school of Radical Computer Music on the first floor of the Blue House in London from 9.00 to 10:10 a.m. every weekday; entries on the InterPlanetary File System (IPFS), a peer-to-peer method of storing and sharing hypermedia in a distributed file system; around a thousand LPs, each sold for 250 Danish kroner (DKK), each containing a 500 DKK note bearing Goodiepal's signature and comments; a dedication to the anti-music of musical cliché; a performative planetary game scenario accompanied by vocal sound effects; an intricate handwritten, elaborately illustrated notebook with music theories relayed in a form resembling graphic notation; at least one Facebook (FB) page; Eurobot advanced music classes; a number of more or less obscure releases on Discogs; a Master Storyteller certificate from StoryTeller Scotland; an arrest warrant for the theft of an Eventide H8000FW from the Royal Academy of Music in Aarhus; the declaration "*Five steps in a Gentleman's War on the stupidity of modern computer music and media based art*," which was released as a supplement to the audio piece, education program and compositional game scenario (*The Official*) *Mort Aux Vaches Ekstra Extra (Walkthrough)*; a refugee organization disguised as a contemporary Tek-Rock-Band called GOODIEPAL & PALS; an apartment in Copenhagen whose doors are open to those who need it; the 192-page book *El Camino Del Hardcore* as well as recent unofficial online releases of this book; various copyright violations, resulting in the *Hacker Pack* and the *Brand Archive* series and, presumably, involving Carlsberg, Nokia, and Chupa-Chups; numerous (grainy) films of (lecture) concerts on YouTube and Vimeo; etc.

I will be unpacking one element above—the gentleman's war on the Royal Academy of Music in Aarhus—telling this story almost exclusively from the perspective of Goodiepal, SYGNOK, and local media and not from that of teachers or administrators within the Royal Academy of Music, who, very likely, have a different viewpoint. In 2004 Goodiepal was hired as Professor of History and Aesthetics of Electronic Music at DIEM, eventually teaching composition as well. Briefly stated, his teaching approach radically departed from the norms and tools of contemporary electronic music production, turning to non-digitalized, nonbinary, object-based—yet ultimately human mind-based—interactions in a game-like compositional scenario designed specifically to keep alternative intelligences (ALIs) challenged and intrigued rather than boring them by "pretending we are computers as well" (MAVEE 2009, 08:02).

In a 2010 interview with Danish radio host Ralf Christensen, Goodiepal stated that once the Royal Academy drastically reduced his salary, eliminated his travel allowance, and told

him that what he was teaching had nothing to do with music, he departed and issued a five-year statement of war on the Royal Academy in the form of a "Gentleman's War on the stupidity of modern computer music and media-based art" (Christensen 2010a, n.p.). Goodiepal describes it as rounds, or in terms of video game levels:

> Level one: Define the problem. I established that contemporary computer music is dead. Level two: Propose a solution, which I believe I did with *Mort Aux Vaches Ekstra Extra*. Not the only solution to the problem, but a solution. Level three: [B]ring it into debate, which I do by teaching all over the Western world. Level four: [W]in the war. Level five: [A]pply the solution. (Yardumian 2012b, n.p.)

After a year of his documented lectures and full-page advertisements in *Frieze* and *The Wire*, among others, the Royal Academy appeared to agree—or at least go along with the joke—and presented Goodiepal with a brass medal depicting two martial arts practitioners in full engagement on the front and "Royal Academy. Århus. War Prize 2009" printed on the back (Christensen 2010a, n.p.). Level four completed, albeit not completely to his satisfaction. At this point he makes a move that could have turned out to be a very interesting hack of the Royal Academy. However, it took a couple of extra turns that possibly undermined any potency it might have had in permanently redefining the institutional boundaries.

In 2010, VJ Livstræt, DJ Hvad, Poul Erik Vejgaard, and Goodiepal—referring to themselves as SYGNOK—removed an Eventide H8000FW from the Royal Academy of Music, placing it in the Cultural Center Støberiet at Blågårds Plads, Nørrebro, Copenhagen (Christensen 2010b, n.p.). The underlying motivation was manifold. One aspect was that this step would be analogous to taking war booty; however, being "gentlemen," they would "expand, drill, upgrade and modify" the machine—now called Sygnok Komputer 1—and put it into municipal service before "repatriating" it (Christensen 2010b, n.p.). As DJ Hvad and VJ Livstræt stated, "instead of being at the conservatory in Aarhus, Eventide H8000FW is now in one of Copenhagen City's premises, available to anyone who wishes to come by and use it to cut a record containing their own music" (Christensen 2010b). "It should be no more elitist than that a rap band of girls of 12 years can come up here and have their record made on the world's most expensive power machine," says VJ Livstræt. "We try to make it as humble as possible" (Christensen 2010b).

Thus, the "most powerful effects processor ever" (according to several online reviews), a tool reserved for those who could navigate the selection process of the Royal Academy, was moved to a location where it could effectively expand, or dissolve, one of the boundaries of the Academy, DJM. Would the new location of this elite piece of academic equipment redefine the scope of the DJM's legitimate output? Might this forced generosity of the DJM result in governmental funding actually becoming more effective in pursuing the top two goals stated explicitly on the About page of the DJM's website: "responsibility for [higher] education courses in music, and for otherwise contributing to the promotion of musical culture in Denmark" (musikkons.dk 2019)?

This ties into another underlying thread of the story: discrimination, both inside and outside the DJM. In the documentary taster mentioned above, VJ Livstræt and DJ Hvad

speak of the racial interrogation that Goodiepal faced—"whatcha doing with these aliens?"—while Goodiepal himself speaks of threats of violence as well as White Pride's sudden interest in him and the DJM due to this affair (SYGNOK 09:24, 06:25, 06:20, 07:10, and 06:45). Regardless of whether they were aware of the ideological underpinnings of the action as a statement against the discriminatory nature of art academies, the DJM's response to inquiry, through the rector Thomas Winther, was that "DJM regards this case as straightforward theft. My answer to your questions is, therefore, the same as my answers to other media before, that DJM does not participate in Kristian Vester's self-promoted media stunt" (Christensen 2010b, n.p.). The police were eventually notified, and a warrant for Goodiepal's arrest was put out. Goodiepal was teaching at Stanford, California, at the time, but stated that he would gladly return, stand trial, and serve his sentence for this offense (SYGNOK 14:31).

A permanent establishment of and communal use of the Eventide H8000FW within the Cultural Center Støberiet at Blågårds Plads would have served both as an interesting hack of the DJM—through the repurposing and relocation of one of their tools, the walls of the institute could unfold to include an area open to the community—as well as a break or incision causing the DJM to enter into an iteration of its instituent practice, to reinstitute itself, redefine its own boundaries and identity. It could have led the DJM to decide that one of its music-making tools would be permanently available to those outside the filtering function—the formal auditioning and application procedure—that determines which inhabitants of Denmark are inside the institute, as students who can enjoy its space and equipment, and which remain outside, as nonstudents who are not granted these opportunities.

However, in the meantime, in a further twist, Goodiepal/SYGNOK decided to drop a record (SYGNOK 10:01). Each LP with experimental computer music (actually a blank LP "object" with handmade engravings and markings [TGE 2017, 4:50]) was sold for 250 kroners (SYNGOK 10:00–10:41) and contained a real 500 kroner note, signed by Goodiepal, to be used for *dannelse*, considered by Goodiepal to mean education through experience, rather than *uddannelse*, an education in the sense of technical training (Yardumian 2012b, n.p.). The records sold out quickly, most likely not entirely based on the intense desire for people to *dannelse* themselves.

While the story is left somewhat open, it seems that Goodiepal eventually made the decision to sell the rewired Eventide to a collector in Belgium, thus financing the production of the LPs and eventually repaying his debt to the Ukrainian mafia (SYGNOK 2011, 11:33) who, according to Goodiepal, had provided the money for the LP.[10] The sale of the Eventide to finance the production of this vinyl record thus ended any small chance of forcing the DJM to redefine its borders and identity. While Goodiepal still seems driven by a motivation to bring attention to discrimination by the DJM, as situated within the broader context of Danish society (SYGNOK 2011, 13:30, 14:57), by this point it becomes very difficult for any outsider to trace the commandeering of the Eventide to a desire to expand the borders of the DJM to include minority groups or others—such as those with an inadequate educational profile—who might want to make use of the music production tools such an institute can offer. This being the case, this very interesting institutional hack seems to

undergo a disintegration through its ensuing plot twists and thus becomes unfortunately more easily written off as a self-seeking artistic stunt.

In recent years, fully living his environmental ethics and observing Danish society becoming more intolerant of foreigners and hardened to the plight of refugees, he initiated Goodiepal & Pals, described on the Cafe OTO website (2017) as "a refugee organisation disguised as a contemporary Tek-Rock-Band" that contributes all concert earnings to refugee aid centers in Serbia. Their YouTube emanations—"GP&PLS—Pro Monarkistisk Extratone" and "GP&PLS—PANIK PANIK PANIK"—reveal a humorous, screaming, DIY portrayal of a hypocritical and overreacting Danish society. As a final gesture to the vectoralists, "his last album, signed Goodiepal & Pals can be obtained only by meeting Goodiepal in person and in exchange for other material" (Monteanni 2018, n.p.).

> As production develops into its vectoralized form, the means appear for the renewal of the gift economy. The vectoral form of relation allows for an abstraction of qualitative exchange that may become as vast and powerful as that of quantitative exchange. (Wark 2004, [202])

Conclusion

While each of these artist(ic bodie)s professionally engages with the world primarily through performative action and music making, their work is also inextricably connected with pressing societal issues—women's rights, state abuses, ecological and environmental depletion, the plight of refugees and prisoners, the war state, the military-industrial complex, capitalist and vectoralist systems and worldviews, institutionalized violence on micro- and macro-levels, etc. They and their work reveal to us that these problems are not just to be pointed out, discussed, or problematized, but they can also be engaged with— through listening, through sound making, through music making—and that this act of engagement will bring not only new musics into being, but new systems of production and dissemination, new platforms for engagement and discussion, and new models for being together in the sonic commons. Each of these artist(ic bodie)s has, in my opinion, performed a significant hack within their social or artistic field, and the work of each operates in singular and multiple ways to break open, transform, and build institutions, enacting both the incisive break as well as the processual, persistent reinstituting characteristic of applied instituent practice.

In response to an invitation from the Feminist Art Program at the California Institute of the Arts for a "Letter to a Young Woman Artist," Pauline Oliveros wrote:

March 15, 1974

Dear Feminist Art Program:

Your collective response and personal potential is welcome to a ragged traveler on a patchy road:

Fox was the only living woman. There was no earth. The water was everywhere. "What shall I do?" Fox asked herself. She began to sing in order to find out.
"I would like to meet somebody," she sang to the sky. Then she met Coyote.
"I thought I was going to meet someone," Fox said.
"Where are you going?" Coyote asked.
"I've been wandering all over trying to find someone. I was worried there for a while."
"Well, it's better for two people to go together . . . that's what they always say."
"O.K., but what will we do?"
"I don't know."
"I got it! Let's try to make the world."
"And how are we going to do that?" Coyote asked.
"SING!" said Fox.

Gender translation by:
Pauline Oliveros
(Oliveros [1984] 2015, 129)*

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* Many thanks to The Pauline Oliveros Trust and The Ministry of Maåt, Inc., for their permission to reproduce this letter in full here.

14

Outside and Around Institutions

Two Artistic Positions

14.i

Working in the Sounding Field

Annea Lockwood

Sound is changing you now, I once asserted, which Alison Knowles silk-screened in red on a pink T-shirt for a series of artists' T-shirts she created in the 1970s. For some years afterward I wore it as a street performance piece, hoping that passers-by might read it and realize "Yes!," and I have it still, sweat-stained and ventilated by moth holes.

I have long realized from my lived experience that sound is an energy that courses through our bodies constantly, whether we are consciously aware of a particular sound event or not, an energy often vitalizing, sometimes draining, as ubiquitous as air. As it passes through us sound effects subtle changes in such functions as blood sugar levels, muscle tension, pulse rate, and respiration. In his paper "Acoustic Trauma: Bioeffects of Sound"[1] Alex Davies reminds us that "The human hearing system not only consists of the ear, but also encompasses conduction and mediation via bones, flesh and body cavities." All of this moving and resonating in an internal dance of conduction and response. Hearing is a whole-body experience. Sound is potent.

When this happens we are making a form of visceral contact with the source of a sound, I believe, making sound an intimate channel through which to experience our environment, giving rise to a feeling of non-separation and of connection with other phenomena. Sound art gives me a home within which to explore this feeling, most fully in my work with rivers, especially *A Sound Map of the Hudson River* (1982), *A Sound Map of the Danube* (2001 to 2005), and *A Sound Map of the Housatonic River* (2010). My intention in making the river installations is, through this intimate channel, to help awaken a sense of deep connection with rivers, and concern with how we interact with them, something ever more crucial as global warming's effects on access to water sources become intensified. From that can come active caring, protection, and preservation. "Ko au te awa, ko te awa ko au" (I am the river and the river is me)[2] is fundamental knowledge for the *iwi* (indigenous people) of the Te Awa Tupua or Whanganui river region in New Zealand, who have been fighting for the recognition of the river as an "indivisible and living whole"[3] for over 140 years. The *iwi* consider the river to be an ancestor, a living entity, and so, in March 2017, the Te Awa Tupua river was granted legal personhood, the first river to be so protected.

I too feel strongly that rivers are alive and have been fascinated by their behavior and sounds since I was a child, when I spent my holidays in New Zealand's Southern Alps, near

a then-wild river, the Waimakariri. This is a powerful, fast-moving river with many channels, a braided river, and each year it was interesting to see how the main channel had moved and how its sound field had changed. That river stayed in my mind during years of composing with many different sound sources, a buried presence like an aquifer, and eventually its influence surfaced in the form of my river sound maps.[4]

Each sound map weaves together the audio recordings I made at many sites along the river from its sources to its delta. They are presented as sound installations, the Hudson being in stereo, the Danube 5.1 channels and the Housatonic 4.1 channels. Each includes a large canvas wall map of the river showing the numbered locations of the sites recorded, the time at which each site may be heard, the date and time of day of the recording and any other information needed, giving a sense of topography and of season, for example (from *A Sound Map of the Danube*):

22 Oberkienstock (underwater) 0:49.20 May 4, 2004, 11:37 a.m.

Together with a time display synchronized with the audio files this enables a listener to identify the sites. This is particularly valued by people who are familiar with one stretch of the river or another but not with its sonic details, which, in any case, change frequently, so each recording is purely a "snapshot" of a soundscape on a particular day. Thinking of that mutability, I still remember the disappointment of finding a beautiful little riffle on the Hammerbachfluss (a Danube tributary) near Passau, Germany, but too late in the day to record, and returning early next morning to find that spot completely submerged following a night of heavy rain, thus reaffirming Heraclitus's impeccably logical dictum: "No man ever steps in the same river twice, for it is not the same river and he is not the same man." From that I learned—record it now!

I know few sound sources so complex acoustically and so enticing to us, in part because of our associations with flowing water (not to mention our existential dependence on it), but possibly also because of the way the constantly changing timbral details of a standing wave, for example, stimulate the audio cortex, keeping it engaged while the apparent overall repetition lulls the listening body into relaxation and calm. Each of my sound maps attempts to draw a listener so deeply into proximity with the water that they feel immersed in it, penetrated by the acoustic energy of the water's action and one with the river.

This is most purely the case with the Housatonic work, in which only the water and its immediate environment are heard. Human experience of the river is integral to the other two works, however, but differently focused in each. With the Hudson I wanted to convey a sense of the river's power through conversations with six people who have experienced that power directly on their bodies: a fisherman, an Adirondacks forest ranger, a farmer, a river pilot, a river conservation activist, and a judge. My original idea for making this work stemmed from the observation that many New Yorkers love to look at the Hudson but have little sense of its energy and power—an awareness that can come more directly from hearing it I feel.

Twenty years later a different question arose strongly within me: "What is a river? What is its being, its nature?" and "Why are we so drawn to rivers?" The Danube came to mind immediately, an iconic river flowing through ten countries and varied terrain, and I began recording at the headwaters in 2001, slowly working my way downstream over the next three years, seeking to sense river-nature through river-sound. I also talked with thirteen

people who all had some direct and personal connection to the Danube, asking them "What does the river mean to you?" and "Could you live without it?" Here are excerpts from two of these conversations, heard in the speaker's native language:

> That is truly my home, the Danube. It's sentimental, true, but nevertheless . . . You live with it and, simply, one can't believe that a person can control water. Water is patient, but you can't control it . . . It comes through everywhere, and even the largest, best dams develop cracks, and then the water comes through. And where it once breaks through, then it continues further. You can run from fire, but when water comes through it overwhelms . . . Water is simply alive, not a dead thing. (Helmut Morocutti, Captain of the *Prinz Eugen* river boat, Blue Danube Line, Austria)

> For me Ruse is mostly the river, as well as the people who live here, but the river is the one thing which keeps me attached to this city, to this land. The river is like part of me and I am part of the river. When I am sad, I go to the river and cry. I tell it all my pain and troubles and I think it understands me, and it's sad with me, and I feel so calm and good . . . The river is everything for me. (Vania Hinkova, poet and bookseller, Ruse, Bulgaria)

Working on the Danube I came to understand that, as Captain Morocutti says, the river has agency. It creates its sounds through the way it shapes its banks in collaboration with rocks, soil, silt, etc., but I was also recording aquatic and terrestrial insects, frogs and tadpoles, fish, geese and other birds, humans, and the wind in reed beds and in trees, listening to how they all interweave, how all are dependent on the river, and thus how the river shapes its whole environment far beyond its banks. At the end of my journey, in 2004, while walking along the Sfântu Gheorghe channel to the Black Sea, this became clear to me and I was filled with gratitude to the river.

That realization also led me to a key aspect of the design of this particular installation, the embedding of the human voices within the total mix. In the *Sound Map of the Hudson*

Figure 14.i.1 Annea Lockwood, *A Sound Map of the Danube*, Stadthaus Ulm, Germany, 2006. Photo: Sabine Presuhn.

River the human experiences are physically separated from the river's soundscape. Whereas the river is projected through two large speakers and a subwoofer, the interviews are heard at a small, separate station (a table and two chairs with headphones), and a listener can select which interview to listen to. In the Danube installation, however, the voices are mixed into the soundscape nearest their home, incorporated into the riparian environment, so Captain Morocutti was recorded on his boat and Vania Hinkova's voice comes through a recording of a large barge, the *Loisach*, moored nearby, creaking and bumping against a dock in Ruse.

The match could not always be so close however. I recorded Gizela Beba Ivković describing the North Atlantic Treaty Organization (NATO) bombing and destruction of the bridges at Novi Sad, Serbia in 1999, but was not able to obtain a good recording of the river there, so she is accompanied by a recording I made further downriver at Smederevo on a floating dock—a very large oil drum with a hole cut in the top, through which I could dangle my microphone. The slap of the waves against the drum reverberated strongly inside it, distinct booms, which amplified the emotional effect of her memories: "We were in a state of shock the whole time, not only because of the bombardment," she recalled. "The bridges near which we grew up were a part of us. It was miserable to watch those pictures, and it was painful to look at the Danube after the bombing, because it looked like a decapitated man." I had sought out her voice because I wanted to acknowledge the tragic human history of this river, its dark side, something far from mind when one is sipping a dry white wine at a riverside café in Orth, Austria. For the Danube installation the interview texts are printed in the appropriate translation (e.g. Romanian for an exhibition in Tulcea) in a handmade book, which also contains images photographed by Ruth Anderson as we traveled down the river and which is placed near the map. Beside the book a rock from the riverbed provides a form of tactile connection to the river, clearly scratched or smoothed by its passage downstream.

None of the sound maps is intended as documentation. For each installation I chose which sites to record by ear rather than by geographical significance, using these criteria: "Is this sound alive?" and "Is it unlike any site I have already recorded?" The first question is not anthropomorphic, but rather concerns the details of the sound, its intricacy and presence, whether it tickles my ear and keeps me listening closely. Having found such a sound I settle down and listen for a while, moving around to discover the best microphone position, then record for about half an hour, or longer if some interesting sound source is intermittent. The pans provided by passing insects and birds, for example, or even a high-flying plane, are invaluable for giving a natural sense of spatial flow in the final mix. Sometimes the microphone is handheld, sometimes it is on a stand, or a "fishing pole" if I'm using a hydrophone.

Because I am aiming to draw a listener deep inside the sound I often record in close-up, even placing the microphone out in the water at times, which a tripod stand enables. In Orşova (Croatia), for example, I waded out into a shallow bay populated by frogs and fishermen, intent on capturing the frogs in close-up and was able to position the microphone in amongst them just above the surface, obtaining an intense frog ensemble with the

sounds of the fishermen's lines whistling overhead. On the other hand, in Dichiseni, Romania, I wanted a broad sound field encompassing boys across the river jumping into the cold water, two girls chatting on the bank, a horse grazing nearby. The horse was moving along the bank slowly, eventually ending up right behind me. I set my stereo microphone (an Audio-Technica 822) in position to capture both horse and girls, with the boys clearly in the background. That soundscape needed something in the foreground to give it focus and depth: the horse was just right and a stroke of luck, as often happens with field recording. I chose that site because as I moved along the river I wanted to convey a sense of human interaction with the river, and splashing, diving kids are as natural to river life as are the small open fishing boats darting across the surface like water beetles.

That particular site was one of the quietest I recorded and needed careful equalization to reduce system noise. Elsewhere I sometimes used equalization and noise reduction to bring out a particular layer of a texture or to reduce traffic, and occasionally some reverb, but no other processing. I want a listener to be able to hear the inherent details of a site with no filters between their ears and the soundscape other than the characteristics of the equipment used, both in recording and in presentation, so there is minimal processing and no audible indication of my own presence recording. The issue of whether or not to acknowledge that presence is still much debated amongst field recordists and a work such as Hildegard Westerkamp's beautiful *Kips Beach Soundwalk* (1989) draws me into listening even more closely because of her subtly guiding voice. In my own work I am aware that what I record is an artifact, virtual, shaped subjectively by my choices and objectively by the limitations of my equipment, but I am intent on putting as few "filters" between a listening body and the sound as I can. Again, because a primary goal for me is the listener's sense of connection to the sound and thus the river, I want to remove awareness of my role and let the sound come as directly as possible to the listener's ears. I feel it is obvious that a recording is made through human agency—that need not be made explicit, rather the challenge for me is how to compose the final work so that one site seems to flow organically into the next, deepening, rather than disrupting a listener's concentration.

This process passes through several stages. First comes the selection of which sites to incorporate and here my initial decisions are based on whether a soundscape is fresh, unlike any already selected. Then I apply equalization or reverb as needed and move on to determine the duration of a site, which I do subjectively, unless it incorporates an interview (in which subject matter is also a determinant), or a time-based event, such as the passing of a coal barge at Popina, Bulgaria, in the Danube map. I listen many times, noting how long my own attention remains engaged, but also keeping track of the relative lengths of preceding edits. One can fall into a sort of rhythm in which sites enter at similar time intervals, something I always want to avoid. Varying that rhythm helps to keep listeners engaged. Then I start to assemble the whole, deciding on entry points and shapes—should this one be a long or short cross-fade, or perhaps an abrupt entry, to match the character of the recording? The final stage comes in the mixing and spatialization (the spatial movement of the sounds), and here the goal is to vary the positioning of sites amongst the speakers so that they flow but, again, do not fall into repetitive patterns. I have been fortunate to work with audio engineer Paul Geluso on the Danube and Housatonic spatializations, an art in

which he is supremely creative. I bring in a rough graph of entries, channels, pans, etc., a first draft, and we work it over until it feels right.

The visual elements—wall map, time display, book of interviews—are integral to the Hudson and Danube installations and are carefully designed. I have worked with Baker Vail, a cartographer, and Susan Huyser, a graphic designer, on the Danube and Housatonic maps (and book). Roland Babl of bablTech, Austria, designed and fabricated the small time display for these two installations. The Hudson map was designed with the Hudson River Museum staff (Yonkers, New York) and used a simple wall clock. However in all three works the visual aspect is kept minimal, throwing the emphasis on the audio. Finally I provide comfortable seating with cushions, sometimes floor mats, or hammocks, with the thought that a fully relaxed body is hearing and absorbing these sounds deeply—the whole body an ear.

Listening to rivers in this way I realize that I am hearing the process of geophysical change wrought by that current, that force, not in real time as I would if sitting by a river right now, but with a vivid streaming detail that my eyes alone would not be able to absorb, and, for myself, I am not aware of being able to perceive such change through any other sensory channel. Are our ears a fast, deep connection to the natural world? The desire for this connection is always present in human communication, through writing, image making, even cooking, but it seems particularly strong now, as we contemplate the damage our resource-seeking creates in forests, waterways, ice fields, the oceans, in other words, our separation from our natural homeland.

Figure 14 i.2 Installation seating at Schloss Orth, the Donau-Auen National Park, Austria, 2007 and 2008. Photo: unknown.

It is not surprising that environmental sound art has emerged in parallel with awareness of environmental damage. The aesthetic openness and expanding technical capacity that have taken root since World War II have inevitably prepared artists to dive into nonhuman sonic spaces, and audiences to accept this merger of art and environment. Moreover, many of the sounds we record and work with are broadly familiar to listeners from their own ambient experiences. I have long felt that the primary elements of field recording-based work, ambient sounds, are in fact a lingua franca, evoking deep layers of personal memories for listeners, richly associative, not always at a conscious level. Our bodies absorb the sounding field, our minds play in it, and we become one with it. From that can come active caring and conservation such as the people of the Te Awa Tupua river are implementing for the river's whole environment.

14.ii

Conversations and Utopias

*Holger Schulze in Conversation
with Mendi and Keith Obadike*

February 5, 2019

Holger Schulze: Where do you find a utopia these days?

Mendi + Keith Obadike: Ultimately, utopia for artists, and perhaps for anyone dealing with contested terrain, is an internal construction first and foremost. But where do our ideas of utopia come from and how do we externally manifest these notions? When are we most in need of these ideas? Those are the questions at the center for our current project, *Utopias: Seeking for a City*. We believe that sound is a powerful means of getting at these things that reside inside of us. In our project we recorded the soundscapes of cities founded by African Americans across the US, between 1830 and 1970. We sonified the positions (longitude and latitude) of these cities and sang along with our sonification. We used text from a hymn about paradise found in *The Egyptian Book of the Dead* (Faulkner 1972). We also made our own arrangement of an old African-American spiritual, "I Am Seeking for a City," that expresses a desire for a perfect city. These sounds were spread in a multichannel sound system across the architecture of a nineteenth-century house at Weeksville, Brooklyn, [New York], a nineteenth-century free black community.

HS: How did the architecture of this build affect your work? How precisely did you install the multichannel system in there?

MKO: When we are working in an internal structure we generally spend time doing internal ambient recordings in order to gain a better understanding of the room sound. This is an approach we took with earlier work like *Sonic Migration* (2016), a sound work that uses internal recordings made in an old Philadelphia church with a Bruel & Kjaer accelerometer and Barcus Berry contact mic and convolution reverb impulse response samples made of the space. With our work *Utopias*, set in a small 1860s home, we did not sample the acoustics, but we did try to replicate the natural decay time of the space in our recording made to play in the space. For some projects we record instruments or vocals in the space of the installation. In the case of *Utopias* we mixed in the space. We studied the dimensions of the room. There were many 1:1.5 relationships in the design of this old nineteenth-century house so that stable, heavy perfect fifth sound impacted the kinds of things we might choose to emphasize in the music. It also worked well for the kind of blues-based

Figure 14.ii.1 Mendi + Keith Obadike, *Utopias: Seeking for a City* (2019). Photo: the artists.

structure that was at the center of the work. The other major concern is speaker placement. We wanted the sound in the work to be able to move between an extremely present, almost tactile, presence at certain moments in the piece to a kind of enveloping aural mist at other moments. With *Utopias* we embed a series of full-range loudspeakers in the cellar and in the attic. In the cellar our four speakers were firing up and shooting into slightly gapped wide oak floorboards. In the attic our speakers fired down and were mounted to overhead support beams. Our primary concern in the attic was to create an overhead acoustical chamber. We concealed a very powerful, articulate, and compact subwoofer in a small closet so that it would resonate the adjacent chamber of a fireplace and chimney in the house. This chamber was really activated as we sonified the numbers of geographical locations. We also placed a number of what we might call room fills, full-range speakers simply mounted on the floor of each room. The room fills also helped to bring the vocals forward in the piece. All the channels are addressed individually and run to a sixteen channel system with amps and a computer installed in the cellar. The same system controls the single-channel video for the work, which was projected in a backroom of the house.

HS: How do you imagine songs and sounds to provide a utopia for us and future generations?

MKO: We think songs and sounds provide guidance for our personal construction of utopia. By this we mean that of course there are songs that are literally about a perfect place, a heaven, an Elysian Field, a "Field of Reeds," but also, for many of us, beautiful sounds, specific intervallic relationships, and especially acousmatic experiences, help to conjure new vistas and idealized landscapes. Sounds (including music and speech) can be instrumental in changing our mental state from sorrow to joy, from apathy to passion, from resignation to determined focus.

HS: How do you start working on a piece, starting from a certain site the proposed work will be related to or presented in?

MKO: Our projects take shape in many ways. All of our projects can be said to have begun in a conversation. We have a series of ongoing conversations that are like little seeds that bear fruit when the opportunity to plant them comes along. Some of these conversations are about specific ideas we want to explore when we get the chance. Others are more

philosophical in nature, and when a context arises, we realize we can physicalize the concepts we've been mulling over. Over the years we have gotten good at keeping track of these conversations, taking notes, trying out manifestations of the concepts, and then including them in projects once we have a firm idea of something we're going to try out in a particular venue. Beyond these years' long conversations, many of our projects are site-specific. Some of the projects also emerge out of a commission at a unique location. So the process typically involves a great deal of research about the history of the site, some time studying the architecture, and many field recordings.

HS: From what conversations, for example, did the *Utopia*-work evolve out of? What detours or reflections went into it?

MKO: *Utopias* grew from a few different converging concerns. First, we had been doing some sonification and mapping work for a couple of years. We made a piece entitled *Vectors (Pan Africa)* in which we sonified coordinates from African capital cities. The sound in this work moved through space creating an abstracted picture of the continent. The multichannel work was built to stipple sound from the rafters of a large warehouse space called Pioneer Works in Brooklyn, but was never installed. The project was commissioned by Performa in New York and 1:54 The Contemporary African Art Fair. Unfortunately during the final days of the project one of the organizations decided (without hearing the work) that a sound art installation might be disruptive to an art fair. This is the kind of common frustrating problem many sound artists encounter.

   We were, of course, deeply disappointed with the *Vectors* installation being aborted, but the work generated new ideas. We had most recently completed *Compass Song*, a sound-walk (iOS and Android app) made for Times Square in New York. In that work we sonified coordinates based on the four cardinal directions. We combined those tones with field recordings, stories/poems related to Times Square's history, and the civil-rights era song *Walk With Me*. Lastly, in 2016, we created two sound works, *Sonic Migration: Homes*, a sound and video work and *Sonic Migration: Morning Comes*, a public work. This project was commissioned by Scribe Video Center in Philadelphia. We reworked compositions by Charles Albert Tindley for this project. These works dealt with what was the sonic and social impact of the Great Migration, a period in American history when African Americans moved from the southern United States to the northern part of the country to escape oppression in the South. This massive population shift is responsible for the sound of popular music in the twentieth century. Everything from Chicago blues, popular gospel, Philadelphia soul, New York jazz, Detroit R&B, and early rock-and-roll came from these communities. The sounds also changed spaces. Literally, these major American cities were all impacted by sounds born from these new black urban communities. So as we were researching nineteenth-century African-American communities and music in major cities and beyond, Weeksville Heritage Center approached us about making a work. We were drawn to this line in African-American music that looked for a perfect city.

HS: What sort of audio recording or sound-processing hard- or software do you hold dear? Do you carry some of this equipment around with you all the time? Or do you select tools and technologies depending on an individual sound art project?

MKO: We do have hardware and software we use repeatedly, but we don't regard any of the tools as particularly special. Our studio is full of handmade, mass-market, professional and consumer speakers, mics and recording devices. We definitely choose tools based on

the project. We've made some large projects using multiple computers, musical instruments, and rooms of hardware and other projects using just the voice. However, I would say that we do enjoy the current ubiquity of recording tools. It is nice to be able to make a high-resolution stereo recording with a handheld device. That ease does make the sound gathering process smoother and more organic. Also, the ability to direct a focused beam of sound has been very important in our work.

HS: Was there a certain point in your work and life as artists, when you started to consider yourselves as sound artists? Did this converge with your decision to work together as an artist couple?

MKO: We would say we started describing ourselves as sound artists around 1996. We had been making things including music, poetry, and artworks separately, but when we started collaborating things evolved into a new form. We were checking for a lot of new music and media art online in the 1990s and following some conversation on listservs. We found ourselves in a community of other people working between experimental music and art who were taking up this language. Keith wrote about this in *Art Journal*: "Responses: What's in a Name? Seeing Sound Art in Black Visual Traditions" (Obadike 2001). The term seemed helpful to us at the time. But just as labels can illuminate aspects of the practice they also have a way of obscuring certain facets of the work.

HS: If there exists something like an obscure "intended listener" implied in your sound artworks, are there certain reactions to your work you consider more appropriate than others? Would there exist an inappropriate form of reaction?

MKO: We are not sure what an inappropriate reaction would look like. Like many artists, we work from the inside out. We are our first audience. When we pull things from our inner world and shape them for external presentation we cannot know what to expect from an audience. We are generally working on a space for reflection and meditation among listeners with different openings and perspectives. We build the work to hold questions and offer touch points for listeners to think about the world and their relationship to the ideas, sounds, and materials. That said, we are often drawing on a very African-American black music tradition and Igbo cosmologies and perspectives, so listeners who are familiar with and/or recognize what we are working with are definitely in mind.

HS: Can you remember a reaction by a listener or visitor that surprised you—in a good or in a more awkward or bad way?

MKO: Our project *Free/Phase* (Stony Island Arts Bank, [Chicago], 2016) has a section that is a public artwork placed outdoors, called *Beacon*, that plays freedom songs that refer to time from a rooftop at the time of day in question. At 9 a.m. it played fragments from "Rise! Shine! For Thy Light Is A-comin'," at noon it played a section from "Woke Up This Morning with My Mind Set on Freedom," and at 7 p.m. it played some of "Keep Your Lamps Trimmed and Burning." We projected sound from parabolic speakers on the rooftops of two major buildings: The Chicago Cultural Center in the downtown area and Stony Island Arts Bank on the South Side. To our surprise when we played phrases from the songs on the South Side of Chicago people sang along with the music and continued once the installation fell silent. The feedback that we were able to speak to the memories of those listeners, to awaken the resources of that freedom song that was already there in their minds, felt like confirmation.

Here's another surprising reaction we were glad to experience: As part of our first *Americana Suite* called *Big House/Disclosure* (2007), we installed a 200-hour long house

Figure 14.ii.2 Mendi + Keith Obadike, *Beacon* (2016). Photo: the artists.

song in the Hall of Funders in the Kresge Building at Northwestern University, [Evanston, Illinois]. As part of that song, we played the voices of Chicago-area residents answering questions about the legacy of slavery. The choices of that song, the bass lines and the voices, shifted as the stock prices of companies that profited from slavery rose and fell. Of the many effects we desired from the choice of making a house song, joy was one, but it surprised us to see listeners dance through the Hall of Funders as they engaged with our work.

HS: Can you detect a certain trajectory of your interests in working with sound—starting from your earliest works before the year 2000 into what you might be desiring to work on in the near future? How does this relate to your work groups such as the *Americana Suites*, the *Opera-Masquerades*, the *Number Series*, or more recently the *Spirituals*?

MKO: We both grew up playing music, recording, and programming sound in the 1980s. And our first collaborative sound art projects that might not be associated with a specifically musical venue happened in the 1990s. That said, we do see that our past work has led to the work we are doing now. Early on with the works like *Sexmachines* (for Nam June Paik and James Brown, 2000) and *Automatic* (for Jean-Michel Basquiat and Raymond Saunders, 2000) we were interested in connecting with other artists, artists who had influenced us a great deal, through our work or constructing our own art history. Later, the *Opera-Masquerades* were our way of exploring other symbolic systems including color, scent, cardinal directions. We are extending that work through our *Numbers Stations*.

Our *Americana Suites*, including *Big House/Disclosure*, *American Cypher*, and *Free/Phase* have attempted to meditate on persistent questions in American history. The work with spirituals might be said to have begun with the *Americana Suite*, part *Free/Phase*, where we were dealing with freedom songs, but the truth is that spirituals are for us part of the vast field of folk songs and rituals that hold important (geographic, spiritual, philosophical, architectural) information passed down from enslaved African people. Our next projects are still being developed, but what we can say about them now is that we are continuing to work with the spirituals and other folk songs, to manifest them physically, and to extend them to the furthest extent of our resources.
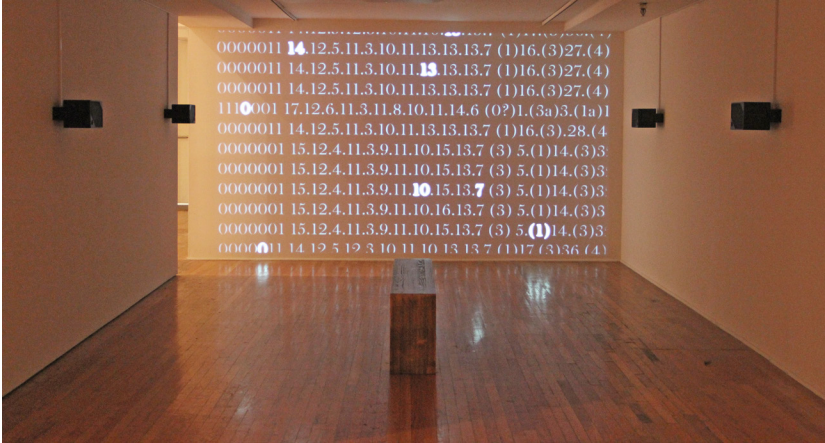
Figure 14.ii.3 Mendi + Keith Obadike, *American Cypher* (2013). Photo: the artists.

HS: Is there a desired, almost unimaginable project you might be doing in the 2020s or 2030s, that you dreamt of for quite some time—but you were until recently not in the position to realize? What would this project possibly be?

MKO: What we can say now is: we are working on some projects that we have been dreaming of for some time. We don't think of anything as unimaginable or not do-able. Finding the resources is sometimes difficult, but we don't think of that challenge as a disqualifier.

Audiogrammi of a Collective Intelligence

The Composer-Researchers of S2FM, SMET, NPS, and Other Mavericks

Laura Zattra

Introduction

In 1955, composers Luciano Berio and Bruno Maderna's diplomatic and forward-looking capacities led to the foundation of Italy's first electronic music studio: the Studio di Fonologia della RAI in Milan, a studio developed in the state broadcasting company and dependent on it (De Benedictis 2009; Novati and Dack 2012). The studio marks the first era of Italian electronic music production, and has always been considered a central experience (Giomi 2002; Mayr 2003). The studio was in Milan, the nation's economic capital and second largest city after Rome.

All festivals, theaters, concert seasons, musicians, directors, musicologists, and music critics gravitated around Rome and Milan till the first half of the 1960s. There had been very few exceptions, such as the *Teatro delle Novità* in Bergamo, an important scene where new music operas by young composers were premiered every year from 1931 to 1973. Moreover, beyond doubt, in Italy the largest part of live performances consisted in classical music concerts and operas (melodramas), both in the capital cities and in the provinces.

Ten years after the Studio di Fonologia della RAI in Milan, as other electronic music centers started to open their doors, an entirely different style of approaching and creating electric sound-based music emerged. This chapter deals with these parallel, often outcast, experiences that helped introduce new forms of sound-based art in Italy. The chapter runs through a series of events that saw the birth of three electronic music centers: the S2FM (Studio di Fonologia Musicale) in Florence, 1963; the SMET (Studio di Musica Elettronica) in Turin, 1964; and the Gruppo NPS (Nuove Proposte Sonore) in Padova, 1965. I will also consider other musical and artistic experiences, such as the live electronics ensembles

Gruppo di Improvvisazione Nuova Consonanza (1964), the MEV—Musica Electronica Viva group (1966), and the radical open-air exhibition/performance *Parole sui muri* (Words on Walls) near Modena (1967–1968).

The historical experiences of the 1960s/early 1970s presented and discussed herein epitomize the determination to reform the traditional, institutionalized, and centralized Italian music scene, especially introducing new artistic practices such as collaborative creation, anonymity, "multimedia," or "cross-media" events; in a nutshell, a novel radical approach to music. Protagonists, whom I will discuss in the following pages, did not use the term sound art per se, but they introduced a whole new series of experiments that eventually matched with the definition. Hence, their approach to sound places them as precursors of this art movement.

My definition of the term "sound art" builds on Alan Licht's (2007) classification, and includes other properties. To me, sound art is a non-time-based, non-programmatic sound experience, it is "not about a stage show" (Licht 2007, 13), it "is defined by the space (and/ or acoustic space) rather than time" (Licht 2007, 16), and it is a "trip" (Licht 2007). Additionally, I also believe (my definition) the following. Firstly, sound art is any total sound-based experience that calls into question traditional "time" and "space" categories. Of course, spatial experimentation—the possibility of positioning sound sources scattered around the space—are not new in the history of music, particularly Italian music. Suffice it to think of medieval and renaissance antiphonal choirs, written by *maestri di cappella* and composers Adrian Willaert in the 1540s, or Giovanni Gabrieli in the late sixteenth century for the St. Mark basilica in Venice, a technique soon imitated in other Italian churches. Or the "offstage" instruments or choirs since the nineteenth century: the offstage trumpet in *Leonore/Fidelio* overture n. 3 (1806), or the oboe in the third movement of Hector Berlioz' *Symphonie Fantastique* (1830). Among the first experiments with technology, the first multimedia works/installations were undoubtedly Edgar Varèse' *Poème électronique* (1958), the *pupitre de relief* built for the spatialization of the *Symphonie pour un homme seul* by Pierre Schaeffer and Pierre Henry (1949) and *HPSCHD* by John Cage (1969), which lasted for several hours (Licht 2009).

Secondly, Sound art is an art form that challenges traditional ideas of musical notation and score (the "neutral level" in semiotics).

Thirdly, Sound art is not based in the romantic musical production chain ("composer -score-orchestra/performers-concert-listeners"); quite the contrary, it is, most of the time, shaped by a collaborative activity (Becker 1974, 1982), and at the highest level, is the result of a "collective intelligence" (Pierre Lévy 1997).

Finally, sound art involves the use of machines, technology, instruments or *dispositifs* in general, in search of forward-looking *experimentation* to generate original musical ideas (I use the word "original" here deliberately). This last point deserves careful consideration. It is true that no artistic practice can ever be experimental in itself, or from beginning to end (During et al. 2009, 15). According to Adrian Martin, "experimentation has a local usage, it cannot hold a maximal opening to experimental. It could be recovered from the concept of *dispositif* (devise, system, framework) where there is a 'game' at stake" (Martin 2014). I believe in the concept of *dispositif*, that is "a game with rules, where the execution of the

game's moves—the following of the rules—generates outcomes, results and sometimes surprises" (Martin 2014).

If we were to consider sound art and electroacoustic music (the whole genre from its historical debuts up until the present experimentations) it would be difficult not to agree with the idea that the most interesting and groundbreaking works (and musical researches) are the ones that have an interesting *dispositif* at their core. A *dispositif* is basically "the arrangement of diverse elements in such a way as to trigger, guide and organise a set of actions" (Martin 2014). My idea is that sound art and electroacoustic music are—and should always be—research toward experimentation. Crucial preconditions to generate an interesting, experimental, original artwork are the interest in knowledge, transmission and representation of this knowledge, a deep awareness of the state of the art, and a reopening to questions instead of answers at the end of the process (Dombois 2009).

The historical experiences of the 1960s/early 1970s outlined in the following pages are innovative in the sense that they promoted new practices of composing, thinking, and performing music, and therefore may be seen as pioneering achievements of sound artworks. The article is both a sociological analysis and a history of sound-based art in Italy over the period under consideration.

S2FM, SMET, NPS, and Other Mavericks

I will begin with a brief historical introduction of the Italian experiences of the 1960s/early 1970s. The S2FM (Studio di Fonologia Musicale) was created by cellist/composer Pietro Grossi in Florence in 1963; the SMET (Studio di Musica Elettronica) in Turin by Enore Zaffiri in 1964; and the Gruppo NPS (Nuove Proposte Sonore) was initiated in Padova by pianist/composer Teresa Rampazzi and kinetic artist Ennio Chiggio in 1965. The four were friends and colleagues. They collaborated rather than being competitors, they had many ambitions in common; they aimed not only at supporting teamwork between composers, musicians, and technicians, but also were fully open to national and international collaborations, a network of exchanges that this chapter considers, along with a profound interest and connection with the realm of visual arts and new ideas on composing.

This radical approach to sound-based music was similarly embraced by live electronics ensembles who made group improvisation with acoustic and electronic instruments, including: the Gruppo di Improvvisazione Nuova Consonanza founded by Franco Evangelisti in 1964 (Bertolani 2019), which included Mario Bertoncini, Aldo Clementi, Roland Kayn, Ivan Vandor (from Europe), and Larry Austin and John Eaton from America; and the MEV (Musica Elettronica Viva) group, a live acoustic/electronic improvisational group formed in Rome in 1966, consisting of expatriate American composers Alvin Curran, Allan Bryant, Frederic Rzewski, Jon Phetteplace, and Richard Teitlelbaum.

Along with other revolutionary initiatives, such as the open-air exhibition/performance *Parole sui muri* (Words on Walls) in Fiumalbo (near Modena) in August 1967 and July/August 1968, these institutions, groups, studios, ensembles, and events were the sign of a

musical reform that was social as well as political. In Italy, young composers, musicians, and artists stood in open or partially open dissociation from an "old" school of music making. They disdained the serialist and postwar, post-serialist music, they had faith in collective creation, they abandoned the idea of the composer *deus ex machina* in favor of collaboration, they believed in the concepts of composer-researcher (Decroupet 2002, 42), composer-artist, and composer-executor (Franco Evangelisti—who, at the Studio WDR in Cologne, had composed the serialist electronic piece *Incontri di fasce sonore* in 1957, and had worked in Scherchen's studio—stopped composing altogether, founded the Gruppo di Improvvisazione Nuova Consonanza, and began a new activity of composer-executor). Sound-based music became an expression of their involvement, their *engagement*, in social themes and in musical praxis.

The Alternative Electroacoustic Music Scene of the 1960s

In the 1950s and early 1960s, electronic music was "an elitist affair" (Mayr 2003, 5). Professional or semiprofessional studio equipment was very expensive, and could only be afforded by institutions that were broadcasting corporations. Even getting access to these places was difficult, however. Such institutions had the money to afford these machines (or they already had them inside a radio company) and the connections, as was the case for the National Radio RAI and the Studio di Fonologia, which could produce and diffuse the music on the same radio (the model was similar to the GRM in Paris, part of the Radio Télévision Française, or the Cologne studio, part of the German Westdeutscher Rundfunk) (Novati and Dack 2012).

The "second-generation Italian studios" (the definition of first and second generation of Italian studios is borrowed from Giomi 2002, 73–91), in the wake of the Western *zeitgeist* of the second half of the 1960s, were receptive to mutual involvement, transfer of expertise, anonymous/collective creation of artworks, and reciprocal hospitality. For example, the triangulation between the S2FM, the SMET, and the NPS is reflected, on a larger scale, in the regular contacts they had with other European and international studios: the Ipem in Ghent, Belgium, the Electronic Music Studio at Brandeis University, Massachusetts, Urbana University, Ohio, the Studio für Elektronische Musik in Munich, Germany, the Museum Sztuki Wlodzi in Łódź, Poland, and the Utrecht Studio, Netherlands.

The second generation also shared other traits. Many of them started as analogue studios before turning their interest to computer music. Furthermore, they were not based in major cities. If Milan and Rome were two metropolises and capitals of electronic music during the 1950s/early 1960s, the second half of the 1960s saw the opening of three electronic music studios in Florence, Padua, and Turin, certainly three smaller, provincial cities. Albert Mayr, who worked with Pietro Grossi at S2FM in Florence, and is one of the second-generation composers, recalls:

As should be remembered, in the early sixties [first generation] electronic music was a very elitist affair. Professional and even semi-professional studio equipment was very expensive, not easy to find and could only be afforded by institutions such as universities or broadcasting corporations. Access to those hieratic places (beyond the occasional short visit) was rather difficult if you did not belong to one of the contemporary music "Churches" that were influential at the time. This led several composers [of the second generation]—who were not among the chosen Few—to do "their own thing," i.e. assemble a private studio. In doing so they usually replaced financial resources with the ability of rummaging through surplus stores of electronic equipment and the co-operation of adventurous and sympathetic technicians. (Mayr 2003, 5)

Second-generation studios, as emphasized by Mayr, were opposed to those "churches" (he refers not only to radios but also university studios) in Italy and abroad, which were recognized and subsidized by the government. Composers who felt left out from those circuits also felt compelled to initiate activities on their own. Ennio Chiggio, cofounder of the Gruppo NPS in Padova, recalls that

We felt left out, we were outcast among the academic circles, and the conservatoires of music, and we often were self-taught in electronic music. Our groups clearly were funded for this reason, in contrast to that. People with the same affinities would congregate around an idea, around the desire to subvert the institutional conducts of music making, indeed electronic music making as well. (Ennio Chiggio, personal communication, March 14, 2012)

Second-generation studios were in fact private studios (Valle and Bassanese 2014; Zattra 2003, 2014; Zavagna 2007). They were all brought into being at various musicians' homes. This was the case for Pietro Grossi, a cello player and teacher at the conservatory of music, who decided to fund an electronic studio at his home (Figure 15.1). Only later he donated his instruments to the conservatory of Florence, and, in 1965, started an electronic music

Figure 15.1 Pietro Grossi's living room at his apartment in Florence, Italy. The handwritten text placed at the bottom of the picture explains this is the studio "S2FM AT HOME—1963." Courtesy of Pietro Grossi collection, by Pietro Grossi Association.

course, the very first official electronic music course in an Italian conservatory of music, called *Corso Straordinario di Musica Elettronica*.

The same happened with Teresa Rampazzi, a pianist who fell in love with electronic music after attending the Darmstadt summer courses (Zattra 2003). The NPS group was based at Rampazzi's home (Figure 15.2); it was only later that she introduced an electronic music course in Padova conservatory of music, after donating her instruments.
And, finally, Enore Zaffiri, a piano and music theory teacher at the conservatory of Turin, started giving private electronic music lessons, and then donated his electronic instruments to the conservatory and started teaching the new electronic sound-based art.

The advantage of this "private" dimension was political and aesthetical freedom. Thus it would be preferable to call it "privatized," according to Massimo Mila and Angelo Paccagnini's definition in 1971. During the sixth episode of the *Musica d'oggi tra suono e rumore* (Today's Music, Between Sound and Noise) radio program aired on November 20, 1971, Paccagnini and Mila (who, one should not forget, worked for and belonged to the Studio di Fonologia in Milan) said:

> There is no shortage of past examples of electronic music studios of privatised dimension, such as the one music director Hermann Scherchen founded in his home in Gravesano in the Canton of Ticino, or another in Rome where worked musicians as Gino Marinuzzi Jr., Franco Evangelisti and Domenico Guaccero, or the Phonology Studio in Florence, originated from the passionate initiative of Pietro Grossi and addressed to cybernetics, and the Electronic Music Studio in Turin, founded by Enore Zaffiri. (Mila and Paccagnini 1972, in Donati and Pacetti 2002, 160, my translation)

Although from an "elitarian" position, Mila and Paccagnini are acknowledging here that other studios were arising at the beginning of the 1970s, and they were "privatized," for the reason this condition was a lot more than a simple belonging to or for the use of one

Figure 15.2 The NPS group in 1965–1968, at Teresa Rampazzi's apartment in Padova (courtesy Ennio Chiggio's private collection). This picture is taken from the official presentation brochure of the studio realized in 1968. It has been retouched by Chiggio to hide the electric cables.

particular person or group of people only (a private dimension that means being alone, undisturbed, and often dealing with matters that are not to be disclosed to others). It was more exactly a deliberate transfer from public to private ownership and control: indeed, privatized. This echoes Lefebvre's "conceptual triad," in which, in contrast to capitalist logic, he encourages alternative spatializations and clandestine spatial practices (Lefebvre 1991, 33). I borrow these concepts, and their relations with sound art, from Professor Gascia Ouzounian (Ouzounian 2008). According to Ouzounian, "when Max Neuhaus proposed the concept of 'sound installation art' in the late 1960s, it was as a kind of art that could intersect seamlessly with peoples' everyday lives, and that could transform everyday spaces." She interprets Neuhaus' works from a Lefebvrian viewpoint, as "spatial interventions with sound [that] can be considered to be transformative, acting as sites of resistance with respect to dominant spatial logics" (Ouzounian 2008, 108). Before the term "sound installation art" was invented by Neuhaus, the *Dream House* (1962) by La Monte Thornton Young was certainly another example of this spatial perspective (Ouzounian 2008, 100).

The Italian studios are similar sites of resistance. As mentioned above, Ennio Chiggio felt "left out, we were outcast among the academic circles. [We] would congregate around an idea, around the desire to subvert the institutional conducts of music making, indeed electronic music making as well" (Chiggio, personal communication, March 14, 2012). Privatization and collaboration became key to the process of renovation and the multidisciplinary process of music making. As a side note, it is interesting to see that these years also correspond with a change in the board of directors at the Studio di Fonologia della RAI. After the glorious first period of the Studio, Berio resigned as director in 1959, was replaced by Renzo Dall'Oglio, and then, in 1966, by a new board of three directors (Emilio Castellani, Angelo Paccagnini, and Luigi Rognoni), to which a single director (Angelo Paccagnini) followed (Zattra 2018).

Although for a long time this second-generation electronic studios was considered of little importance musically—Armando Gentilucci, in the first Italian book completely dedicated to electronic music (1972), believed that Pietro Grossi, Enore Zaffiri, and Vittorio Gelmetti's works (he does not mention Teresa Rampazzi, nor did Mila and Paccagnini) were "generally very immature applications" (Gentilucci 1972, 99–100)—this alleged inferiority was only inferred from local, provincial standpoints. However, the important *Répertoire Internationale des Musiques Electroacoustiques* compiled by Hugh Davies in 1967 (the first book that studied the presence of electronic music studios globally) includes works of Grossi, Zaffiri, Rampazzi, and the others (Davies 1967, 100–1 for Grossi, p. 111 for Zaffiri, pp. 104–5 for Rampazzi), and considered them the equal the Studio di Fonologia experiences. The presence of the three studios means that they were active internationally and that their network was global. They knew Davies and Davies knew them, given the fact that he contacted them in order to include them in the book. Thirty-nine countries were represented in Davies' catalog, each studio recorded under four categories: private, official, permanent, improvised; under 5,000 compositions and references; and 2,935 composers have works listed (Mooney 2013, 2015).

Among the lengthy yet overlooked experiences of the 1960s, I also mention the improvisation groups in Rome, that represent a whole new trend in Italy: live electronic music. MEV's (Musica Elettronica Viva's) activity in particular (whose translation of their name could be "Live Electronic Music"), began in the spring of 1966 when some American composers living in Rome presented a concert of experimental music in the crypt of St. Paul's American Church. During the 1960s, the city of Rome was, as Frederic Rzewski observed, "unlike any other place on earth" (Bernstein 2010). Its artistic community included The Living Theater, Giacinto Scelsi, Federico Fellini, Michelangelo Antonioni, Don Cherry, Gato Barbieri, Ornette Coleman, Steve Lacy, Trisha Brown, La Monte Young, Marian Zazeela, and Terry Riley. The nucleus of the MEV group was composed by Frederic Rzewski (composer and virtuoso pianist), Alvin Curran (who has investigated the entire spectrum of avant-garde music), and Richard Teitlelbaum (electronic researcher and pioneer of brainwave-generated music). They emphasized live electronic music rather than music recorded on magnetic tape, using "homemade" electronics, found objects, contact microphones, and a variety of acoustic instruments.

The MEV experience is relevant not only because it shows the presence of an international group of composers and musicians in Italy, and their active role in the European and American music scenes (a concert at the SpaceCraft, Akademie der Künste in Berlin, on October 5, 1967, is worth mentioning). It is also, once again, a sign of this precise historical period, the late 1960s, during the rise of the counterculture, the New Left, urban riots, and student activism. This *zeitgeist* also led the MEV group to abandon written scores and leadership, replacing them "with improvisation and critical listening" (Alvin Curran, presentation text from the *Musica Elettronica Viva*, *MEV40* collection, New World Records, 2008).

> Three young Americans with master's degrees in music composition from Yale and Princeton meet by chance on the banks of the Tiber River in Rome in 1965. Within a year they found a musical group whose goal was to turn the clock of music history back to zero, Tabula Rasa, aiming to walk on air by making music without scores or preordained structures, without conductors or any kind of authority except the human need for unity. (Petrey 2016)

The sound world of the MEV group is tinted with sociopolitical attentions, particularly against the US government and the Vietnam War. Titles of works such as *Stop the War* (1972), an improvised interplay between piano and acoustic and electronic instruments (the Moog synthesizer) are significant, coming from a group of musicians and composers who left the United States as conscientious objectors. Collectivity and free improvisation are symbols of new ways of creating new sounds and of "the fragile bond of human trust that linked us all in every moment [and] remained unbroken" (Alvin Curran, presentation text from the *Musica Elettronica Viva*, *MEV40* collection, New World Records, 2008).

It is as a result of the aforementioned activities, affinities, and shared experiences that *Musica/Realtà* was founded later in 1973. *Music/Reality,* originally an association to organize concerts and seminars, later a music journal, was founded in Reggio Emilia by Armando Gentilucci, Luigi Pestalozza, Luigi Nono, Claudio Abbado, Maurizio Pollini,

Giacomo Manzoni, Piero Santi, Vittorio Fellegara, Enrico Fubini, and the mayor of Reggio Emilia Renzo Bonazzi. They were a group of intellectuals with a strong political, cultural left-wing engagement. *Musica/Realtà*'s main concern was to be open to every kind of sound-based art, from avant-garde to popular to jazz, and to bring it to alternative places such as libraries, schools, gyms, factory cafeterias, and political places (Mussini 2004, 7). Every concert was followed or opened, or both, by debates with the audience to stimulate cultural, intellectual, and political discussion over new forms of music. The official presentation text is interesting: *Musica/Realtà* is born "from an idea of a group of democratic music operators who, in reaction to the uneasiness due to the influence provoked by our society upon the role of the musician and the musical functions, try to find new pathways of radical change of our national cultural policy, with a direct confrontation with the base" (Pestalozza 1980, cited in Scudieri 2007).

This culture of renovation fits into a wider pattern, visible in the crucial year 1968 alone, not only for political and social reasons, but also for artistic and institutional debates. Cultural institutions such the Milan Triennale and the Venice Biennale were severely contested as part of the bourgeois systems and politics. We may cite the highly questioned XIV Triennale di Milano (1968). Students demonstrated against, and journalists and critics wrote about, the "system" that had to be revolutionized, the institutions and authorities headed by an older generation of 60–70-year-old men with centralized power. Carla Lonzi writes that they contested the "recognition of the architects as a category of which the Triennale is the expression, [which had] a far too indulgent role of mediation with political, economic and industrial powers" (Lonzi 1968, 144–6, cited in Hwang 2017). It was a "system" that sometimes could be overthrown with difficulty. The same year, fierce protests against the Venice Biennale (urged on by Emilio Vedova and Luigi Nono, both Venetian and influential left-wing intellectuals) were an "over-simplified, even anachronistic, request that nobody could seriously satisfy! Moreover, the occupation of [Milan] Triennale isn't a real political act, and could be tolerated, because Triennale doesn't represent an economic center nor a structure for power. One could see the difference with [Venice] Biennale, which on the contrary does! This institution which represents, apart from its renown, big business for Venice and a powerful instrument for politics in the international art world has simply been a taboo" (Trini 1968, cited in Hwang 2017, 181).

Cooperation, Total Performance, Anonymity, and Co-Signing

"Without conductors or any kind of authority except the human need for unity" (Petrey 2016). These words portray the inner nature of the MEV group. The deliberate lack of authorship, and the collaboration based on mutual creation, are at the core of this improvisation group that supported egalitarianism. We find the same qualities— cooperation, anonymity, and/or co-signing—in the bond that brought many musicians and

composers together during the second half of the 1960s. Pietro Grossi, Enore Zaffiri, Teresa Rampazzi, and their collaborators, and the artists participating at the open-air exhibition/performance *Parole sui muri* (Words on Walls) in Fiumalbo in August 1967, were guided more by an intense, common, exploratory spirit, rather than an artistic attitude *tout court*. They believed in cooperation as a new necessity in music and artistic research, particularly when using new technologies. They were typically composer-researchers, as defined by Decroupet (2002, 42), or artist-researchers.

Grossi, Zaffiri, and Rampazzi, in particular, are examples of the so-called collective intelligence, a term coined by Pierre Lévy (1997). Pierre Lévy's theory is appropriate here because it engages synergies involving the use of technology (which is the case of the Italian studios), different persons with different skills, mutual learning, and mutual enrichment. Grossi, Zaffiri, and Rampazzi were among the first pioneers to clearly assert and demonstrate that the new sound-based technology needed collaboration at many levels (which was also manual when using analogue instruments). "We even reached an empathetic, over-gestural [even without small facial expressions, gestures, postures and the like] communication" (Ennio Chiggio, personal communication, March 14, 2012). Chiggio continues:

> Although we were all sons of structuralistic conceptualizations, we unconsciously overcame them (or maybe consciously) with proto-cognitivism. All parties contribute to the whole. At the NPS, the dialogue we developed could not be done sitting in the living room, we had to go to the laboratory [two adjacent rooms at Teresa Rampazzi's house!]. We had to test, record, listen. There was a constant feedback between our ideology, which we wrote in our manifesto [written in 1964], and the form that our thoughts took in musical object. The laboratory was essential. (Ennio Chiggio, personal communication, March 14, 2012).

Other collaborations occurred in Florence and Turin. Visual artist Maurizio Châtel was an important teammate in Enore Zaffiri's works of the 1970s. The eclectic sound poet Arrigo Lora-Totino (one of the participants in the *Parole sui muri* total performance in 1967), worked with Zaffiri frequently (Stefanatto 2014). Zaffiri also worked with composer Vittorio Gelmetti in 1975, producing improvised music with synthesizers for the RAI broadcasting company. Some years later, in the footsteps of groups such Nuova Consonanza and MEV, Giovanni De Poli and Alvise Vidolin, members of the NPS, initiated a new semi-improvisation group with Michele Sambin and Teresa Rampazzi (who left shortly after, since the improvisation approach did not fit her ideals) called initially P4 and then Arke Sinth (Rizzardi 2016). In one of the pieces, from a perspective that recalls culture jamming techniques, recycling, and music borrowing, they used "a tape with Pietro Grossi's materials" (Alvise Vidolin, personal communication, cited in Zattra 2000, 19). Friendship and collaboration mirror in an endless camaraderie (phone calls and letters) that characterized this enlarge group of Italian pioneers of the 1960s/early 1970s.

The same exploratory spirit and cooperation typifies the total performance *Words on Walls* (August 8–18, 1976), a subversion of artists' intents comparable to the *Potemkin* mutiny (Zattra 2019a). Julien Blaine wrote on that occasion: "Fiumalbo c'est Potemkine" (Blaine 1968, 26). It was an "open-work" performance (the book by Umberto Eco had

been published only a few years earlier) with poets (visual, concrete, dynamic, and mechanic poets), sound poets, sound sculptures, musicians, actors, visual artists, and, above all, the public in interaction with them. It was a chance to enjoy a ten-day (and 10-night) performance (the spirit was that of the Fluxus, Op and Pop Art avant-garde), in time and space (the little village of Fiumalbo) (Figure 15.3). It was an open-air space/laboratory, where the village became the "body of an art work" (Gazzola 2003, 13). Organizers were Mario Molinari, Claudio Parmiggiani, Corrado Costa, Adriano Spatola, Henri Chopin (who sent a letter inviting many artists), and the newly elected major, Mario Molinari. Among the artists were also Timm Ulrichs, William Serra, John Furnival, Ketty La Rocca, Maurizio Spatola, Arrigo Lora-Totino, Gruppo '70, Gianni Emilio Simonetti, Ladislav Novak, Lamberto Pignotti, Carlo Belloli, Arias-Misson, Ugo Carrega, Mimmo Rotella, Paul de Vree, Gianni Bertini, Kitasono Katue, Sarenco, Bernard Aubertin, Mario Diaconno, Dick Higgins, Gianfranco Baruchello, Jiri Kolar, Mondo Beat, George Maciunas, George Brecht, Magdalo Mussio, Franz Mon, Emilio Isgrò, Pino Masnata, Achille Bonito Oliva.

Parole sui muri represents another important occasion for some Italian intellectuals and artists trying to reinvigorate the old, institutionalized, "high-minded" and elitist caste. Alberto Tessore published an article right after the event in the *International Times*, an alternative journal devoted to culture and captured the spirit:

> It was a first experiment and the organisers hope to be able to repeat it next year. And that's really to be hoped for because it could bring a small change in the Italian atmosphere and in their avant-garde, which up to now has been very intellectualistic, refusing to take part in any action and dedicating itself to purely theoretical discussion (most literary and artistic), which actually remains very remote from the people. (Tessore 1967, 18)

Figure 15.3 *Parole sui muri* (Words on Walls), the 10-day open-air voice- and sound-based total performance in Fiumalbo (near Modena, Italy), August 1967. Source: https://www.comune.modena.it/salastampa/m accessed September 10, 2018.

The invitation of so many different artists to Fiumalbo epitomized the need for cross-contamination of genres and arts, under the common denominator of sound and voice. Among the artists who participated were Ketti La Rocca, an Italian and a leading exponent of body art and visual poetry movement who had studied electronic music with Pietro Grossi. Gianni Sassi, producer, photographer, and founder in 1971 of the avant-garde record label Cramps also participated. Later on, Cramps issued records by Juan Hidalgo, Walter Marchetti, Cornelius Cardew, Steve Lacy, John Cage, and Demetrio Stratos (the Greek singer, famous for his vocal experiments, and leader of the crossover group Alea) (Ceolin, Graziano, and Zattra 2011).

Salvatore Sciarrino was among those invited to participate in the second edition of *Parole sui muri* in 1968. On July 18, 1968, Sciarrino wrote back that he was excited by the presence of the Old Bridge Jazz Band from Florence at the festival (letter held in the Archive of the city hall of Fiumalbo). He asked if there was an organ and someone willing to play it, and other people playing "any type of instruments," and suggested a series of proposals, among which an intriguing experiment with three steel plates (he described their dimensions). In item number two of his letter, Sciarrino wrote that "all these ideas could be realized separately but also simultaneously."

As an aside, a more musicological note, it is important to emphasize that we will find the use of steel plates in Sciarrino's more recent works *Cantare con silenzio* (1999), or the two-act opera *Ti vedo, ti sento, mi perdo (In attesa di Stradella)* (2017), as if this idea was recovered from this first experiment. It is also worthwhile noting that Sciarrino's propositions for *Parole sui muri* are not mentioned in the composer's catalog (Rai Trade, Roma/Milano, version 2008). Sciarrino's catalog starts with *Minifuga con alcune licenze (a 3)* (1965), *Sonata per due pianoforti* (1966), and *II Quartetto per Archi* (1967), dedicated to Franco Evangelisti and premiered at the Festival di Nuova Consonanza in Rome on June 17, 1968. Sciarrino's website starts with the *II Quartetto* (1967). As he himself has mentioned several times, Sciarrino "considers what he wrote before 1966 as immature works of apprenticeship."

Among the peculiarities of the events narrated here, there is also the big question of anonymity. Pietro Grossi's S2FM group in Florence, NPS group in Padova, and Zaffiri's SMET group in Turin believed, at least at the beginning of their stories, in anonymity. "We all agreed to work anonymously under the name NPS (Nuove Proposte Sonore)" wrote Rampazzi (1979). The choice of the name ("New Sound Proposals") shows a firm decision to eliminate any artistic aspiration: this was pure research and each result, named *oggetto sonoro* ("sound object"), would have been anonymous. These *oggetti sonori* were reminiscent of the Schaefferian masterpiece *Traité des objets musicaux* (Rampazzi was at the GRM in Paris and she had a copy of the *Traité* autographed by the author), but they were intended to be its evolution (Zattra 2003). The idea of sound object indicates the scientific attention to each phenomenon: it is a research based purely on the timbre and the density of events. The sound objects are events perceived "in an acoustic way, in which a 'consistent' number of simple and homogeneous tracks, either linear or not, are structured and placed in a mutual relationship according to their pitch, rhythm and time, and in which the audience, the second term of the communication

relationship, is able to 'understand' the structure" (VV.AA. 1977, 44–8). Even during concerts, the NPS group claimed not to propose single pieces but, more precisely, sound objects. Since this approach was about pure research, the group paid great attention to titles, which were numbered and named according to themes: every year, one or two "dimensions" were investigated, and numbered as 1, 2, 3, etc. until the investigation was believed to be exhausted. Sometimes a number would be missing (e.g. Function 2) in the documents, because, if the piece was considered to be a failure, it was removed. Since 1970, the sound objects have borne individual titles: they are no longer part of the research series. This is explained by the change in approach that occurred from 1968, with the transition from the first period of the group to the second one. In 1968 Ennio Chiggio moved away from the group because "on one hand, collective control was claimed, on the other hand, this was felt to be demeaning for personal freedom and individual creativity, and everybody was reacting more or less 'romantically' to the harsh discipline of the rational postulates of the group" (Chiggio 2002, 1).

Although after a few years NPS members started to sign their works (the same happened for S2FM and SMET), in the beginning they trusted in the idea of common art, which reflected in the spirit of the time, as it had within the Musica Elettronica Viva improvisation group: the idea of collaborative creation that mirrored in their workflows and international collaborations.

> No one is teacher; no one is pupil; at least in the hierarchical meaning it still has in many schools. Even if only one single person does a work, it is always and only the abbreviation N.P.S. that appears. The private property of a work of music in such condition has no more right to exist or be maintained. [. . .] It is by no means a question of modesty. It is a question of accomplishing our little part in a work that goes beyond our personal limits. (Rampazzi 1970, 215)

The Micro- and Macro-Dimensions of Sound: Notation and Scores

Contrary to the improvisation groups, a common topic among the three studios NPS, SMET and S2SF was the attempt to create scores, in order to meticulously study electronic sounds and their deeper components. Scores were schematics with amplitudes, frequencies, and blocks of sounds, similar to Stockhausen's scores made in the Cologne studio. In Padova, scores were called *Audiogrammi* (audiograms). They were used as operational schemes, but also as graphic and listening scores (Figure 15.4). They were so precise that Ennio Chiggio has recently been able to resynthesize them with modern software.

Enore Zaffiri began to use "Tablatures" from 1970 for his works realized with the computer, CVS3 and Synthi A synthesizers. In 1967 Zaffiri explains that "the figure is not a full score but rather an organisational schema, that is to say, a graphic element with a purely structural function. When we speak of 'reading' a figure, we mean the process of extracting a nexus of relationships from it. Its very structure determines the outcome of events. It is a tool in the operator's hands and not an absolute determinism: it can suggest
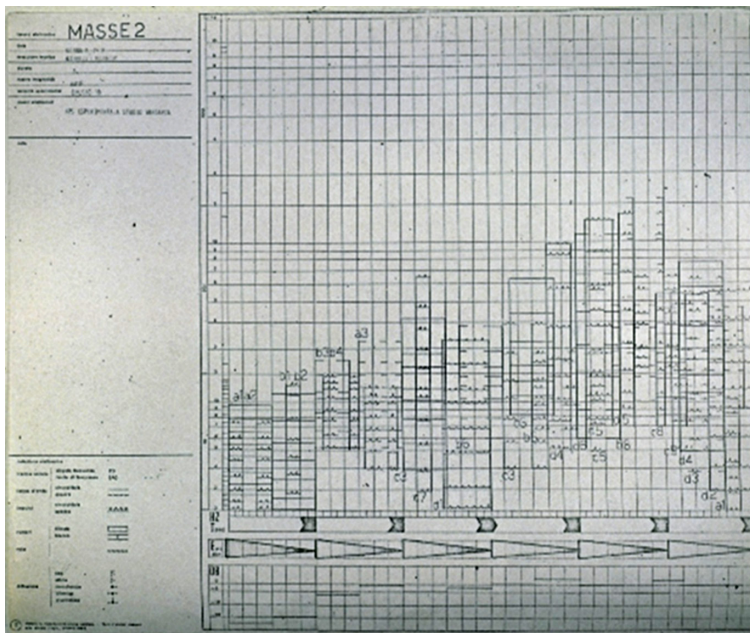
Figure 15.4 Audiogramma di Masse 2 (NPS).

infinite development possibilities" (Zaffiri 1967, 384). It is interesting to note that they retrieve the traditional scope of the score, which allow the recreation of a musical piece in the long term.

Sound and Visual: A Perfect Marriage

The tight bond with visual arts is a common issue for every experience I have cited so far. Members of S2FM, SMET, and NPS, for example, were more inclined to present the new music in art galleries, rather than in concert halls (Mayr 2007, 94). It can be said, perhaps more significantly, that the intuition of these "alternative" realities was specifically to bring together music research and visual research in one unique purpose. Notation and scores go hand in hand with geometrical, algorithmic, and numeric thinking, which is also the ideal field for visualization for conceptual and compositional study. Moreover, such scores become beautiful objects that can be featured in an exhibition.

More specifically, when Ennio Chiggio met Teresa Rampazzi in 1963 he was a member of the *Gruppo Enne*, a collective founded in 1959 by Chiggio with Alberto Biasi, Toni Costa, Manfredo Massironi, and Edoardo Landi, plus other architecture students. The group was devoted to visual-kinetic research, developed as collective work in a shared laboratory, and whose results were unsigned. And then again come scores and notation: "I remember an exhibition called *Musica scritta* (Written Music) in Padova, organized by us of the Gruppo Enne at the Teatro Verdi. The exhibition features indeterminate, open,

graphic scores by Earle Brown, Sylvano Bussotti, La Monte Young, Cornelius Cardew and others. Bussotti's scores hit me like lightning!" Chiggio recalls (personal communication, March 14, 2012; the exhibition is also mentioned in VV.AA. 1977). "This exhibition was a cold shower for a control freak like me, because it showed me the potentialities of the association between visual research and sound research" (Chiggio, personal communication, March 14, 2012). Structural painter, graphic artist, and sketcher Antonio Calderara, who was friend of Enore Zaffiri's and, according to Chiggio (Ennio Chiggio, personal communication, March 14, 2012). "brought Zaffiri to Padova" attended the exhibition.

After the foundation of the NPS group, the deep liaison between visual art and music similarly characterizes the subsequent events. The first experimental work of the group is a sound collage, which would have functioned as musical background for an exposition by the *Gruppo Enne* at the 1964 *XXXII Venice Biennale* (using Teresa Rampazzi's semiprofessional Telefunken). It was a 30-minute tape, played very slowly (4.75 cm/s) to make it even longer! They did not call it sound installation, nor sound art, but they willingly create an artwork that was not meant to be a traditional (electronic and frontal) music piece. It was at the 1964 Venice Biennale that they decided to summarize their theories in a manifesto.

> The (traditional) instrument has exhausted its possibilities, it has been raped, destroyed, it is no longer an object of communication—the performer is no longer the bearer of the unique message. Tape—and the possibility of endlessly repeated listening that it offers—demystifies the act of listening—the acquisition of new parameters requires experimentation and subsequent organization of the sound material—the new sound proposals exclude any use of the electronic sound related to the tonal system—the new proposals reaffirm the need for control and predetermination of the composition process—the new electronic systems extend the audible space by increasing its size. (VV.AA. 1977)

Ennio Chiggio recalls that "we wrote it on Teresa Rampazzi's dining room table at her house" (personal communication, March 14, 2012).

Pietro Grossi's studio S2FM in Florence was a meeting point for artists from the *Arte Programmata* movement (the Italian kinetic art from the 1960s). Among them we find Auro Lecci, Maurizio Nannucci, Paolo Masi, and art critic Lara Vinca Masini. In Turin, Arrigo Lora-Totino (the iconic performer of the international concrete poetry movement) and Enore Zaffiri patnership at the SMET, with visual artist Sandro De Alexandris, led to the parallel creation of the Studio d'Informazione Estetica (1964), to carry out research on the interrelationship between poetry, sound art, and visual art. And in 1968 Enore Zaffiri realized the interdisciplinary work *Q/81*, made in collaboration with painter Antonio Calderara.

The marriage between sound-based research and visual investigation led to the organization of several collective expositions. From December 5, 1964, to January 5, 1965, there was an itinerant exhibition: *Proposte strutturali plastiche e sonore* (Structural Plastic and Sound Proposals) organized by Galleria la Polena from Genova, whose

curators were Germano Celant and Lara Vinca Masini. The exhibition was hosted, among other places, in Florence at the Galleria Proposte, and in Torino at the Galleria Il Punto. During the exhibitions, music by the electronic music pioneers was played (Vittorio Gelmetti and Pietro Grossi, among others). According to curator Vinca Masini, author of the exhibition catalog, this exhibition's purpose was "the verification of a new 'interaction' between schemes of structural plastic (visual) organization, and structural auditory schemes of organizations, in terms not so much of a hypothetical integration between arts, but of an interrelation of *researches* [my italics] in diverse sectors of the artistic intellectual working" (quoted in De Mezzo 2006, 544). Composer-researchers and artist-researchers were at the core of this operation, as of many others in those years (often made by the same people cited so far).

Another collective and itinerant exposition throughout the "boot" of Italy was organized in 1967 (*Ipotesi linguistiche intersoggettive*); inside the section "musica programmata" (programmed music) they presented music by Grossi, Zaffiri, and NPS (unsigned and anonymous, to emphasize the collective approach) (Mayr 2007, 94).

From May 22 to 27, 1965, La Chiocciola Gallery in Padova hosted a concert/exhibition that was the first public audition of the Gruppo NPS. And there again it was not just a question of offering a concert (an audition of electronic music), but reproducing music by using the spatial qualities of the gallery (music by Zaffiri: *Tr/e 54 I* e *Tr/e 54 II e III*; Gelmetti: *Modulazioni per Michelangelo* e *Treni d'onda*; Grossi: *Progetto II*, *Progetto III*, 4; Rampazzi, *Ricerca 2*; Aldo Clementi: *Collage 2*; and Niccolò Castiglioni: *Divertimento*). Zaffiri gave a speech during the inauguration evening. He declared that Anton Weber was "the mandatory starting point to rediscover the dimension of isolated sounds, fragments, surrounded by silence" (quoted in Stefanatto 2014, 14).

> Our first revelation to the public was also our first experiment of installation. La Chiocciola Gallery was located in a basement in Santa Lucia Street [in Padova] and the ceiling was a vault. So we studied the place in order to have a different spatialization and we put one loudspeakers pointing upwards, so that it could produce unexpected sound disappearance, and the second was in the forward position in front of the audience, to avoid any possible reference to stereophonic listening. We made a lot of drawings of possible reflection using also sound reflectors, but this solution was too hard, and we could not make holes in the ceiling. (Ennio Chiggio's written remembrance, ca 2010, www.grupponps.it/04Audizione1.html)

During the exposition week, a local newspaper published an article. Its author stressed the strong connection between the sound dimension and the visual-graphical dimension of the music presented to the public (Veronese 1965). It also showed the performance score of a work by Enore Zaffiri (*Tr/e 54*) (Figure 15.5), to reveal that this music could be seen/listened to, a concept that demonstrated exactly these innovators' intentions: a musical form, a musical rhythm that can be seen. "We aimed at the purity of signs," Ennio Chiggio says, "because we wanted to end the era of the musical pentagramme. A musical note is very much close to the concept of straight line" (personal communication, March 14, 2012).
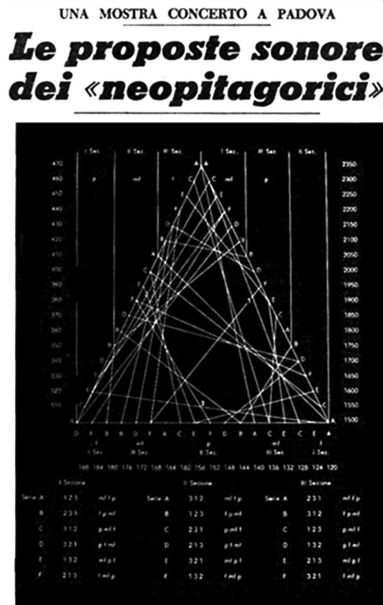
Figure 15.5 Performance score of *Tr/e 54* by Enore Zaffiri (published in Paolo Veronese, "Le proposte sonore dei 'neopitagorici'," *Il Gazzettino,* May 27, 1965).

Enore Zaffiri realized another groundbreaking work in 1968, the project *Musica per un Anno* (Music for One Year, 1968). The work, realized on tape produced with algorithmic processes, is based on a cycle of 360 days, and conceived as a possible soundtrack for different sites. In it, sound events change subtly but continuously according to months, days, hours, and minutes (its "score" is also astonishingly beautiful) (Valle 2014). This work has the same drone quality of La Monte Young's *Dream House*, although Zaffiri was completely unaware of Young's work (Valle 2014, 119).

What emerges from the events quoted above is that the attention for the visual function of sound-based art is related at the same time to the micro-dimension (time, timbre, form, generative ideas) and the macro-dimension (installations, spatialization, interpretation, listening). The strong desire to achieve figural control over the sound itself in the closed form of traditional musical pieces (mirrored in notation and scores), is multiplied and amplified in the horizontal skyline (space and open forms).

Kinetic, optical, generative art, the first psycho-cognitive studies, and the tradition of *gestalt psychology*, nurtured the experiences I have cited so far, as well as Fluxus and pop experiences, and as well as composers of electroacoustic music or instrumental music who had introduced space, open form, and installations in their musical research. Iannis Xenakis's *Metastaseis* (1953–1954) and Edgar Varèse's *Poème électronique* (1957–1958) were notorious at the time. Xenakis acknowledged electroacoustic music to be the door to add spatial techniques to traditional musical forms. However, these investigations and experiments remained little known among the mainstream musical and artistic scene in Italy at the time (though not to the aforementioned artists, of course).

International Networks

It would be impossible to cite here the numerous exchanges, experiences, and networks these composers and artists had encouraged and cultivated over time. Suffice it to remember that in their numerous writings they stated the importance of collaborating with everyone in order to expand their musical and artistic research (most of Grossi, Rampazzi, and Zaffiri's writings—mainly articles—are published in Zavagna 2007). Pietro Grossi was in Gand in 1964 "where I represented Italy" (Grossi 1966). Enore Zaffiri writes in another document: "From September 1–5, 1964, an international conference devoted to the problems of electronic instruments in music was held again in Gand. Schaeffer, Xenakis, Gazelle, Pousseur, Koenig, Pietro Grossi, for Italy, and others participated" (Zaffiri 1965).

Another major event took place in Florence in 1968: the "Maggio Musicale Fiorentino" hosted the International Convention of the Experimental Centers of Electronic Music (*Convegno Internazionale dei Centri Sperimentali di musica elettronica*), on the initiative of Pietro Grossi (June 9–14), with speakers from around the world (Figure 15.6). Concerts and "sound installations" were proposed to the public with scores exposed on the walls and realized by the Italian groups, and sounds by Vittorio Gelmetti, S2FM of Pietro Grossi, and SMET from Turin.

Besides Grossi, Zaffiri, and Rampazzi, and composers from the Phonology Studio in Milan, there were also, among the foreigners:

Figure 15.6 Marcella Chelotti (left to right) and her husband Pietro Grossi, Teresa Rampazzi, unknown person, and Antonio Mazzoni, music critic and friend of Grossi. According to Albert Mayr, this picture was very likely taken during the International Convention of the Experimental Centres of Electronic Music in Florence (June 1968).

Fritz Winckel of the Technische Universität in Berlin and Vittorio Consoli of the Studio R7 in Rome dealt with topics relating to physics. Leo Küpper of the "Studio de recherches et de structurations electronique auditives" in Brussels, discussed psychoacoustics and the theory of information applied to auditory perception of music. The theme of sociology and communication was introduced by Abrams Moles (Paris). Karlheinz Stockhausen of the WDR in Cologne described and played two of his compositions. Iannis Xenakis of the University Indiana at Bloomington (USA) dealt with the problems of automatic composition via stochastic or probability theory calculations. A collaborator of Gottfried M. König's of the University of Utrecht (The Netherlands), presented a paper on the use of computers in composition and in musical experiments carried out in teaching. (Zaffiri 2007b)

Among other participants at the 1968 conference, there were the Russian Yevgeny Murzin (who also dealt with issues of graphics), James K. Randall (who described his composition *Tema con variazioni* for computer violin), and Ivan Stadtrucker of the Experimental Television Studio in Bratislava (Czechoslovakia), who spoke about functional music and the use of electronic sounds in cinematography. The 1968 Maggio Musicale Fiorentino was as successful as other future international conferences, such as the International Computer Music Conference, which would have opened in 1974 (East Lansing, Michigan), 1975 (Champaign/Urbana, Illinois) and 1976 (at MIT, Cambridge, Massachusetts).

Conclusions

In the past two decades, Italian scholars, composers, musicologists, and sound artists have repeatedly stressed the importance of the long-forgotten contributions of the 1960s in Italy. (The vast majority of the music has only recently been released on disk.) A series of conferences, articles, books, vinyl, and CD issues (or re-issues) have been dedicated to this electronic music scene. One of the first occasions was the CIM conference (Colloquium in Musical Informatics) in 2003 in Florence. Nicola Bernardini wrote in the preface to the proceedings:

> Since the last edition of the CIM [2000], two much-beloved and respected pioneers of Electro-acoustic and Computer Music, Teresa Rampazzi and Pietro Grossi, have left us— mixing our sorrow to the mandatory obligation of perpetuating the memory of their work (which coincides with the origins of Computer Music in Italy). This Colloquium and these proceedings are dedicated to the memory of Teresa Rampazzi and Pietro Grossi. Therefore, a focus on the historical aspects that are starting to emerge in the Italian and international scene of Computer Music (and the analyses of their continuities and discontinuities) seemed to be the most obvious choice as a central theme. (Bernardini, Giomi, and Giosmin 2003, 4)

The list of publications that followed included (De Simone 2005; Giomi 1995; Giomi and Ligabue 1999; Mayr 2003, 2007; Valle and Bassanese 2014; Zattra 2000, 2003, 2008,

2014; Zattra, Canazza, and Rodà 2011; Zavagna 2007). The new series of studies—based on historical, philological, and analytical methods—does nothing but corroborate what other international scholars had previously seen in the Italian electronic music scene. Daniel Teruggi writes that it has a "regional" quality, in opposition to the centralization of studios such the GRM or IRCAM in Paris. "Italy is an absolutely original example, due at the same time to the regional character of its political organization, the personalities and the type of approach of the first composers of electroacoustic music, and the impact this music had on the public. Studios were dispersed and located in the principal cities of the nation" (Teruggi 2001, 67).

In this chapter I have analyzed this originality. I have portrayed the innovative impact of these "alternative places" (Giomi 2002, 73). Alternative sound-based experiences of the 1960s and the early 1970s in Italy were characterized by revolutionary approaches not only applied to sound and the compositional dimension. Quite the contrary, revolutions in sound and compositional or formal approaches were powerfully connected, even derived, from social and political positions. The privatized dimension (as opposed to national government institutions), collective approach to creation, lack of leadership, interdisciplinarity, and the bond with visual arts are crucial characteristics that help to understand and appreciate their sonic outcomes.

There are other stories that I did not mention in this writing, and would need further research. Alvin Curran wrote to me:

> One very brief missing piece is the group collectively founded by Domenico Guaccero, Luca Lombardi and myself, who in the early 1970s performed as a Trio of VCS3 Synthesizers. We left little trace but were briefly on the case! There too was the electronic music studio at the Academia Americana di Roma (the American Academy of Rome) founded by John Eaton with one of the earliest voltage controlled synthesizers: The Synket by Paolo Ketoff. It is there using their professional tape machines that I composed my first important tape piece called *Watercolor Music* (1966). What I find more interesting is: culturally how isolated this music was, and how—until the PCI's [Italian Communist Party's] full embrace of Afro-American and European free improvisation and its popular appeal (see Rai Radio 3 later broadcasting "Un certo discorso" 1976–1988)—the so-called new music (the Darmstadt variety) was a generic anomaly all over this bel Paese excepting for the Festival Nuova Consonanza and the Palermo new music Festival Internazionale di Music Contemporanea. (A. Curran, January 21, 2019, via e-mail)

There is perhaps a reason why this part of the Italian music history has long remained in the shade after the first rebellious experiences. Many of the aforementioned musicians returned to institutional positions in the following years. Grossi, Rampazzi, and Zaffiri did everything they could to convince the directors of the conservatories of music in Florence, Padova, and Turin (respectively) to open a course of electronic music, and it is thanks to their efforts that today almost every Italian conservatory has a bachelor or a master's degree in electroacoustic music (Di Scipio 2014). It was as though the making of the new sound-based art, through the use of technology and with new aesthetical approaches, had been brought in everywhere, even in the most skeptical and traditional music arenas. It had

become normal and accepted by everyone. Once the revolutionary leaders had impacted the musical scene, their disciples spread the faith.

There is of course another more critical reason, which has to do with archival awareness and historicization. Due to the continued acquisition of knowledge and the urge of experimentation by musicians, composers, computer scientists, sound engineers, technicians, musical assistants, etc., that led to postpone, and often to forget, the organization and preservation of their materials, oblivion and/or inaccurate preservation have been going on for a very long time. But even if archival awareness and the historicization of the electronic music past are rather recent disciplines, the innovative and revolutionary impact of the 1960s and 1970s upon the following generations of sound-based artists in Italy is flagrant. Suffice it to mention the name of Luigi Nono and his works of the decade 1980–1990. Luigi Nono had a strong interest in music as a performance event, an idea that elicited thoughts about the incompleteness of any sound recordings, as for any type of fixed and definitive notation. In *La lontananza nostalgica utopica futura*, composed in 1988, Nono created a piece for eight prerecorded tracks, but the Live Electronic Musician (Plessas and Boutard 2015) has the task to prepare them, mix them, and think of the spatial distribution. This liberty leads to new versions of the piece every time it is played in concert. *La lontananza nostalgica utopica futura* is almost an open work, and thus, equally, are any of its recordings. (To Umberto Eco, the idea of openness inside any "open work" is not intended as "infinite possibilities" and complete freedom, rather a liberty inside a range of preestablished rules and interpretative solutions.)

Nono's works and their late musical approach have much in common with a typical sound art experience, were it only for the crucial and imperative dimension of the *listening* ("ascolta," listen!), which is a fundamental basis in his music. *Prometeo. Tragedia dell'Ascolto* (1984–1985), *A Pierre. Dell'azzurro silenzio, inquietum* (1985), and also *La lontananza nostalgica utopica future* (1988) and *"Hay que caminar" soñando* (1989)— where soloists must walk around (Daleman forthcoming)—are, if we relate to the definition made by Alan Licht, "not [. . .] a stage show" (Licht 2007, 13). They are "defined by the space (and/or acoustic space) rather than time" (Licht 2007, 169). These are dramaturgical experiments "subsumed in a sound world in which *sight* gradually cedes to pure *listening*" (De Benedictis 2013), in the pursuit of new sonorities, new manners of "experiencing sounds (by performers and listeners) but also new configurations for concert venues" (De Benedictis 2013), with the "determination to break down the traditional barrier between stage and audience [. . .], for he saw this as the relic of an 'antidemocratic' ritual with 'the faithful attending and the celebrant officiating'" (Nono 1962, p. 122, cited in De Benedictis 2013).

Following the experiences of the 1960s and early 1970s described in these pages, Luigi Nono, as well as Salvatore Sciarrino with *Perseo e Andromeda* (1991), *Noms des Airs* (1994), and *Lohengrin II 2004* (Vidolin 2005), and Agostino Di Scipio (Zattra 2014), are only a few among the most significant examples of Italian musicians who have experimented with new solutions involving sound and space.

Acknowledgments

Sounding in Paths, Hearing through Cracks

Sonic Arts Practices and Urban Institutions

Elen Flügge

Introduction

This chapter considers contemporary sound art and the use of listening as a means of interrogating institutions, understood as organizations, practices, and doing. It examines a recent exhibition in Belfast that featured a number of scores and collective projects including *Listening Wall* (Iris Garrelfs), *Path of Awareness* (katrinem), and *Soundspace Manifesto* (Gascia Ouzounian and Sarah Lappin). On an experiential level, sound art and its traditions can pose a disruption to habitual ways of understanding and inhabiting everyday space. Sound art can also challenge institutionalized practices in other fields, such as architectural and urban practice. This chapter considers a speculative sonic urbanism where sound art may play a deinstitutionalizing role. At the same time it considers how the sonic arts themselves are undergoing institutionalization in becoming mainstream practices supported by cultural and educational institutions and infrastructures.

Walls for Ears

April 17, 2018. I am at an exhibition opening in a gallery, in the center of Belfast city. This gallery holds a large number of sound works, though indeed the place is fairly quiet. Seeping in are humms and vrmmms of cars passing on the busy road outside. A few people are talking and holding wine. Some are absorbed by numerous sheets of paper tacked on the walls. The papers have text or graphics or pictures on them. There are more stacks of paper, copies of those on the wall, resting on low benches. These are part of a "Listening Wall" by Iris Garrelfs, a collection of scores and works about listening from various composers.

A score that appears to be handwritten catches my eye. As does one with a large yellow spot. They are arranged in clusters along two walls, meeting straight rows of cards across the third. These cards outline a "Soundspace Manifesto" by Gascia Ouzounian and Sarah Lappin. In each pair of cards, a red and grey graphic design displays a tenet, while another expands on the tenet in relation to practices and theories from sonic arts and sound studies.

A second room features maps and documentation from walking-based works called "Path of Awareness" by katrinem. A garment hangs on one wall. Shoes occupy windowsills. A screen shows images of past walks with headphones to listen in to the mediated streetscapes, accompanied by tapping footsteps. Guided performances of the route by the artist take the exhibit outside through Belfast city streets.

Building Up and Tearing Down

This is one instance of a sound art exhibit, within a new music event, based in a sonic arts research institute. The show featured works within works. Alongside its nesting of works was a nesting of institutions and conventions. Sound arts can be read as rife with institutional critique, while also considered in relation to various institutions that support its practice—and synchronously, recognizing practices within it that have already begun to institutionalize. Titled *Silent Sonorities*, the exhibit above was an offshoot of the Sonorities Festival, based out of the Sonic Arts Research Centre (SARC) at Queen's University Belfast, Northern Ireland. Events took place at venues around the city, including in this gallery, Queen Street Studios (QSS). With this exhibit as my point of departure, I will reflect on some ways that sound art oscillates between seeking to deinstitutionalize and challenge institutions, all the while embedded in institutions and undergoing its own processes of institutionalization.

There are numerous ways sound artworks can be framed as questioning institutions: by pursuing listening as a disruptive practice; by resisting traditional cultural forms of musical production and consumption; by seeking out unconventional sites for aesthetic experiences, such as public streets or domestic spaces.[1] Artists may invert compositional focus, seeking to structure listening behavior rather than shape sonic material, or compel audiences to navigate a sonic environment. In numerous ways, sound artworks encourage different forms of attending to situations, ocularcentric traditions, and institutions—such as by reframing them in relation to a listening perspective. The means that artists use vary from detailed scores and instructions, to signs, icons, broadcasts, installations, sculptures, or performative irritations to everyday environments. Take, for example, lineages of sound art rooted in resituating an everyday aural awareness, a lineage often traced through works of John Cage as well as art movements such as situationists, Fluxus, and performative events such as happenings.[2] These are exemplified by subtle, site-tailored interventions in public spaces, à la Max Neuhaus, to be stumbled upon by unsuspecting passers-by. For works in city spaces, this can involve changing how a listener physically occupies and conceptualizes the given urban situation. Often these compositions are more concerned with altering how a listener frames what is audible, than with adding sounding content.

Figure 16.1 A gallery full of sound, QSS Belfast. Courtesy John D'Arcy.

The change is effected, that is, through manipulating the listener in their process of listening.

The *Silent Sonorities* exhibit provided a means of thinking about these dynamics as it featured works that self-reflectively explored listening as a means of creative provocation. These works collectively positioned listening as an interrogative and investigative action. Many were concerned with the role of listening in creating awareness, connection, and conceptual innovation. Having previously reviewed this exhibition (Flügge 2018) it occurred to me that the ways in which these practices and acts of listening were framed in the compositions indicated their own institutionalized culture of listening. While this interrogative listening can be a means of disrupting institutions by redirecting habitual practices, the strong tradition of interrogating listening—or interrogation through listening—can itself be understood as an institutional practice within sound arts. In other words, this practice of deinstitutionalization has itself become formalized and well established here, which is to say, well-instituted.

As deinstitutionalization is one concern of listening-based artworks, which are themselves variously formalized and part of formal institutions, then institutionalization and deinstitutionalization are not mutually exclusive affairs: Even if a practice or structure may have become institutional in one context, such as a field of practice, it may still support new perspectives in another field. The works of this exhibition in particular, with their references to material architectural structures, focus on urban space, their navigation through immediate and imaginary places, and their call to reconsider urban planning, all evoked questions for me about the interplay of sonic arts and urban design. As a listener bringing my own experiences, interests, and conceptions of what sound art entails, this text is one perspective on how some works are connected to particular institutions and how these might bear influence beyond a sound art sphere. Thus this chapter contemplates the interplay of sonic approaches with fields such as urbanism, musing on how listening practices suggested by such works may contribute to building up and tearing down walls, both perceptual and material.

Listening Walls

The paper sheets around the first room formed *Listening Wall*, a collective project by sound artist Iris Garrelfs. Motivated as a response to a current political climate privileging isolationism and erecting walls over inclusion, the project conceived a "wall" seeking to connect, rather than separate. It is an ongoing project, primarily comprised by a growing number of scores from contemporary composers. In this, its third iteration, fresh scores mingled with ones from previous shows as well as a number of historical works, such as by John Cage and Yoko Ono. The scores displayed wide-ranging styles. Some short, poetic, reminding me of Fluxus event scores. Others were longer, instructional, didactic. Mysterious graphics, images, and games were present as well.

The project is both a work and collection of works; it is a work of collecting. Garrelfs's role, as enabler, gatherer, participant, and networker of artists and scores, is not quite captured by the title of curator. The project can be considered in relation to a wider scope of her explorations, which probe into the background conditions and protocols of sound artists' practices[3]. *Listening Wall* is both experiential in its atomic parts, that is, in the immediate realization of a given score by a given listener in a given moment, and akin to an academic exercise in its overall structure. The listener-viewer is left to curate their own experience of the scores: Select those that interest them, perform as they choose and discern links between the pieces of the wall.

Many connections could be made across the scores of *Listening Wall* through recurrent themes—suggesting shared concerns among a number of practitioners of sonic arts. Environmental awareness; the sense of in situ listening; references to urban places, to internal space, to the trace of sound on body; instructions to pay attention, sit, or stand, to move and to remember. References to walls were notable through text and image. A few scores made explicit reference to occasions where *Listening Wall* had previously been erected. What struck me was how a familiar canon seemed palpable, with scores that harkened to particular influential forerunners. With old and new interspersed, the collection likened a live archive featuring a lineage of various approaches to a particular, silent or non-sounding, form of sound art.[4] A retrospective—or perhaps a retro-auditive?

The *Listening Wall* seemed to progress from decades of composers exploring listening as the medium of the work. This lent a sense that this investigation of listening—as well as its valorization as something that can respond to sociopolitical situations—had become such an integral part of sound art as to be nearly institutional itself. In this respect, I am using institutionalization as shorthand to talk about different ways and degrees to which sound arts are formalized. In some cases, formalization is linked to an institution with a tangible, architectural presence, like a university, a gallery, or a sonic arts center. In other cases what is under consideration is the individual formalization of practice, such as that of one artist—sound art in its micro-institutionalization. Seeing these scores along gallery walls was a chance to reflect on how far the interrogation of and through listening might be institutionalized in this field of practice. The exhibit seemed to confirm an already discernible tradition of approaching this niche of sound arts: scores and instructions that guide a listener-reader, drawing them in as a critical performer.

Disruptive Listening

A lasting influence can be attributed to Pauline Oliveros' compositions and Deep Listening practice, which encouraged opening one's awareness to one's current surroundings and to all sounds. This was supported through works such as Oliveros' *Sonic Meditations*, short scores that invite one to practice listening, often incorporating attention to an individual's bodily presence in situ (Oliveros 1974). Her *Meditation V. Native* reads, "Take a walk at night. Walk so silently that the bottoms of your feet become ears." (Oliveros 1974). In such scores, listening is construed as bodily, physical, mental, and interactive. It involves a simultaneous inward and outward attention—sound making must be attended to and adjusted to, while the listener must also reimagine their listening organ as displaced, bodily, into the mobile tactility of the sole of the foot.

Listening can also be imbued with a revelatory, revolutionary quality, uncovering what is otherwise overlooked, while acting as preparation for outward expression. Composer Hildegard Westerkamp, another pioneer of exploring listening as a practice, has suggested, "An ongoing listening practice tends to become a way of life that inevitably reveals and amplifies that which is ignored or normally avoided" (Westerkamp 2015). Moreover, Westerkamp frames listening as disrupting, intervening into the hectic chaos of modern life. Disruptive in "the sense of stopping routines, habits, unconscious gestures, reactions and behaviors" rather than a "one-time shock" (2015). She proposes "our listening be an ongoing practice, so present and attentive that it asserts change inside us over time and as a result eventually in the soundscape, in our communication with others, in society at large" (Westerkamp 2015). Listening is thus a personal act, but one which, in transforming the individual, can ripple out into wider social influence.

Composing Audition and Conventional Audience

A significant number of sound artworks use listening attention itself as material for composition. Akio Suzuki and Peter Ablinger are among composers who have long used signs and scores—non-sounding means—to incite particular acts of listening or auditory behaviors. Suzuki's works include a series of listening points, his "Oto-date," which, since 1996 he has recreated for various cities, finding special spots to stand and hear, that are marked with symbolic ear-feet. A recent realization was in Bonn where Suzuki served as "city sound artist," 2018. Ablinger has numerous "Hörstücke" or "Listening Pieces" of which he writes that it is not so much the piece that is the point, but hearing itself.[5] While these might be installations or tape pieces, many are text-based examples whose performance is entailed in their title, such as "Ohrstöpsel" [earplugs], "aufnehmen gehen" [walking recording/going recording], "sitzen hören" [sitting listening], and so on. Other of Ablinger's works are invitations to listen in public sites through the placement of objects, such as groups of chairs set up in public spaces as though indicating an audience area.

Such compositional strategies diverge from listening formalities in musical contexts, which focus on shaped sonic material and give little direction regarding how an audience,

or individual audient, should attend—except, perhaps, to sit and be still. Often works rely on the conventions in place, as regulated by given cultural institutions of listening. That new music seemed, despite other sonic, structural, and conceptual innovations, to have failed to induce innovations in receptive situations, led composer Bill Dietz to works centered on the audience—particularly concert listeners—and their relationship to a played musical work. Dietz highlights the figure of the claque—a person paid to react in a specific manner to a musical or theater performance as part of the audience. For Dietz, "discovery of the claque stood for something like the internalized institutional apparatus of the classical concert as distinct from its architectural enclosure (the more literal and obvious parallel to the museum)" (Dietz 2017, 9). This figure, and a series of scores for audience reaction, which Dietz based on "instances" of actual reactions to various performances of the Donauschingen Musiktage Festival, are means to reflect on this aspect of institutionality—the culturally structured behaviors and conventions within particular sites (and within particular regions). Decorum extends to all manner of behaviors, listening is not exempt.

Dietz probes this further through *Tutorial Diversions*, presented as "compositions of listening" (Dietz 2015, 14). One of these, *3-Part Dances*, instructs a listener to keep a sound source at the threshold of audibility. The sound, meanwhile, is playing from a file that has been processed through a profiling software giving it a particular dynamic envelope. This eventually increases in amplitude so much that the listener might be compelled not only out of the room, but outside the house and down the street (Dietz 2015, 50–3). This piece pivots on a particular kind of action, namely, a listener moving away from a sound source; a good listener is one who barely hears. It also underlines the social contract implied in being a good listener by problematizing it. In this work you might be faced with a dilemma: continue with an odd and potentially very inconvenient exercise, or renege on your responsibilities as audient—that is, go back on an implicit promise to listen as you are told.

Audience conventions and listening behaviors expected in forms of sound arts—particularly sound installations and interventions in public space—diverge from conventions of some (e.g. classical) music's (concert) audience. This is the case for conventions relating to time as well as space. Sound artworks frequently dispense with having a set, collectively experienced, beginning or end to a piece. Further, it is far less common to have an immobilized audient, in a designated audience area, while sound is played in a separate stage area. This piece suggests that, not only can domestic and urban spaces be used within a work, but a work is equally situated in and at a listener who is performing it. Out in everyday, shared or public spaces, performing listeners are in interplay with the incidental sound environment, passers-by, pigeons, street sweepers perhaps, entering a transitory listener's experience and becoming part of the piece. These works move away from institutional practices of musical listening by literally moving away.

Tender Reflection

Many approaches to sound art that focus on composing listening and guiding auditory attention have seemed provocative to me, insofar as they disrupt particular institutionalized

forms of listening and audience behavior. But even then, anti-institutionality is not so easily achieved, as we are the main listeners. We—people—are the acculturated products and producers of institutions ourselves. This implies a hardening of aural bias, which, perhaps, needs to be tenderized.

The handwritten score that caught my eye on the *Listening Wall* was Cathy Lane's *Score for Everyday Tender Listening* (July 2017). Written in ALL CAPS it is "To be performed anywhere, at any time, as often as possible." It has two stages. In the first preparation stage you are instructed to "Sit quietly and think about yourself. Consider how one or more of the following might affect your everyday listening. Your gender, your age, your nationality, your height, your language . . ." and the instructions continue to list class, home, mobility, skin color, education, and health. In the second stage, "Performing Tender Listening," you are instructed to "Practice your everyday listening while considering how a change in one or more of the above might affect that listening" (Lane 2017). Lane suggests that this be done while going about everyday activities without "absenting" yourself.

Lane's score reminds us that listening is not one type of act. It is not neutral or pure, but in fact is very much biased, informed, and colored by situation, upbringing, and attitude. While the score gives a sense of following in a lineage of sound artworks as awareness exercises, rather than positioning listening as an exceptional state separate from everyday activities and exchanges, the "preparation" stage suggests that listening can hardly be extracted from all the various components of a personal identity. What one might achieve is heightening the recognition of those influences that perpetually tint one's perception, auditory and otherwise.

A tender listening, then, seems a nudging toward empathy, particularly as Lane suggests maintaining this practice, in which you consider various identity-based influences, during exchanges with other people. Elsewhere, Lane has questioned "aspects of listening as it is formulated within current sound arts practice" (Lane 2017), such as the idea that one must learn listening from an expert, or that listening needs to be a solitary activity. To "absent" yourself in order to "listen" also reads to me as though referencing an expected distancing of self, psychologically rather than physically, from the everyday. It suggests that we, as listeners to music and sonic arts, falsely think we are meant to hold personal subjectivity at a remove in order to listen with a more objective authority—supposed greater accuracy—to a particular work. This idea seems persistent, despite the writing of theorists and artists, such as Salomé Voegelin, emphasizing the contingency of listening subject and the sound artwork, which is produced, as an object or event, through that auditory engagement (Voegelin 2010). Listening scores, in many ways, underline this contingency, making explicit the necessary presence of the listener. Lane's score in particular could be taken as a reminder that institutional critique might first involve attending to ourselves; that we are in fact the institutionalized beings that some sound art could seek to question. This leaves me with a sense that the degree to which works like these scores can be institutional critique is the degree to which we, as listeners and participants in the work, allow them to do this: allow them to provoke radical thought, or dismantle habitual bias. That is, how far we, as listeners, are willing to tear down internal walls.

Legible Curation

A source of humor in Garrelfs's *Listening Wall* is the inherent puzzle with which it confronts you: The contradiction of presenting, as a wall (normally something concrete, figuratively or substantively), a work that is only just materially present—just paper, just words, just thoughts, just images. A work that is not even one work, but a constellation of gathered impressions, conceptual nodes with imaginary threads—at least for the sound art initiated, or a listener willing to take time to look. A listening wall—would that mean one that is porous—where we hear through its cracks? As we hear through small cracks in our body, which also utilize a flexible wall—a membrane of the eardrum—between inner and outer, walls can be thought of as both internal and external. Each of these delimits the attention and awareness of a practitioner, a listener, an inhabitant. They are supportive structures as well as obstructing ones, creating the rooms for a home, as much as dividing societies. Fruitful artworks can provoke new ideas through metaphor, sound artworks particularly so, by framing situations through listening and sound—a trusting of the ears and their "hearing perspective," coaxing us to be *sonic thinkers* (O+A 2009, 63), that is, to frame experience in reference to sound and auditory metaphors.[6] These openings to new avenues of thought can play on other fields. What would walls hear? Would they hear both sides of a place, like ears on both sides of a head?

With Lane's score in mind—reflecting on personal previous experiences and bias—it occurs to me that these ruminations, on how self-reflection through listening is an important material of current compositional practice, presupposes coming to this exhibition with a certain prior knowledge of sonic arts practice. This leads to a question of how far the works on the *Listening Wall* consciously rest on foundations built from precedent conventions in this sound arts practice. Perceiving shared interests in the substance of the scores could be taken as indicating that the exhibit raised my awareness of my own canon of listening culture as an informal institution—an indoctrination—rather than evidencing external institutionalization.

The reality may lie somewhere in between. To be specific, the exhibit coalesced within the framework of the Sonorities Festival. Sonorities, as a contemporary music and sound art festival that has run since 1981, is a musical institution itself. Still, like a gallery, the form and content of this event—how it is instituted—has evolved over time, partly in response to shifting ideas of what constitutes "new" or experimental musical practice, as well as the calls and focus of its organizers (in 2018 co-directed by Simon Waters and Miguel Ortiz). SARC, despite a name pointing to an institution in a bureaucratic-organizational sense implying a degree of stasis, is also a fluctuating entity, though perhaps less obviously than Sonorities as a festival. Currently a department in the School of Arts, English and Languages, "SARC" is neither fully separable from nor contained by either its physical building—with designated sonic arts spaces—or its shifting research and performance community. The architectural and the social manifestation of SARC overlap, just as do practices of sound art and sonic research within it. To be specific about institutions is to observe their ambivalent, fluid identities.[7]

The *Silent Sonorities* exhibit, one among numerous 2018 events, was curated by John D'Arcy, an artist and lecturer at Queen's University Belfast who is also a former student at
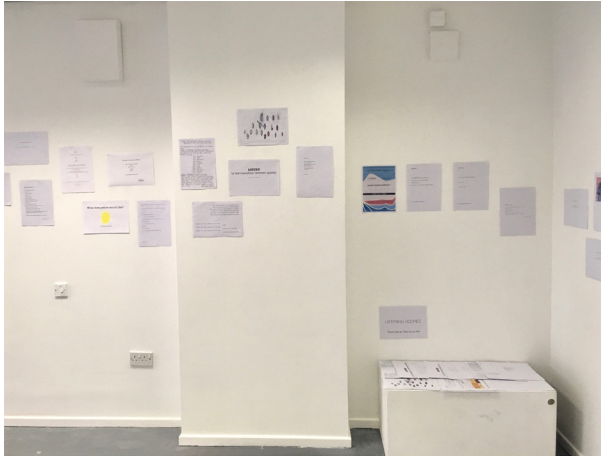
Figure 16.2 Image of *Listening Wall*. Courtesy John D'Arcy.

SARC. In this regard, the exhibit stems from an individual's institutionally shaped interest in a strand of listening-centered sound art, particularly concerned with qualities of urban spaces. This interest bears traces of previous SARC-based practice. Just as instrument design or interactivity might form strands of research weaving through the institution over time, listening attention to urban space is a topic area explored in practices of SARC's former and current researchers, students, lecturers, and visiting practitioners.[8] When, as happens, people rejoin the institution at which they were themselves partly institutionalized, strands feed back in and a more palpable culture—a stronger node of research and practice—can form. Through the exhibit, featuring projects that connect listening and urban environments, D'Arcy draws on such threads, interests that could be described as institutionalized in that they crystallize within and through the more formal structure of an academic-creative institution. Such institutionalization develops through an accumulation of individuals' interests, focused through the broader organization, in this case, SARC. Framed in this way, the content of *Silent Sonorities* connects to a palimpsest of SARC research and practice.

While this begins to distinguish reasons behind sensing a shared listening culture in the works, it does not address the issue of legibility. How would those visitors not inducted through this, or any other, sonic arts department, perceive the references underlying the scores? Or underlying the entire exhibit—for a start, that there is a tradition of non-sounding works still understood as within the bounds of sound art? How accessible are such scores? In a talk at the associated Sonorities Festival symposium, Garrelfs herself acknowledged related questions with regard to the challenges of acting as composer, collector, and curator: the dilemma of deciding whether to discriminate between scores in reference to her own taste, or to leave open a broad palette with the hope of offering any potential listeners a foothold into the project. Thus, simple prompts hung alongside obscure scores.

Misgivings about aesthetic accessibility imply there is a way to successfully "read" given scores, presupposing an aesthetic value system that the scores themselves might not necessarily impose. It suggests that reading and performing those scores demands a form of expertise—a familiarity with sonic arts and degree of being "versed" in a sonic thinking

accompanying it: a line of thinking beginning to smack of sound art elitism. Perhaps, as Kim-Cohen has described text scores, these works "disperse power in all directions [. . .] flowing equally toward and away from all involved" and one might always "accept, decline, evade, reverse, censure or satirize the instructions" or ultimately subvert any implied control (2009, 55), which could mean questions of legibility are beside the point, as reception has free reign. Could such scores in fact be legible enough for any who came? It is possible—after all, the exhibition was situated physically in a codified place for art. A gallery, even with countless variations in form and organization, is a familiar cultural institution. Presumably the site itself draws a public primed to be in an aesthetic-receptive mode. But what sort of reception?

Reflecting on the gallery as a "site for the production of soundful happenings" (Kelly 2017, vii), Caleb Kelly points to an established visually-oriented documentation and discussion of artwork as a reason why this sonic facet can get overlooked. Kelly argues "we always approach art with a thick employment of the senses, from within our bodies. It is then the mechanisms of the art institution that continually direct us to think about art visually [. . .]" (Kelly 2017, 17). If that is so, it brings up another tension: the gallery, as an institution in which the works are positioned, might be directly counteracting the listening attitude that the works inside were seeking to encourage. Would the sonicity of the scores be missed were it not for the "listening" literally writ large on the physical wall? Even accepting the individual scores as invitations to a disruptive impetus to listen, there was little overtly institutionally critical about the room itself, with its white walls and ornamentally displayed pages. A step in that direction might be escaping. Taking a cue from Neuhaus, Westerkamp, or Dietz and going mobile.

Sounding in Paths—Guided Listening in Public Space

April 18, 2018. I return to the gallery the next day to participate in a walk performance by katrinem. The route for Belfast is traced as a large red shape on one wall. Pictograms show situations at numerous points of the walk, serving as instructions or map or score or all those at once. On windowsills, shoes frame a vase with a yellow flower, and on the wall behind the video player hangs a simple dark-gray garment. The curation of the room is different than the first, papered with sheets. Here there are touches of deliberate materiality. A bench covered in a mottled gray felt, the clothes, making tangible references to body, and a particular person.

Steps and Paces

One way sound artworks can be construed as disrupting familiar ideas of aesthetic listening is by placing us, bodily, in varying situations—beyond the concert hall, outside

the gallery. This is a facet of sound art that feels more tangibly counter-institutional: works taking place in situations that are everyday, which are not-quite-so-sanctified as sites of art. It is counter-institutional to many familiar musical listening practices, in that while a significant number of musical works assume a stationary listener, a significant number of sound artworks require a movable one.

Besides attention to listening as a creative practice, physical movement has an important place in sound art. Numerous pieces encourage listeners to be physically active, frequently by walking around. A much cited example, Christina Kubisch's *Electrical Walks* (2004–), invites you to borrow special headphones to explore the normally inaudible electromagnetic frequencies invisibly ubiquitous in urban space (Tittel 2009, 61). Some works have asked listeners to drive, as in Max Neuhaus's *Drive-In Music* (1967), or ride a bicycle, as in Kaffe Matthews' *Sonic Bikes*,[9] or simply stand in specific spots facing particular directions, as with Suzuki's aforementioned *Oto-date* (1996–). As with works of Dietz mentioned above, not only are people *encouraged*, but they are *compelled* to bodily and geographically engage in order to complete and thus experience certain pieces (or else, one might say: to experience and thus complete the piece).

Soundwalking is a widespread sonic arts practice, with abundant iterations of walking and listening, to diverse ends. Artist and researcher Andra McCartney has written extensively on the wider implications of soundwalking and various artistic approaches, including composer Viv Corringham's focus on voice and place for her series of *Shadow Walks* and sound artist Janet Cardiff's use of mobile audio storytelling, as well as Westerkamp's work (McCartney 2014, 226–7). Westerkamp in particular connects soundwalking with "rediscovering" and "reactivating" a sense of hearing (Westerkamp 1974, 2007, 49). Soundwalking has been used to encourage awareness of auditory conditions in a given place, or initiate a dialogue on sonic experience with participants who may or may not be "trained" to listen in a given manner or context. Besides sonic arts, it has been a core practice in acoustic ecology and remains closely linked to related fields such as soundscape studies. It is increasingly acknowledged as an aspect of research methodologies

Figure 16.3 Artist's shoes, yellow flower. Courtesy John D'Arcy.

in other fields, particularly those entwined with ethnographic practice, sensory studies, and urban studies (cf. Radicchi 2017).

Silent Sonorities featured walking works by artist katrinem, who investigates ambulatory interactions with city space. Her work includes studies of specific sites in which she tracks people's use of the area on foot, for example a video work in which she sonifies individual walking patterns over a large square in Berlin (*Gendarmenmarkt 2007/2010*). Overall she is concerned with how "the built, controlled and organized urban environment and its atmospheric qualities influences walking behavior and rhythm."[10] The *SchuhzuGehör* or "Path of Awareness" work created for the exhibit was part of an ongoing series of paths winding through various city areas; routes to follow while attending to one's step sound, experientially embedded in a particular urban space. The given route is determined through the artist's preparatory exploration of the city and is scored as well as performed as guided listening walks. If Lane's score hints at internal partitions and how these delineate listening, katrinem's paths explore external, material walls, connecting Garrelfs's conceptual *Listening Wall* to the physical bricks of Belfast.

Scores of Cities

Beginning with an original conception of a "Path" in 2012 for a sound art festival in Braunschweig, *Klangstaetten Stadtklaenge*, katrinem has repeated and developed the process to create paths for cities including Berlin, Marseille, New York, and Tehran. In each place, katrinem composes a route informed by a period of walking exploration and fieldwork on site. During this phase she observes movement patterns in the area and characteristic urban architectural structures. The work then manifests in multiple forms. While present at the exhibition site, katrinem realizes a set of performances of the walk, guiding participants along the route, wearing specially adapted "soundful" shoes and using deliberate footsteps. These shoes tap along the ground and resonate in the city's material environment. Beside this, recordings of the route made with binaural audio and video are produced as an audiovisual composition to be experienced over headphones in the gallery or online. Finally, katrinem also produces a score for future walkers to follow. These might be in the form of a map or may use pictographic elements, as did the one for the exhibit in Belfast.[11] The scores are a chance to do the walk yourself, inviting an investigative process, as you listen for your own steps and begin to attend to changing acoustic characteristics of the street, depending on materials and sizes and shapes.

Discussing various uses of step sound, as an everyday sound, in artistic practices such as katrinem's, Elena Biserna describes how being invited to experience a work by walking puts attention on this way of interacting with our immediate environment. Hearing the step sound as a dialogue in the polyphony of urban space, we use our own individual pace to "re-write our auditory situation and actively interlace with the many other rhythms and auditory dynamics taking place in urban space" (Biserna 2018). Biserna suggests that by taking an everyday sound and "amplifying" its sonic significance in the work and granting

it "aesthetic status," artists "destabilize and provoke our ordinary modes of experiencing, triggering a process of appropriation of place through exploration, action, and soundmaking" (Biserna 2018). Doing this, "these works highlight the relational character of sound through the relational practice of walking" (Biserna 2018). If so, this points toward reading work like katrinem's as deinstitutionalizing. For one, it may "destabilize" habitual patterns on attending (or not attending) to the interplay of our body and urban spaces. Further, the listening scores already mentioned, as well as walking works, could be understood as intimate, individual experiences that are not contained within what can be hung on a wall; instead they are to be *done*, which is to say performed, personally by a listener each time.

The simple hand-drawn graphics of katrinem's scores focus on sequences of action, and elements influencing sonic experience, revealing aspects of the physical character of the respective city. For example, the repetitive nature of the Midtown Manhattan score reflects the grid structure of that area and utilizes its frequent public access walkways. Belfast, meanwhile, is depicted through a series of sites like scenes—each with their own slightly different urban character. In the legend of each score, icons show the elements deemed notable for that city route. In Manhattan, for example, revolving doors compared with push/pull doors were a significant rhythmic element and form of threshold for listeners going in and out of numerous walkways. In Belfast, car icons are used to show both moving traffic but also to emphasize the (inaudible) presence of parked vehicles in particular sites—this reflects a notable aspect of how Belfast inner-city space is used, in that it disproportionately affords space for cars, and their sounds. In such ways, the scores capture facets of an experiential relationship with a place.

The score makes the place strange through new representation. These formalizations show what is notable to the artist but also become a means of raising awareness in persons reading the score and retaking the path: cues for peaking interest. It acts as an aid to redirect attention to elements that might otherwise be overlooked as unremarkable. While it happens I am familiar with both these sites as a current or former resident of the

Figure 16.4 Maps and scores of previous *Paths* at QSS Belfast. Courtesy John D'Arcy.
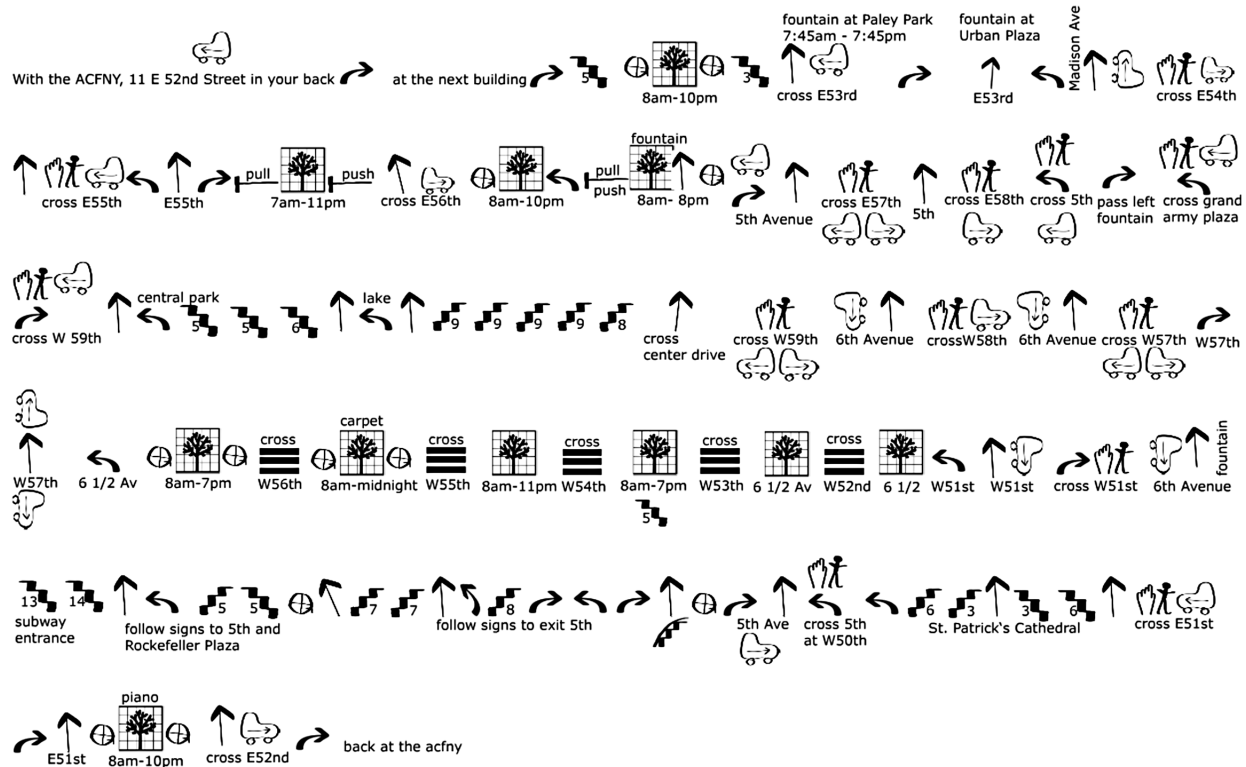
Figure 16.5 Path of Awareness score for Midtown Manhattan (2015), by katrinem. Courtesy of the artist.
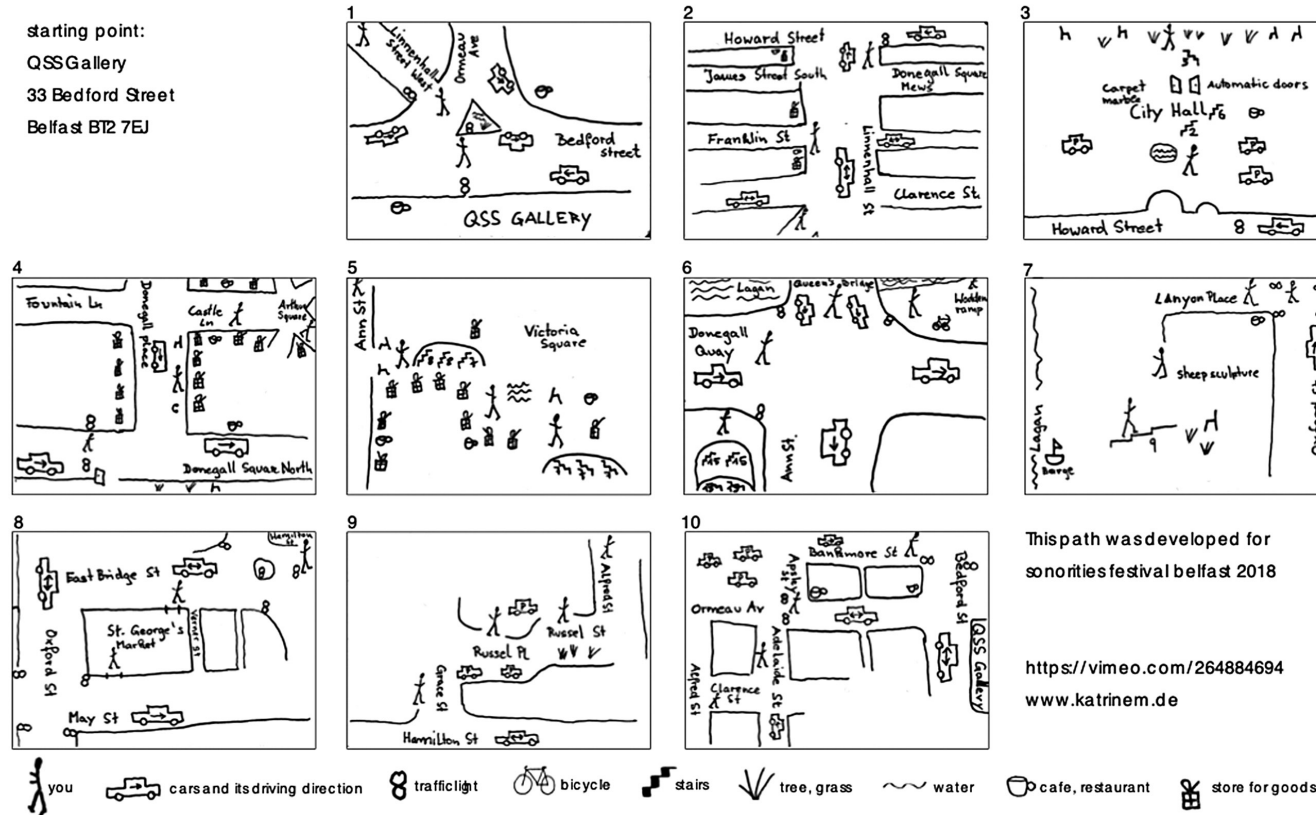
Figure 16.6 Path of Awareness score for Belfast (2018), by katrinem. On one frame, gift icons point to a shopping district, while in another frame the carpet, marble and doors of the City Hall building are emphasized. Courtesy of the artist.

city, in each case there was a sense of needing to relearn the areas through a foreign language of depictions, and graphical caricatures of urban space. Like Lane's score above, there is a sense that a listener retaking the paths needs to reflect on the prejudices of past experience in that place.

Processes (Walking So Deliberately the Soles of Her Shoes Become Ears)

A *Path of Awareness* work is constructed through processes—the observations entailed in creating the work, the performance process as an experience shared with a public group, and the individual process that any person might choose to undertake when using the score to navigate their own performance of the path. Creative work can impel development of new instruments or devices; katrinem's work exemplifies how particular artistic practices can become codified. In its repetition, a routine implemented in city after city, her creative process likens a method, necessitating its own methodological inventions. For instance, as there is no convention on how to make an urban path a musical composition, katrinem is employing an interpretation of the musical process as simultaneously a topological one; a compositional system focusing on urban geography, sociality, and mobility emerges. With scores as artifacts, it is possible to trace the creation of her notation systems.

katrinem's performance manner, the style of walking she adopts during a guided walk, is also a developed practice. It is a formalization of walking, focused on rhythms and the performer body as instrument; a catalyst for resonance in a sequence of urban spaces. While on the one hand removed from familiar musics, even from experimental music, katrinem's methods still rest on skills earned from a traditional training in composition, as well as musical performance practice as a classical violinist. Compositionally, the shift entails extending the temporal sense inherent in musical composition and overlaying it spatially, to interpret it topographically. Performatively the shift is that she is the instrument: her feet, and soles of her shoes, rather than a violin.

Taken as a whole, the work examines the auditory character of cities using walking and listening. This planning, documenting, and dissemination of works forms a methodology. It shows cities as sonic components and ways that we interact with them. It composes, in a sense, the same work, yet newly emerging in relation with specific institutions in various places. The scoring meanwhile captures traces of this process, as well as being a means of instructing future performance, indicating a particular listening-walking relationship with a given city area. If such a formalized creative exploration can be compared to a research methodology then the scores produced read like evidence. Just as the curated listening scores for *Listening Wall* suggests an academic archive showing historical layers of practice as much as a creative work, the process of creating a *Path of Awareness* seems to hover in between compositional pursuit and scientific survey. Like naturalists observing and drawing birds in the wild, the paths model an observational approach for sonic urbanism.

The repetitiveness allows the uniqueness of sites and situations to surface. It also highlights how cities are networks of institutions and communities. In each case, the work process intersects with new city spaces as well their urban institutional supports or hindrances—both in the sense of organizations such as galleries and consulates, as well as the habitual patterns of behavior of users of those spaces. The scores show traces of those structures and institutions embedded in the work, such as the prominent feature of QSS Gallery as the Belfast walk's start and end point, or the numerous public access walkways of the New York score, indicated by their square tree symbol.

While not expressly anti-institutional the works rest on a persistent in situ presence that develops minute awareness of what is happening and how. This can itself be anti-institutional in times where certain institutional power depends on ignoring a present situation as is. Conversely, the works are usually embedded in an institution: katrinem's works routinely emerge from residencies, which are physically and formally coupled with institutions such as cultural forums or galleries. Residencies, as programs that particularly enable artistic explorations in relation to a specific location, can be taken as yet another example of art institutions and a significant way that sound art literally, and geographically, takes place.[12]

Sonic artworks frequently involve an artist following a particular method or habitual practice, reworking it in a different context, developing a new piece through contingencies of that instance. Following such a work through various iterations is another way of reflecting on how artists interface with numerous forms of institutions. At the same time as they might challenge limits and conventions, these works are imbued with the various organizations—residencies, festivals, symposia and galleries—which house and support their creation and dissemination. The *Path of Awareness* works are grounded by institutions; in a literal sense, emplaced. Originating from a site and system as stable points from which the rest of the work wanders.

Hearing through Cracks

After walking around Belfast streets outside the gallery, I returned to reflect anew on the cards facing the *Listening Wall*, and comprising *Soundspace: A Manifesto* (2014) by Gascia Ouzounian and Sarah Lappin. This *Manifesto* urged architects to develop a listening practice and reconsider urban environments with special attention on sound. Originally published as an article in the journal *Architecture and Culture*, the *Manifesto* was then produced as a series of cards with illustrations by Ryan O'Reilly. Each card features one of ten tenets from the manifesto, beginning with "1. Learn How to Listen." These tenets are further illustrated with reference to a number of sonic artworks and practices, or concepts from sound studies and anthropology. The second tenet, "2. Take the people out," cites Neuhaus's *LISTEN* work and the need to personally experience everyday sounds of urban space. Taking the people out also refers to the idea that architects and urban planners should be taken out of their institutional tracks, out of theory and "into the contingent

Figure 16.7 Soundspace Manifesto postcards at QSS Belfast, graphics by Ryan O'Reilly. Courtesy John D'Arcy.

and particular realms of everyday life" (Ouzounian and Lappin 2014, 307). Meanwhile the fourth tenet, "4. Take the sound of the room breathing," refers to Yoko Ono's *Tape Piece II: Room Piece*, using it to underline a conceptual shift: that "a soundspace does not necessarily entail bringing sounds into a space; instead it evolves by bringing sound and space into a mutually productive, co-creative relationship" (Ouzounian and Lappin 2014). Between the *Soundspace Manifesto*, the Belfast *Path of Awareness*, and the palpable sound of the city outside, attending to urban sound space was a theme that vibrated through the exhibition. Scores on the *Listening Wall*, pertaining to walking and city environments, emerged more prominently, as though thematically in tune with each other. A few by Maria Papadomanolaki, given to participants on soundwalks during her research into sonic perception in urban space, featured prompts such as "listen to a sonic threshold," thus entering into conversation with katrinem's walks, the *Manifesto's* recommendations, as well as other scores, such as *hEar the Wall*, by Viv Corringham, which suggested listening to, and through, a wall. While the *Manifesto* is not, strictly speaking, a sound artwork, nestled in these listening scores, its performative potential is accented: it becomes a composition offering instructions to enact in situ, as much as ideological provocations for architectural practice. Like the other works, it seeks to affect the perspective of a reader whose role as *listener* in an urban space is emphasized. At the same time, it points frankly at a conceptual shift that could be elicited, calling on urban practitioners to "Think Sonically" (Ouzounian and Lappin 2014). If artists O+A, as self-named sonic thinkers, are any indication, this may imply a deeper sense of the collective responsibility that people carry for shaping the quality of sound atmosphere in everyday spaces (O+A 2009, 63) and be taken as call to take greater agency as a listener.

The *Manifesto* also represents another relation of sound art to institutions: those of writing, publication, and theorization. The work was conceived not for gallery walls so much as for critically framing and disseminating ideas about sound art to a readership from another discipline. This link to research, and knowledge disseminated through

written form, seems especially pertinent in an exhibition dominated by printed words and works on paper. The particular catalog of names—Westerkamp, Cardiff, Oliveros, among others—featured in the cards, echoing around the other scores and the walking works, further crystallized my sense of a shared sound arts canon. Along with a repetition of ideas about listening, this palpable set of common influences signified institutionalization within sound arts—an establishment of a culture of listening. Still, the injection of these figures and ideas, familial to sonic arts, into an urban architectural discourse becomes provocative within an unrelated set of institutions. This provocative injection of ideas into a second field is in fact aided by a degree of institutionalization of the first, allowing it to be parceled for wider audience. It offers a tacit consensus on central values, such as attentiveness to present sounds, and the fruitfulness of particular approaches.

Speculations on Sounder Urbanism

On the whole, the *Silent Sonorities* exhibit evoked questions regarding institutions of sound art, while works like the *Path of Awareness* and *Soundspace Manifesto* intimated what this might imply for institutional practices in other fields, specifically those involved in shaping urban sound environments. In the context of earlier writing about sonic artworks in Belfast, Ouzounian described how sound art can "recompose a city," construed as a "lived and living composition" (Ouzounian 2013, 48). To extend this, if sound artworks and practices can transform—"recompose"—an individual listener's experience and sense of a city space, why would this not be possible for a field of practice? As the *Manifesto* suggests, ideas of sound art could have material impact on urban planning: by influencing spatial practitioners who create and construct urban environments, and changing how they might think about cities and approach urban design.

There is a growing field of practice and scholarship in this area, which is variously termed urban sound studies, sonic urbanism, or acoustic urbanism (e.g. Ouzounian and Lappin 2015; Claus 2015). Numerous projects address the development of urban sound space at various scales—from interpersonal, local community, to suggestions for a citywide sound agenda. Sound art might be considered as a means of changing practice in urban development or else as a source of inspiration for new conceptual approaches to city sound. This includes an extant sense that sound art can actively encourage listening practices, or support expertise about sound space in cities. There are instances of sound artists explicitly participating in urban and architectural design, supporting explorations into improving public sound environments, or holding workshops with architects on sonic spatial practices. One example is *Bonn Hoeren*, a residency based in Bonn, Germany, which since 2011 has appointed a Stadtklangkuenstler—a city sound artist—to engage with the city environment, bringing listening perspectives to the shaping of urban sound (Nauck 2013; Ouzounian and Lappin 2015). In 2018 the artist was Akio Suzuki, who carried out a version of his Oto-date work mentioned above. While *Bonn Hoeren* is an intriguing framework for supporting city sound art, it is another way sound art practice is institutionalized—curated through the residency and given legitimacy through its connections. Artist Sven Anderson's

Manual for Acoustic Planning in collaboration with Dublin City Council, postulates further coupling of sound art and civic institutions (Anderson 2016); from this emerged a sound installation system in a Dublin square, *Continuous Drift,* as well as a formal reference in an official EEA report, *Noise in Europe* (EEA 2014, 48).

In sonic arts, practices of listening are valued as a means of investigating place. Urban planner Caroline Claus, who has explored local sonic experience through community projects, suggests urban sound design means making room for various possible auditory experiences, as well as creating "public space that encourages listening" (Claus and Kijowska 2015, 17–19). Emphasizing the collective aspect of this process as a "participatory tuning" (Claus and Kijowska 2015, 17), for Claus, "Sound artists working in public space develop sonic strategies to analyze, reflect, challenge and/or improve the quality of sonic environments and the listening experience of people using the space" (Claus 2017, 227). Such approaches produce understanding and skills that have the potential to be stimulating to those involved in rethinking urban public space (Claus and Kijowska 2015).

Soundwalking might be considered among these "sonic strategies," as a practice intersecting methods already adopted for studying the city, such as the related *Commented City Walks* employed by researchers Jean-Paul Thibaud and Nicolas Tixier (Thibaud 2013). As urban researcher Antonella Radicchi points out, "Unlike figurative art that is traditionally appreciated by means of visual perception, to experience the work of architecture and of the city necessarily implies a spatial and temporal dimension as well as a perception involving all the senses" (Radicchi 2017, 70). Sound artist Andres Bosshard, along with urbanists Trond Maag and Tamara Kocan, employs soundwalks for investigating the auditory quality of public spaces, and the possibilities of sonic design, in seeking to create a "city planning aid for the ear" (Bosshard and Maag 2012; Maag et al. 2016). Maag argues for developing a *sound agenda* in planning, grounded in a wider cultural shift that brings multiple disciplines to the task of designing future city sound (Maag 2013). He turned to sound artists as experts, alongside planners and councilors, in considering possibilities of an urban planning acknowledging the importance of sonic elements. In this context, methods such as soundwalking become "steps of citymaking," which invite the participation and expertise of residents; they "allow local people to get involved in the design process and to support site specific knowledge" (Maag 2017).

Explorations that intersect with sound art practice form just part of wide-ranging research on city acoustics. A notable amount refers to conceptions of soundscape (Southworth 1967; Schafer 1993), while still strongly associated with acoustic ecology, current studies involve a range of disciplines (e.g. Kang and Schulte-Fortkamp 2016). The long-established CRESSON (the Centre for Research on Sound Space and Urban Environment), based in Grenoble, represents another significant accumulation of research into urban ambience, involving sociologists and urbanists, among others. Some results of the decades-long research led to the seminal *Sonic Experience* (Augoyard and Torgue 2006), outlining an array of sonic effects, described from multiple disciplinary perspectives. In immediate proximity to the exhibition discussed, SARC connects with multiple research projects and groups exploring intersections of sound art and city space. An

urbanism drawing on sonic arts perspectives could shift questions asked about city spaces by framing sound as a productive and communicative element, rather than one to avoid or abate, and emphasizing the creative sensory repertoire with which we approach everyday experience.

Attention to a hearing perspective and the concerns of situated and participatory sonic works, dovetail well into approaches in planning acknowledging the importance of civic engagement and coproduction of shared place with inhabitants. To me, this resonates with urbanism in the vein of Jane Jacobs, known for drawing conclusions about good urban practice from in situ observations of everyday life, particularly communal uses of streets, sidewalks, and squares (Jacobs 1961, 1993). This ground-up approach contrasted concurrent tabula rasa approaches of modernism seeking to impose communities from scratch rather than see and hear what—and who—was already there.[13] Other urbanists concerned with social quality of public space, such as Jan Gehl, have championed pedestrian uses of street areas, focusing on "life between buildings," that is, interstices of material environments in which dynamic social spaces can emerge (Gehl 2007). Meanwhile, architecture collectives such as *Assemble* construe architectural practice as extending to event-based, temporary, and collaborative design projects, furthering an overlap of sonic arts and architectural practices. In such urban approaches, listening to locals, being able to hear one another, and sharing a "compositional" role in urban space seem fundamental.

Reciprocity, Complicity, Soni-City

The scores gathered by Garrelfs, katrinem's invitation to step outside, Lane's tender auditor, and the *Soundspace Manifesto*'s direct urging, all frame our interplay with sonic environments as listeners and sound makers. We have multiple potential parts to play in the overall composition—instruments, shifters, filters, participants, amplifiers, nodes, destroyers, and curators. In relation to city space, this suggests that being an inhabitant, a sonic artist, or a planner, are roles that overlap; we all become city makers, co-curating urban sound environments at multiple scales. Shared responsibility for a city's audible character is required in such a *sonic commons*, or "any space where many people share an acoustic environment and can hear the results of each other's activities, both intentional and unintentional" (Odland and Auinger 2009, 64). Our sounds intermingle in immediate ways, as well as by proxy, through products and mechanisms of consumerism (c.f. Garrett Keizer 2010). We are complicit in the quality of the sonic commons, by sounds directly and indirectly produced, and by influencing the listening attitudes of others. An urban sound design would rely on the more conscious participation of all players in an urban situation. From those who construct material environments, those who dictate their social rules, to those who inhabit them, bending and breaking those rules.

But how might urban spaces built through sonic thinking, feel, look, sound, taste, and function? If a hearing perspective were brought to bear on planning, whose ears would be considered and who would be valued as composer, collaborator, or curator? Enveloped by assorted interest in urban sonicity, the works of the Belfast exhibition stimulate diverse

speculations. Works such as katrinem's draw attention to the rhythmicity and temporality of urban spaces, reminding us that it is not only the listeners-walkers-participants who are flowing through the city, but indeed that urbanity can be understood as flux. Thinking of the urban as process, and even reframed as its own open score, as has been proposed by musician and urbanist Chris Dell (2016), invites further consideration how urban institutions might be recontextualized through sonic practices. If a score can be gleaned from city experience, as in the *Path of Awareness* works above, perhaps a city can be produced through scores. Thought of as a large-scale listening score, a city curates sonic experience through paths and walls, and how inhabitants are guided through it. City planners might be excited by a sense of creating such scores, open compositions that "take the people out" for a listening walk, paced by streets and materials, through rules and policies. Who is performing this score and how are the players interacting? What role do listening and sound making have in this open score? Would it recognize the carving of sonic desire lines through its spaces?

What of a city constructed in "listening walls"—who or what would they listen to? One could imagine a built environment in which material structures were responsive: a sensor-laden smart city attending to our needs. However it as easily evokes the panacousticon of Athanasius Kirchner (1650), a listening device integrated inside a wall, only now spread citywide into structures that allegedly support inhabitants while used to keep them in check. A listening city need not mean a communicative one. It is possible to imagine other issues arising from practices of listening being "instituted" in urban planning. Optimistically, prompts to listen can be invitations to reexamine a present situation, hear it anew—to tear down metaphorical walls, personal and public, and increase connection and participation. But the danger exists of a rhetoric of listening being misused. Sonic thinking might as readily be co-opted for oppressive long-term designs, which "listen to" some concerns but mute others—a sonic thinking that has misheard. Listening more is not enough, as Lane's score reminds us, what we ultimately hear is colored by numerous, everyday filters. Instead, how we hear people and spaces is a situation we need to reflect on continually, and address before building material walls or destroying them.

I have reflected on particular sound artworks, their nesting in institutions and urban spaces and how ways of listening may be framed as inviting a disruption to habitual ways of experiencing everyday space, while also understood as institutional in sound art practice. In that context, institution is considered in relation to formalized practices as well as formal organizations. Discussions about listening and sound well-trodden in a sound art community may have ear-opening potential when placed in dialogue with other fields; Aspects of sound art that can be deemed institutional acquiring a deinstitutionalizing role when taken outside its bounds. In regard to projects seeking to influence institutional practices of urbanism, sound arts may invite new sonically-imbued perspectives in research and theory.

Part V

The Sonic Imagination
Sonic Thinking as Sound Art

The Sonic Fiction of Sound Art

A Background to the Theory-Fiction of Sound

Macon Holt

When All Is Quiet: The Kaiser Chiefs Present Sound Art

When All is Quiet was a collaboration between the York Art Gallery, UK, and the post-Brit-pop band the Kaiser Chiefs toward the end of 2018 into the beginning of 2019. I attended the exhibition shortly after Christmas while I was visiting my parents in Scarborough over the festive period. Living in Copenhagen, I had not been to England at all in the previous year. The excuse I had given myself for the absence had been that, between the desperate scramble for paid work, the writing of applications, and working on my book that I simply did not have time. But these were just excuses I relied on to avoid the wrenching negative affects brought on by Brexit. However, even these themselves were merely an exacerbation of the atmospheric conditions of impossibility that had become ever more prominent in the UK since the financial crisis had stated to bite. And bite in ways that had provided the Conservative party the cover required to further dismantle what remained of the UK's social democratic state infrastructure.

The collaboration with the Kaiser Chiefs seemed like a move by the gallery to compensate for these material circumstances, which had seen a massive cut in public funding for the arts. It appeared to me that this was a move to boost attendance and popular recognition. The band, who's heyday was now nearly a decade ago, had a fan base that were now of an age that could lead one to think they were in desperate need of a day out. A fan base that may well now have some disposable income. But a fan base that may not have considered the art gallery a place for them, and to whom sound art may have seemed willfully obscure. This collaboration was intended to combat this assumption, to make the most out of works the gallery already had access to, and to hopefully sell some tickets. At least this is the

materially justified cynical take on it. A framing device for understanding the exhibition that is as myopic as it is accurate.

Among other works, the portion of the exhibition, purportedly curated by the band, featured Janet Cardiff's renowned sound installation *The Forty Part Motet (A Reworking of "Spem in Alium" by Thomas Tallis 1556)* (2001) and *Deep Listening*®, an assortment of audio and visual material by the late composer Pauline Oliveros. Each of these installations were fine on their own. I remembered the Cardiff piece, in particular, from a visit to Toronto in 2004, when I was fourteen. The forty speakers surrounding an exhibition space in their choral clusters, created a stunning sound sphere of human voices. They interweaved with one another in such a spatially specific way that the fourteenth-century context seemed to evaporate and left me, instead, with an awareness of some slice of sonic possibility. It was clear to me then that sound could build worlds, though it was not clear what it built them from or who built them. Fourteen years later, I appraised the piece more as a technician and critic. I tried to chart the route of each sound source to its point of intermingling. I considered the inherent conservatism of working with sacred music. I considered what a great entrance into sound art this piece could be for the uninitiated. But I also tried, with some success, to quiet this impulse to appraisal, to stand in the middle of the room with my eyes closed and tap into that fascination the work had previously spurred in me.

In addition to the curated sound art portion, the band had constructed a couple of pieces of their own for the exhibition. These included *Silent Gig* (2018), a misted white cube in which one could stand or dance or sit or lie down as the lighting programs for their touring shows ran in the absence of their music, and a project called *The Kaiser Chiefs Take Over York Art Gallery's Collection*. In the latter, the band paired paintings by Turner and Golding to music by post-punk and 1960s bands such as Talking Heads and the Beach Boys. I found this utterly infuriating. In attempting to come to grips with these pairings of canonical pieces of, with the exception of a piece by Bridget Riley, white male art with a collection of indie rock songs by a similarly white male assortment of bands, I was reminded of the scene from the John Hughes' movie *Ferris Bueller's Day Off* (1986). There is a scene in the movie that has been repeatedly parodied since. It is a montage of the protagonists at a large art museum looking at art and engaging in hijinks to musical accompaniment. The music is an instrumental version of The Smiths' "Please, Please, Please Let Me Get What I Want" (1986) and the scene's denouement features the supporting character, Cameron, staring, transfixed by the beauty of George Seurat's painting *A Sunday Afternoon on the Island of La Grande Jatte* (1886). As the camera comes ever closer, cutting between Cameron's face and that of a young girl in the painting until we only have his eyes and the abstract power of color as material, we are led to believe that this experience has been transformational for Cameron. A character—previously worried about quotidian things like his ostensible best friend stealing his father's car and vandalizing his home—has been changed forever by "the profound experience of art" (Lerner 2013), apparently.

This room seemed to have been engineered for the purpose of manufacturing that experience. What they appear to have missed is that the music in the film is non-diegetic and the effect of the scene on us is intimately tied up with the unfolding of the film's narrative. Likewise, while one could have had a transformative, ecstatic, aesthetic

experience admiring a painting while listening to a piece of music, to manufacture this still misses the importance of narrative. The music would likely be a piece of your choosing, which is to say of some significance to you. To farm this role out to a band of moderate fame seems ever so patronizing while posing as open.

However, as I look at Lowry's painting, *The Bandstand, Peel Park Salford* (1931), synchronized to The Kinks' "The Village Green Preservation Society" (1968), a song I have always found charming though I have never rushed to put it on, I'm struck by the inadequacy of my attempts to appraise the exhibition. And by the inadequacy of the discourse of sound art to describe the form that sound art has taken in this provincial art gallery under the conditions of neoliberalism near disintegration. There is something amiss in my leveling of judgment. The refinement of sensibility has left me blinkered and almost incapable of recognizing how encompassing ordinary life can be, even as one attempts to explore other possible worlds of sound art. The fact of my knowing of Cardiff's piece before I opened the door to the room of its installation takes me out of the context in which this exhibition exists. There is a different story being told here that is easily missed by those who grew up in an environment surrounded by arts academics or those who have chosen to surround themselves with them. It is a story that I am only just learning. A story of my ignorance. The same ignorance that also led me to be surprised when, in 2016, a majority of the British people voted to leave the European Union. For all the racism, xenophobia, and misguided nationalist nostalgia that led to that result, it was catalyzed by the material conditions of impossibility that are inherent in the nostalgic ache of the concept of The Village Green Preservation Society. Something has been long lost. The same nostalgic ache of the song and the painting resonate with the material conditions which have meant that, on the high street of Scarborough, the only stores that seemed to be thriving were the myriad of vape shops. The future is impossible and so the past is all we have.

When I take the exhibition in toto—the grandeur of Cardiff, the exploration of Oliveros, the banal familiarity of the Kaiser Chiefs, the misguided mission of the gallery—my mind is forced back to 2008: the start of the financial crisis and the start of my undergraduate degree in creative music technology at the University of Surrey. Located in Guildford, an affluent part of London's commuter belt, I was walking into town with some of my new course mates. One of them, a tall, charismatic young man, who made what sounded to me at the time club quality electro tracks, said to me in the course of our conversation that he'd "never really thought of music as art." This idea stunned me. That was all I thought it was. Between my snobbery and insecurity I was not sure what to say, and mumbled something that allowed me to get through the interaction without confrontation despite my naive sensibilities having been affronted.

Now as I reconsider this in 2019, his remarks make me aware of how alienating the discourse of art itself can be. And sound art, as is the case with qualifying prefixes, can be so all the more. This is not to say anything about the practices or practitioners of sound art, the qualities, politics, and accessibility of which are always particular. It is only that, as I approach sound art as a concept to be narrated, to be engaged in the process of fictionalization, I need to get a sense of what is at stake. Why eschew the vernacular form of music in favor of art, which is commonly understood to be more rarefied? As I approach

this chapter and consider the sonic fiction of sound art, this tension needs to be worked through. Because sonic fiction—as much as an abstract conception of writing and thinking aural experience can be said to belong to any other practice—does not belong to sound art. Historically speaking, sonic fiction belongs to music generally but specifically music made by those who were excluded by concepts such as art. This needs to be remembered.

Afrofuturist Science Sonic Theory-Fiction

> Respect due. Good music speaks for itself. No Sleevenotes required. Just enjoy it. Cut the crap. Back to basics. What else is there to add?
>
> All these troglodytic homilies are Great British cretinism masquerading as vectors into the Trad Sublime. Since the 80s, the mainstream British music press has turned to Black Music only as a rest and a refuge from the rigorous complexities of white guitar rock. Since in this laughable reversal a lyric always means more than a sound, while only guitars can embody the zeitgeist, the Rhythmachine is locked in a retarded innocence. You can theorize words or style, but analyzing the groove is believed to kill its bodily pleasure, to drain its essence.
>
> [. . .]
>
> In CultStud, TechnoTheory and CyberCulture, those painfully archaic regimes, theory always comes to Music's rescue. The organization of sound is interpreted historically, politically, socially. Like a headmaster, theory teaches today's music a thing or 2 about life. It subdues music's ambition, reins it in, restores it to its proper place, reconciles it to its naturally belated fate.
>
> In More Brilliant than the Sun the opposite happens, for once: music is encouraged in its despotic drive to crumple chronology like an empty bag of crisps, to eclipse reality in its wilful exorbitance, to put out the sun. Here music's mystifying illogicality is not chastised but systematized and intensified—into MythSciences that burst the edge of improbability, incites a proliferating series of mixillogical mathemagics at once maddening and perplexing, alarming, alluring. (Eshun 1999, -007—4)

If we want to understand what is at stake in moving the concept of sonic fiction into sound art, we need to consider where it started. So we should start with the book. In the opening pages of *More Brilliant Than The Sun: Adventures in Sonic Fiction* (1998), Kodwo Eshun asserts that music is a means of thinking in itself and not merely something to be thought about. This doesn't mean it is something just to be "felt," as if it were in some kind of transcendental black box, alien to conceptualization and the world of signs, but something more connective and powerful than mere signification. In his book, Eshun dives into this sonic thinking and the corporeality that extends the body into the vibrant electronic networks of (post-)modernity as a space of invention and "desiring-production" (Deleuze and Guattari 2013a, 11) racing toward intensive intersections of post-human potentiality and into Afrofutures through "futurhythmachines" (Eshun 1999, -005). These were concepts that other media had, up until then, seemed able to only to glance at. Eshun claimed that these ideas could be better actualized through music understood as the

production of sonic fictions. By engaging with music and the experience of it as means of producing new fictive worlds that he would then document through writing, Eshun could connect this sonic thinking to other kinds of thinking. Eshun's sonic fictions allows us to explore the logics, systems, and narratives from which particular musics emerge and through which they flow, without reducing them to the virtue ethics of the sublime (Merritt 2017), the strictures of Western harmony, or the narratives of black redemption under white hegemony.

But we need to take a step back here to make sense of this method. Because its history and logic is particular. It entangles the cyber culture of the 1990s with the poststructuralism of the 1970s and the sci-fi of the next five minutes.

We should start with the science fiction; the genre that catalyzed a fictive approach to inquiry into the future. It is from science fiction that Eshun, in collaboration with the theory-fictionalists of the Cybernetics Culture Research Unit [CCRU][1] (Gunkel, Hameed, and O'Sullivan 2017, 257), found the imaginative resources to uncover and invent whole fictive words from sound, owing to this genre's particular relationship to reality.

In his 1971 essay "Fictions of All Kinds," the science fiction author, J.G. Ballard, argued the case for this speculative mode of writing, which has so often been dismissed as merely pulpy entertainment. He claims that the focus of mainstream cultural discourse on so-called serious fiction is leading to a failure of imagination. A failure that, with the increasing rate of technological development, we can no longer afford to indulge. Ballard claimed that we were (and perhaps we still are) in desperate need of a science fiction that rides these currents of development if we are to even begin to understand what is happening to us and the world under the condition of ever accelerating modernity. He writes:

> In essence, science fiction is a response to science and technology as perceived by the inhabitants of the consumer goods society, and recognizes that the role of the writer today has totally changed. [. . .] To survive, he must become far more analytic, approaching his subject matter like a scientist or engineer. If he is to produce fiction at all, he must out-imagine everyone else. (Ballard 2014, 238)

Ballard claims that we no longer have the option of considering technology and human life as barely overlapping magisteria; as if we are the ones who simply "use" the tools. Instead, we have to realize, as numerous philosophers have, that these tools are our world and thus also they are parts of us. For Ballard, the writers of science fiction needed to be able to practice some kind of scientific distancing to rid themselves of the notion that the human condition is something timeless and of universal importance. Instead, these writers need have to consider our existential condition under the contingencies of our changing situation. Though an imperfect way of addressing this situation, it is through this that we can perhaps place our problematic pervasive humanism into the context of a variable. By doing so, we may be able to imagine what is to come of the world that we have built while we have been so enraptured and distracted by more immediate goals.

We find hints of Eshun taking up this cause on his bio page in *More Brilliant Than The Sun*: "He is not a cultural critic or cultural commentator so much as a concept engineer, an imagineer at the millennium's end writing on electronic music, science fiction,

technoculture, gameculture, drug culture, post war movies and post war art" (1999, -017). When Eshun writes about music he does so outside of what is accepted as the frames of music criticism. He is not merely commenting on something we have made but something that has also made us. Thus, he doesn't wish to contribute to a corpus of cultural production. But instead he wants to engineer the production of a new culture. Eshun, however, accelerates the central claim of Ballard's essay. If Ballard wanted us to ask, in morally disinterested terms, what was becoming of humanity, Eshun asked, Who's asking?

More Brilliant Than The Sun is, more than anything, an attempt to wrest so-called black music from the essentialists and romantics, and to bring it into a world that so often relegates such music and its meanings to the position of a "minority" interest in every sense of the term. The intention of Eshun's sonic fiction was to use this music to help forge the future beyond this patrician restriction just as Ballard envisaged for science fiction. Because—more than the present, which is arguably always so very impoverished by the weight of history—for Eshun, the future is the actual territory that is at stake in sonic fiction. The space that most easily occupies the border between possibility and actuality.

This was also the paradigm under which science fiction writers such as Philip K. Dick, Octavia Butler, and William Gibson operated and from which Eshun and CCRU drew inspiration. In addition to the well-established capacity of this art form to offer a critique of its contemporary moment, the preemptive, or hyperstitional, capacities of certain pieces of science fiction were believed, by these thinkers, to be such that a direct real-world application of what had been described in a piece of writing could appear in the world not so long after its publication. Though, due the powerful yet banal circumstance of late capitalism becoming neoliberalism, the real-world realizations of these hyperstitions often appeared like deformed reflections in a bad mirror. For example, the hackers of the matrix, addicted to the thrill of cyberspace in Gibson's *Neuromancer* ([1984] 2016), find their real-world corollary in dopamine junkies staring at the infinite scroll of social media. However, there is much more to this formal capacity than a simple predictive parlor trick.

Such is the hyperstitional capacity of science fiction that it allows for the actionable recognition of the "immanent continuity between epistemology and ontology" (Parisi 2017, 223). To flesh this idea out, the (science) fictional convention of building a world plausibly connected to our own, but in some, important way other-than-it-is, is a practice that exposes how the conditions in which we find ourselves "being" establish what we can consider ourselves "knowing." And, on top of this, it is through this conditioned "knowing" that we are aware of our "being" and the conditions of it.

It is with science fiction as this kind of paradigm-rupturing device in mind that we should consider the role of Afrofuturism. And through this, we can see how Afrofuturism was a necessary component in the conceptual development of sonic fiction as such. There are a great many takes on Afrofuturism that range from the radical and revolutionary to reassuring liberal banality. But in Eshun's use of the terms, we find it as an intrinsically speculative form of Afrocentric conceptual engineering. Of course, it is entangled with the historical legacy of both racism and colonialism but, nonetheless, this concept is oriented firmly toward the future. A future in which there is the possibility that this history of violence and oppression that runs through postcolonial blackness, that reduced so many of

those with black bodies to objects and commodities, may no longer be definitional. Indeed, it makes appear possible a future in which the horrors of plunder may barely be remembered at all. This opens up the question of what will be possible to know with a radically different conception of the subject that does the knowing? That being said, these fictions are, however, always read by those of us existing in a present that is inseparable from the traumas upon which our world is built. Meaning that the reality of this past is folded into the possibility of our future.

As Eshun writes in the essay "Further Considerations on Afrofuturism," when imagining the conclusions arrived at as a team of archaeologists from the United States of Africa (USAF) start to examine artifacts from the early twenty-first century:

> In our time, the USAF archaeologists surmise, imperial racism has denied black subjects the right to belong to the enlightenment project, thus creating an urgent need to demonstrate a substantive historical presence. This desire has overdetermined Black Atlantic intellectual culture for several centuries. To establish the historical character of black culture, to bring Africa and its subjects into history denied by Hegel et al., it has been necessary to assemble countermemories that contest the colonial archive, thereby situating the collective trauma of slavery as the founding moment of modernity. (Eshun 2003, 287–8)

For Afrofuturism, the project is nothing less than an attempt to assert the existence and validity of, for want of a better term, black subjectivities that had been disavowed by so much of Western philosophical, cultural, artistic, and political history. This is not something that can simply be argued to be an oversight; as merely having been a mistake of (white, wealthy, Western) reason. Rather in Eshun's sci-fi, the materials of cultural production understood to be Afrofuturist highlight the blind spots endemic to the hegemonic "image of thought" (Deleuze 2011, 164) and thus the thinking subject as envisioned as the white bourgeois European man of property. This is nowhere more evident than in music.

Traditional Western musicology, with its privileging of harmony as some kind of mechanistic riddle to resolve the conundrum produced by the conceptual collision of truth and beauty, is, and has been, poorly equipped to deal with other musical priorities and socialites (Small 2011). One need only look to one of the more radical practitioners of this mode of musical analysis, Theodor Adorno, to find a truly unforgivable lack of comprehension of music that deviates from the imperatives of the Western harmonic tradition. Despite the inherently counter-hegemonic tendencies in jazz aligning with his own desire to see capitalism come to an end in a way that would eschew authoritarianism, Adorno's commitment to the Western musical tradition leads him to denounce it as "cynical barbarism" (Adorno 1991, 34). Even as recently as the mid-2000s, the "avant-garde" composer, Karlheinz Stockhausen, struggled to find anything more incisive about the use of repetitive syncopated rhythmic devices used contemporary electronica than to request they stop with all "these post-African repetitions" (Stockhausen et al. 2008, 382). And in the nominally empirical/scientific field of audio signal analysis, a 2012 research paper, "Measuring the Evolution of Contemporary Western Popular Music" by Serra et al., attempted to draw conclusions about the relative state of contemporary Western popular music with no consideration for rhythm, and not even a mention of its omission.

The work of Gilbert and Pearson in *Discographies* (1999) has helped to shape the critique of connection between this outmoded form of musicology and its relation to the conceptualization of the bourgeois individual under liberal capitalism. But for the Afrofuturist, against the stupidity that Gilbert and Pearson so aptly identify, there is no argument to be made on the terms as they stand, and thus none is directly attempted. Instead, Afrofuturism illustrates the insufficiency of the status quo through the presentation of a richness derived from what is understood as an otherness incomprehensible to the dominant discourse. We can hear this in the way melody, harmony, timbre, and rhythm are organized as a continuum in so-called black music; it as much as the drag of the stick against the snare as the syncopation of beat; as much the duration of the horn note as the production of the artificial harmonics; as much the quality of the sawtooth synth as it is the tune you hum for days afterward; as much Flying Lotus's infusion of the dragged "soulful" rhythms of jazz now sampled, as it is the "postsoul" (Eshun 1999, -006) of laptop drum machines.

Indeed, it is with a complex conceptualization of rhythm that Eshun rewrites that science fiction of future music and in doing so decolonizes the field of aesthetics through the technological potential of the rhythmachine and thus is simultaneously able to challenge those who would essentialize blackness:

> Traditionally, the music of the future is always beatless. To be futuristic is to jettison rhythm. The beat is the ballast which prevents escape velocity, which stops music breaking beyond the event horizon. The music of the future is weightless, transcendent, neatly converging with online disembodiment. Holst's Planet Suite as used in Kubrick's 2001, Eno's Apollo soundtrack, Vangelis' Blade Runner soundtrack: all these are good records—but sonically speaking, they're as futuristic as the Titanic, nothing but updated examples of an 18th C sublime.
>
> [. . .]
>
> Hyperrhythm's digital supersession of the human immediately alters your perception of the percussive act. As an actional event in timespace, drumming loses its solidity. Breakbeat science scrambles the logic of causation, opens up a new illogic of hypercussion and supercussion. (068)

Eshun's sonic fiction charts its route through the baggage of history, musicology, capitalism, technology, and rationality at the level of the concept. It is not enough to expand musicology to include appropriate consideration for rhythm, or to simply understand the music of *The Black Atlantic* (Gilroy 2007) as being tied to a history of capitalism and colonial exploitation, which has played a part in the production of the technologies of musical expression. All these things are insufficient appendages to established ways of containing music as either the "trad sublime" or just theoretically significant diversions. Eshun wants to use sonic fiction to explore the logic of sensation that runs through musical experience as an experience of technology, of history, and of possibility. He is the concept engineer, working in the bowels of these ossified ideas to redirect resources from certain structures and instead overpowering other capacities to find new openings and new means of conjunction and disjunction.

We see this in Eshun's narration of Sun Ra. A musician who, according to Eshun, knew more than any other at that time how to exploit the collapse of science and technology into the magic and mythology that one finds in recorded and electronic music. While there may be the temptation to dismiss it as hyperbole, Eshun's fictioning of Ra provides both an incisive analysis of what is at play in the composer's practice and is able to avoid the pitfalls of reductionism.

> From Marconi to Tesla to Moog to Ra, electrification opens up a discontinuum between technology and magic. Why a discontinuum instead of a continuum? Because alternating current transmits across gaps and intervals, and not by lineage or inheritance. From now on, Electronic Music becomes a technology-myth discontinuum. Traditional Culture works hard to polarize this discontinuum. Music wilfully collapses it, flagrantly confusing machines with mysticism, systematizing this critical delirium into information mysteries.
>
> [. . .]
>
> Music is the science of playing human nervous systems, orchestrating sensory mixes of electric emotions: the music of yourself in dissonance. Ra hears humans as instruments, sound generators played by the music they listen to. The tone scientist's role is to engineer new humans through electronics. (Eshun 1999, 161)

There is a dry academic way to put this notion of Sun Ra's MythScience. One could, in line with Deleuze and Guattari's notion of stratification (2013b, 46–85), say that what Ra does is move freely between different strata of material organization. He is able to manipulate tools derived from the insights of physics and use the biological reaction to these manipulations to produce new systems of signification while translating fragments of this new system into more conventional musical languages allowing people to be let into this musical experience. But such an analysis subsumes Ra into the concepts of French intellectuals via the conventions of the white academy. Eshun's sonic fiction of Ra lets us deploy these concepts but allows the musician and his work to exceed such analytic categories. It allows something of Ra's work and practices to be glimpsed, heard, and understood more thoroughly while never confusing these articulations for a final analysis.

The standard take on this jazz composer is that his experimental style was supplemented with an eccentric performative engagement with ancient Egyptian iconography and science fiction references. For Eshun, this misses most of what is actually taking place in Ra's work. Eshun hears and sees the production of a space of possibility encompassing Ra's music, performance, writing, and filmmaking in the production of a new mythscience fiction. Ra's music resonified and thus reconceptualized space as something other than the void of the trad sublime, and entangled in this reconceptualization are implications for our world. Ra puts forth an idea of black emancipation that is at once uncomfortably Nietzschean in its willingness to cast aside the apparent naturalism of the world as it is and, in doing so, opens the possibility of becoming despotic.

> Soul affirms the Human. Ra is disgusted with the Human. He desires to be alien, by emphasizing Egypt over Israel, the alien over human, the future over the past. In his MythScience systems, Ancient Africans are alien Gods from a despotic future. Sun Ra is the End of Soul, the replacement of God by a Pharaonic Pantheon. (Eshun 1999, 155)

And here we have the problematic potential of sonic fiction. The capacity "fictive ideality" (Parisi 2017, 226) that it shares with its precedent, theory-fiction is without a necessary politics. Ra's desire to anoint himself the despot of an empire of ancient African aliens is, at once, able to appear terrifying and reasonable. He wants to occupy the position of the powerful rather than that of the oppressed whose redemption is eternally deferred. "Rather than identifying with the replicants [. . .] Ra is more likely to dispatch blade runners after the Israelites. He's the Tyrell Corporation's unseen director" (Eshun 1999, 155).

However, it would be incorrect to call sonic fictional practices relativist because, as Schulze notes in his examination of sonic fiction (2013), these practices are based in empiricism, which is to say that they start from experiences that precede them. There is something first something concrete, absolute in ontological terms but particular in experiential terms from which they stem. An a priori condition to the production of Ra's sonic fictions. A being that precedes his capacity for knowing but that can only be understood through this capacity.

We could say that, in the first instance, there is the sound. There is the music of Sun Ra with its particular qualities, which moves to the edges of a particular mode of signification (jazz with experimental ideation), which is then combined with Ra's utterances and descriptions (the despotic space pharaoh, the galactic African empire). But we're getting ahead of ourselves again. Even prior to this there are the histories both of Western and African musical practices and their intersection in colonialism. On the one hand, this means that despite his desire to break "violently with Christian redemption, with soul's aspirational deliverance, in favor of posthuman godhead" (Eshun 1999, 156), the circumstance from which Ra attempts to escape haunt his desire to do so. On the other hand, the actualization of this desire in his music and other artistic practice does move into a space that is beyond, or other than, the telos of the hegemonic ideologies that are inherent to these conditions.

All this is to say that it is incorrect to consider sonic fiction to be relativistic because it is grounded in existing systems of what can empirically be said to be. Speculations from here may follow but they are routed in the given. This speaks of the intentions of sonic fiction as a practice. The goal is not to produce new absolutes on a universal scale but nor is the practice of writing sonic fiction one that can be reduced to a particular partial slice of given conditions. The goal is to occupy that space between that fiction so often does. In the terms of Alexander Weheliye, this is a space of singularity, where particulars and universals are not held above one another but held in parallel tension (Weheliye 2005, 206–7).

Regardless of what one may think of Ra's expressed desire for a kind of musical despotism—which is nothing new in the white musical avant-garde (see for example Luigi Russolo or Karlheinz Stockhausen)—it is the mode of expression itself that carries the potential of sonic fiction. Sonic fiction offers the tools to engage empirically in the skepticism found in the postmodern tradition of "incredulity towards the grand narratives" (Lyotard 2006, xxiv); a notion that is so often misread. Incredulity does not mean dismissal or abandonment. Instead, it means only that one is unwilling to believe in these narratives

of history or progress prima facie. Rejection or criticism of these narratives may follow from this initial skeptical move but this is more likely to point to a problem with the narrative in question than the stance of incredulity itself.

But sonic fiction is more than just a skeptical, critical project. It is a creative practice. A way of producing new narrative worlds and systems of signification that, while they may start from the conditions that can be said "to be," they do not remain constrained by the hegemonic insistence that these conditions "must be."

Eshun's sonic fiction, despite being the instantiation of the concept as such, must too be considered as singular. It is soaked with the orientation toward the future that is both derived from its connection to the accelerationist theory-fiction of the CCRU and the science fiction of Afrofuturism. Certain imperatives, problematic and less so, are thus baked into it. However, like each singular instantiation of sonic fiction that can be said to exist in music exceeds that music, the practice itself exceeds the circumstance from which it emerged. And while sonic fiction emerged through the concepts churned up by the musics produced in the latter half of the first full century of recorded sound, sonic fiction exceeds its first instantiation.

Sonic Fictions as Possible Worlds: Sonic Fiction and Sound Art

> To talk of the "future of computer music" immediately presumes an academic composer-scientist locked into a prewar model of top-down official science. But Breakbeat science is the runaway future of computer music, in which alphanumerical sound escapes from the lab, replicating across bedroom studios in a series of covert operations. Breakbeat science is the secret technology of gene-splicing sound, the unofficial science of rhythm hacking the break until it becomes a passage into the drumtrip and the drumtrick, an escalation of rhythmic timbreffects. (Eshun 1999, 068)

An aside. It was 2011 and after three years of studying music technology I met with a newly minted professor of sonic arts at another university to discuss the possibility of pursuing a Ph.D. in this sci-fi sound art field. There was some sort of career path that stretched out in front of me that involved spending huge amounts of time and energy manipulating the spatialization and comb filter automation of multichannel audio files. A great deal of fun but in the wake of the election that had happened in the UK a year earlier that was to usher in the age of austerity, which has brought about the current reckoning, it was a practice that seemed almost misanthropic in its detachment from everything a step outside the ambisonic studio door.

Another way to put this problem was that, despite my love of making weird sounds, I was utterly addicted the idea of making music I thought that people would listen to. Something seemed to be happening in the world around me that I could not imagine addressing effectively in audio abstraction, regardless of how detailed the sociological connection was outlined in the accompanying liner/exhibition notes. The justification in

such notes may be utterly sound, but its vitality and importance would always be missed by those who experienced this work by itself or who were without the training to engage with it further. Rather than full but unread explanations of experiments in audio, it seemed to me that much of the value of expanding the aesthetic potential of sonic experience rested with the chaotic relationality it could have with a listenership. And a starting point for this in music has always been to put a beat to it. Thus everything the professor said to me repulsed me. "It is possible that perhaps one of the pieces you work on could have some sort of recurring pulse element. But we generally stay away from anything that could be considered a beat." This is how I remember it.

It is not that I'm stuck in the shock of the new. On my undergraduate program, I was the great defender of the avant-garde, the hard to sit through, the practices many would regard as a dead end. While others took options learning how to compose for commercials and video games, I stuck solely to courses on free improvisation, soundscape, and the history of electronic composition. But what struck me in my meeting with the professor was a different orientation of the same problem I had first encountered while studying a piece by a composer with no problem with beats for my A-level in music, *The Firebird* by Igor Stravinsky (2016). To pass the exam, one had to be able to connect different musicological elements of the composition to the narrative of the ballet. For example, the use of tri-tones in the climactic "Infernal Dance" section of the piece. We were told to cite how the use of the interval depicted the demonic nature of the events in the ballet. But this is entirely meta-musical. This is a claim, albeit an inaccurate one, about the history of the Christian church in Europe as much as it is about the functionality of a diminished fifth. This was the liner notes. There seemed to be a step missing between the speculation about the composer's intentionality, as likely as it may have been, and this becoming a true claim about the piece. A musical fact. There was a specter here of hermeneutics performed by musicological theologians, with all the appended elitism at play. And while the orientation of these hermeneutics was toward a referent outside the music, something of this essentializing methodology of interpretation continues to haunt the insistently beatless practices of some schools of sound art. The notion that sound art should pursue sonic experimentation has replaced the semiotics of music. Thus, even as certain traditions of sound art turn away from such referents as being overly connected to musical convention they nonetheless seemed, to me, to propose a new kind of theologian. An "academic composer-scientist locked into a prewar model of top-down official science."

What I wanted instead was something more democratic. Something like what Eshun called "interpretive communities" (Eshun 2018). Sonic fiction has been an attempt to produce new interpretive communities from the more established social practice of music making. While music as a practice overlaps with sound art, it has significant conceptual differences that are productive of new interpretative tensions. The tension between the proliferation of sonic interpretations and the creation of new established practices and critical standards for sound art can be seen playing out in the attempt to create a sonic fiction of sound art. And this is a tension that I would like to map out.

*   *   *

> My Sonic Fiction lingers in the illogical found via the body listening rather than in history
> and canonical names, to ignore "comforting origins and social context" and build contingent
> ones instead. But it does so via literary evocations and as possible worlds rather than as
> science fiction. (Voegelin 2014, 183)

There is a book that already addresses the subject of this chapter, *Sonic Possible Worlds* by
Salomé Voegelin, and it takes a radically different approach than mine. The reasons for
this difference is clear. I arrive at sonic fiction via Eshun's project to attempt to break open
the ossified understandings of established cultural practices of engaging with a particular
medium (sound as music), and its intersections with innumerable other media practices
with their own various ossified understandings. In short, Eshun's is a sonic fiction of music
and music cultures. Sound art is something related but it is something else, at least as a
discourse, and thus requires a different sonic fiction. The above quotation is taken from a
footnote in Voegelin's book in which she outlines what she sees as the key difference between
her and Eshun's projects. This will be returned to, but first there are more fundamental
conceptual distinctions to sketch out.

    First I want to propose what could be a way of thinking about the distinction between
music and sound art for the purposes of understanding the different demands these
practices make on sonic fiction. One way to put this is that sound art is the result of an
incredulity toward the metanarrative of music. If this is the case, then the implications are
philosophically technical. If we think of Deleuze and Guattari's concept of reality or matter
as a plane of consistency or absolute deterritorialization, and the organization of this matter
as producing different strata that compound and produce ever more abstracted levels of
signification (Deleuze and Guattari 2013b, 155), we could say that sound art is a practice
that attempts to deal with sound on a pre- or even post-musical level. There is no imperative
that it move to the level of music but the level of music exists and is present as a relative
position in our sonic experiences as listeners and practitioners. Unlike a structuralist
argument that would have sound art as being defined by not being music, ambiguity can
exist here but there is an intensive directional movement away from what is understood to
be organized as music by what is understood to be organized as sound art. However, this
pre/post-musical level is not the level of the plane of consistency. Though sound art could
be argued to be closer than music is, owing to its eschewing of certain established semiotic
systems, and because attempts can be made in this practice to deal with sound as material
with a capacity for absolute deterritorialization. Generalizing with the knowledge that a
great many practitioners of sound art may object to this category construction, the priorities
of sound art tend toward the capacity of sound to confound certain structures of material
organization, whereas the priorities of experimental music seek to use sounds as signifiers
to disrupt established modes of signification. There is of course a great deal of overlap (e.g.
Steve Goodman's conception of bass-driven dance music [2010, 28] and the pieces of
Pauline Oliveros [Voegelin 2014, 79]), and there are certainly exceptions (e.g. the politically
engaged works of Brandon LaBelle [2018, 9], and the entire musical philosophy of Karlheinz
Stockhausen [2008, 370–80]) but, if there is to be a conceptual distinction and thus a need
for a different kind of sonic fiction, then it would seem that this divergence of tendencies is

an appropriate way to define it. Music pulls sonic experience toward abstraction as signification and sound art pulls sonic experience toward absolute deterritorialization.

Regardless of the limitations of this definition, it is useful to continue with it here as it seems to overlap substantially with Voegelin's conception of the capacities of sound. When she critiques the art criticism paradigm of "'intensionality': a discussion of the work via discourses external to art: philosophical, political, and social texts and ideas, in order to expand how we think about the work as a work of art" (Voegelin 2014, 52), I read this as not wishing to pursue a practice focused on the disruption of systems of signification. And when, instead, Voegelin proposes a critical paradigm of "extensionality" that "serves to discuss the invisible mobility of the work, enabling sonic ramifications to pervade the actual art world and the actual everyday world, and make its plural complexity impact on discourse and criticism" (Voegelin 2014), I read this as an impulse in the direction of, though not necessarily hoping to reach, the level of absolute deterritorialized matter to find new creative possibilities. So it seems appropriate to consider this in looking at Voegelin's exploration of sound art.

Despite using the term sonic fiction throughout the book, Voegelin seems concerned with a more fundamental level than fiction in the world. Instead, her focus is the fiction of the world and the possibility of other world fictions. Voegelin draws from the work of the philosopher David K. Lewis and, in particular, his possible world hypothesis as a part of his theory of modal realism, which, greatly simplifying, states that possible non-actual worlds are not different in kind from actual worlds. Put another way, the ontological status of a form of material organization (not organized material) that could be called a world is the same if the world is actual or merely possible. And if a world is possible but not actualized it is no less existent as a form of organization than a world that is actualized, it merely exists as a potential. From here Voegelin picks up the interpretation made of this line of thought by literary theory and, given the complexity of this subject, it is worth quoting her argument at length. She writes:

> For literary critic Ruth Ronen, possible world theory is interesting and useful for the exploration of fictional texts as long as they remain autonomous of its philosophical background in logic as well as of the ontology of the actual world. "Possible worlds are based on a logic of ramification determining the range of possibilities that emerge from an actual state of affairs; fictional worlds are based on a logic of parallelism that guarantees their autonomy in relation to the actual world." The use of possible world theory for a sonic aesthetic is equally untied from the philosophical background, using rather than obeying conventions of logic, negotiating and subverting at times even its methods through the sensibility of sound. However, unlike literary fictions, sound artworks are only autonomous from the actual world when considered via a conventional, aesthetics, more seen than heard: when their material is negotiated via a visual referent or source, producing in sound a visual meaning or idea that exists as an aesthetic fiction. When listened to, they sound in the actual world its possibilities [. . .] Beyond reference, sound produces not an aesthetic parallelism that guarantees its autonomy from the actual world. Rather, it infiltrates the actual world and challenges how we might listen to it, aesthetically, in relation to art, as well as in relation to the world. (Voegelin 2014, 51)

Voegelin uses the insights from the step that moves this theory from modal logic through literary analysis to arrive at the question: What makes a sonic possible world? The point of distinction that she suggests between the literary possible world and the sonic possible world is a question of the possible world's position in relation to the actual. She argues that while literary fictional worlds exist in parallel to the actual, sonic fictional worlds are entangled with the actual. This helps to clarify the distinction Voegelin sees between her sonic fiction and that of Eshun. Eshun's journey into the science fictional has apparently taken sound into a possible parallel world of literary fiction, which, for Voegelin, falls short of explaining what sound can do. When it comes to the particular relationship between sonic fiction and sound art, Voegelin develops this idea further:

> Sound does not propose but generates the heard whose fictionality is thus not parallel but equivalent: it produces a possible actual fiction rather than a possible parallel fiction and sounds as "world-creating predicate." Sonic fictions do not propose a bridge between the actual and the possible but make the possibility of actuality apparent, building reality in the contingent and rickety shape of its own formless form. Thus, the sound artwork as sonic fiction is a phenomenological, a generative fiction, rather than a referential fiction. It is designed from the actions of its own materiality, not as description or reference of an object, a source, but as sound itself; we inhabit this materiality intersubjectively, reciprocating its agency in the sensory-motor action of listening as a movement toward what it is we hear. (Voegelin 2014)

I have some serious objections to this conceptual distinction. While it may hold that there are some considerable particularities to the phenomenological experience of sound artworks that differ greatly from the experience of literary or visual artworks, which in turn may have epistemic implications, it is a stretch to claim that this means there is a necessarily different ontological position of the fiction produced by different media art forms. For example, the productive entanglement of the sonic fictions found on the Matmos album *A Chance to Cut is a Chance to Cure* (2001) remains somewhat obscured until it revealed that the samples featured on a track, such as "California Rhinoplasty," are from actual plastic surgery operations (Reynolds 2001, 145). This motion of referentiality co-produces the actual possibility of the body with the sound in a way that the sound alone only hints at. Listening to the sound through the reference affects the material and the world of the listener. This is not to say that sounds cannot offer some kind of direct experience of the actuality of possibility, but more that it is not unique in doing so. To read Bataille's novella, *Story of the Eye* (2001), is, I would argue, not to experience something that is only parallel or referential. The short story does indeed use referentiality through exploration of the figure of the eye, the egg, the bull's testicle, but the experience of reading this text is one of "linger[ing] in the illogical found via the body." It is an experience of possible actuality in the actual world and not merely a referential parallelism.

To be clear, it's not that Voegelin entirely dismisses referentiality. As we can see from the example that follows immediately from the quotations above, on the sonic qualities of *Cells* by Louise Bourgeois (Voegelin 2014, 54), to fully grasp this piece is to dwell in an interplay between these modes of experience, and undoubtedly the experience of sound helps to

destabilize the distinctions between these different strata of experience. But this capacity to blur the boundaries between physical experiences of the world and systems of referentiality is not something that can only be done by sound.

I am not entirely averse to the notion that sound has particular qualities that other material does not and affects bodies in particular ways. For example, I am quite convinced by the argument for this put forth by Goodman in *Sonic Warfare* in relation to the politics of frequency. But, to make this argument Goodman had to deconstruct the very notion of sound and reconstruct it as the vibrational force (2010, 81). However, this is not what is under discussion in Voegelin's conception of sonic fiction. So when Voegelin claims that she does not read Bourgeois' piece but instead inhabits it, I am forced to ask: Can these things be opposed? Yes. But are they necessarily opposed? No. We read as we inhabit. We abstract from immanent experience and then pull these abstractions close again and vice versa. Sound demonstrates an extraordinary capacity toward both of these extremes. But to declare a kind of sonic exceptionalism for immanence, seems to me to be shaky ground on which to establish the sonic fiction of sound art.

I share Voegelin's concern as expressed in the section on *Cells*, that the limitations on the discourse surrounding the capacities of sounds in artworks are stifling creatively and experientially. The idea that one must refer their experience of the sonic to some kind of external canon does relegate something of the experience to a space of excess and unexplainability. This is my concern in the vignette above when talking about the correct way to listen to *The Firebird*. The experience was limited to the established hermeneutic tradition and anything else became too subjective to take seriously. This is Eshun's concern when he paints theory as the stern headmaster here to teach music a lesson. But to respond to this by asserting that the sonic can intercede in the production of possibility on a more fundamental level than the visual or symbolically abstracted modes of expression and experience, seems to me to place sound in the position that Eshun denounces in the opening; that of a transcendental, albeit material, black box.

For music, which is so inherently entangled in a multitude of levels of symbolic abstraction, the problems with this claim are abundantly clear. But with the tendency of a great deal of sound art to circumvent certain symbolic levels, the temptation reemerges to claim and assert the validity of the otherness of sounds that has been so often used to dismiss it by those over invested in referential reality construction. However, this can be done to too great a degree. And all sonic exceptionalist formulations do is to construct new canons and new systems of referentiality, which can make sound art and its capacity for the actualization of possibility, which I fully agree it has, less audible.

The implication of this for the sonic fiction of sound art are significant. Sonic fiction began as a particularity produced to address a singularity with universal implications. Eshun's approach to his coinage could not be more particular. These are signifiers of the genres. They are the rules of the games he is playing. They are polemical and there is swagger. There is history and there are norms, even as they are being rewritten. But when he writes about the capacity of music to produce new mythsciences and hyperstitional realities, its sonics are already entangled with referentiality. Where sound exceeds certain

references new references emerge. When a reference has sonic possibilities the physicality of sound can expand on them. With all this in mind and despite his origination of the term, there is no reason why the deployment of the concept of sonic fiction should only and always be made in reference to works similar to Eshun's own. The concept can, in his parlance, be reengineered. And such reengineering will be necessary to produce a sonic fiction of sound art. But such a sonic fiction cannot be made of sound alone.

Women Sonic Thinkers

The Histories of Seeing, Touching, and Embodying Sound

Sandra Kazlauskaite

Prologue: The Voice of the Mother Tongue

"Offer your experience as truth" (Le Guin 1989, 150), said the artist and composer Pauline Oliveros when she spoke to the feminist science fiction and fantasy writer Ursula Le Guin for the first time in the early spring of 1986.[1] This sentence resonated with Le Guin. In reflection, she wrote: "There was a short silence. When we started talking again, we didn't talk objectively, and we didn't fight. We went back to feeling our ways into ideas, using the whole intellect not half of it, talking to one another, which involves listening. We tried to offer our experience to one another. Not claiming something: offering something" (Le Guin 1989). Le Guin and Oliveros were able to talk in a language they both shared—a language that sought to offer something rather than claim something. This language, as Le Guin calls it, is "the mother tongue" (Le Guin 1989, 149). For Le Guin, the mother tongue is a language of a relation, a relationship: "it connects. It goes two ways, many ways, an exchange, a network" (Le Guin 1989). Those who speak it do not wish to divide or separate. Those who live by it do not speak *at* you but *with* you—a*ll* of you: your body, your limbs, your ears, and eyes, as well as your surroundings. The mother tongue, then, is a language of embodied collectivity. It encompasses more than mere words. It includes gestures, bodily presence, movements, and the lived environment. It is a language that allows those who speak it to listen, to experience, to be with one another, to form relations, to build knowledge together and to offer something, rather than to claim something.

The mother tongue, however, is not a universal language. It sits on the peripheries, outside the centers of governance and "the civic space of men" (Carson 1995, 125). At times, it is barely heard or understood. And not everyone speaks the mother tongue, although those who do, time and time, have been admitted as bad to hear (Carson 1995,

119)—as irrational, as incomprehensible, as incognizable. The mother tongue, then, is a language of weirdness and queerness. According to Le Guin, it is often isolated and placed outside the language of rationality and order, outside what she calls "the father tongue [. . .]—the language of power—of social power" (Le Guin 1989, 147). The father tongue considers itself to be *the* universal language. It organizes and sets the systems of social order, and, because of it, it conditions, it claims, and it restrains. The father tongue, thus, is one of limitations. It is not a relation or a relationship. It is not built on kinship. Quite the contrary, it is "spoken from above. It goes one way. No answer is expected, or heard" (Le Guin 1989, 150). It does not speak *with* or listen *with*, but instead, it speaks *at* you: "it only lectures" (Le Guin 1989, 148). The father tongue, then, is one of *dis*connection, *dis*embodiment, and *dis*union: it divides, individuates, excludes, distances. It creates gaps. It quietens and silences the voices of those who may not be able to speak it.

Those outside the father tongue, as demonstrated by Oliveros and Le Guin, have continued to listen together, share experiences as truth and consequently empower one another, collectively. Despite the silencing and the exclusion, when speaking the mother tongue, some of us have resisted and dissented against the patriarchal systems and codes. In Sara Ahmed's terms, we have performed as willful. Willfulness, after all, is "the acquisition of a voice as a refusal to be beaten" (Ahmed 2017, 150). Willfulness allows us to challenge individualization, bodily inhibition, and the gendered language that continues to exclude some of us. By being willful and speaking the mother tongue, we have been able to unearth what feminist philosopher Julia Kristeva calls the "*chora*" (Kristeva 1986, 94)—our bodily articulations, which we use as ammunition to combat the language of power and to reclaim our position within the social lived center. Thus, even when told that "our experience, the life experience of women, is not valuable to men—therefore not valuable to society, to humanity" (Le Guin 1989, 148), *our* collective chora, when using the mother tongue, has allowed some of us to speak *with* and listen *with*, this way reclaiming our lost subjectivities and confronting the world in which, as Ahmed argues, "*human* is still defined as *man*" (Ahmed 2017, 15).

Sonic Thinking the Father Tongue Way

This chapter proposes that the history of sound in the arts since the entrance of the phonograph in 1877, as it stands now, has paid too much attention to the father tongue and those who speak it. Let us set the scene: When studying and reading about the history of experimental music and what we now call "sound art," we are repeatedly taught that it was John Cage who conceptually rejected the idea of silence. We are told to turn to composers such as Luigi Russolo when thinking about noise or nonmusical objects. When listening, we are ordered to concentrate and reduce our ears, as dictated by Pierre Schaeffer. When imagining sound in space, we are often referred to composers Edgard Varèse, Iannis Xenakis, or a sound artist Bernhard Leitner. When engaging in the

soundscapes of the world, we are directed toward sound ecologist R. Murray Schafer's thinking, as, supposedly, he was the first practitioner to claim the term with confidence. The history of thinking *with*, *about*, and *through* sound in the field of sounding arts, as we encounter it in the ever-increasing compendia and edited books and journals, has continued to present itself as technologically determined, driven by masculinized ideals and structures and, as a result, gendered. Whilst conducting itself using the language of social power and with an assertive tone, the history of sonic thinking in the arts has created distance, has left gaps, and has claimed a very particular linearity, consequently displacing some thinkers and makers of sound, including women, out of the center and into the suburbs.[2]

Sonic thinking or thinking *with, about*, and *through* technologically mediated sound "the father tongue way" can be traced back to the entrance of the audio recording devices at the end of the nineteenth century. The early avant-garde of the twentieth century turned to technologies such as the phonograph as a way of conquering new sonic terrains with a mission to extend the spectrum of sound and push music toward atonality and abstraction. The conceptual expedition, led by Western composers such as Edgard Varèse, Luigi Russolo, Léon Theremin, and others, was primarily driven by the promise of the machine to expand sound into space and administer any sound possible. Such an approach to sound research and practice quickly resulted in sound being claimed in primarily rational and objectively organized terms, creating a conceptual and critical space for middle-class, heteronormative *men* working with sound.

Scholars Tara Rodgers (2010), Holly Ingleton (2015), and Marie Thompson (2018) propose that the quest to frame sound in the so-called neutral, administrable, and measurable sonic parameters coincide with the broader epistemological project of splitting sound into prescribed gendered dichotomies (Thompson 2018, 110). Thompson argues that the "quality," or the "mastery," of technologically produced sounds is measured against historically established acoustic ideals, which have been primarily associated with "masculine" qualities and standards. A sine wave, the scholar further suggests, "is structurally analogous to white masculine subject (recall the universalising 'normality' of the masculine cadence)" (Thompson 2018, 111). Any sound outside the formal masculinized "norm" would be "feminized" and thus removed from the compositional spectrum.

Tara Rodgers admits such an approach to sound and music production is techno-fetishistic. The writer argues that the processes of industrial modernization and warfare at the start of the twentieth century, driven by "symbols of violent confrontation and domination" (Rodgers 2010, 7), has led to militaristic, rationalistic, and "masculine" characterization of sound and music. The sounding machine offered "rationalistic precision and control," which coincided with the "notions of male technical competence and 'hard' mastery" (Rodgers 2010, 7). The socially prescribed "feminized" thinkers and practitioners would be deemed unequipped to maintain such a level technical proficiency, thus, coded as "nontechnical" and prompted by "soft" knowledges (Rodgers 2010, 7). The so-called subjective or "feminized" approaches to knowledge

production, as a result, would be devalued and excluded from the main "sounding" experimentations and debates. It could be argued that a removal of "feminized" bodies from sonic research and practice since modernism has led to a preservation of patriarchal social order and what Matthew Bannister calls "masculine hegemony" (Bannister 2013, x).

The Mother Tongue in the Sounding Arts

This chapter calls for a reconsideration of the history of sonic thinking in the arts beyond the laws of masculine hegemony and the language of social power. It proposes that there are many histories and not just one, thus, in order to understand how sound has been researched and practiced outside the father tongue, we must turn our attention toward women in sound. Self-identifying women working with sound and technology, even when quietened or kept outside recording studios, performance halls, and gallery spaces, have actively contributed toward the evolution of what we now call "sound art" or "sonic arts." When pushed out from the spaces of reason, objectivity, and order, they have not been silent. Quite the contrary. In Le Guin's terms, they have tuned toward the mother tongue, assiduously, and offered their experience of sound as truth with the aim of expanding our relationship with sound beyond the masculine ideals.

This chapter proposes that thinking *with* and *through* sound for some women artists and composers has served as both a creative and a political project. Some have used sound as a way of challenging the gendered silencing, whilst others pushed sound into more expanded conceptual and critical domains. In other words, sonic thinking, for women artists and composers, has served as a way of amplifying their presence as creators and thinkers as well as providing a form of ammunition against bodily inhibition, the endemic sexism, and the institutional exclusion, experienced in the field of sounding arts and experimental music. By creating their own unique narratives of sonic thinking and practice, women in sound have sought to explore aurality beyond its masculinized limitations and push sound toward more open and experiential sociopolitical domains. Artists, including Pauline Oliveros, Daphne Oram, Hildegard Westerkamp, Annea Lockwood, Maryanne Amacher, Lis Rhodes, Mary Ellen Bute, Alison Knowles, and Judy Dunnaway, to name *a very few*, have worked with silence, transformed nonmusical objects into instruments, drawn sound on film, and questioned the potential of soundscape. As an introductory historiographic survey into women's work with sound, this chapter demonstrates that sound has been used by women working with sound in different fields, including film, installation art, and performance. Some artists have been able to see and touch sound, whilst others embodied all sound, this way expanding our understanding of sound beyond the rational and objective (or "masculinized") thought. Whilst their explorations *with* and *through* sound continue to sit on the edges, sporadically entering the center, the task of this chapter is to consider their work as integral to the histories of sounding arts and account for their voices, waves, and frequencies.

Seeing Sound

How does one *see* sound? Throughout the history of sounding media art, a number of women artists have turned to film and audiovisual technology as a way of expanding our perception of sound. Nonrepresentational film pioneer Mary Ellen Bute (1906–1983), for example, made sound visible in her abstract animation works. A British artist Lis Rhodes (b. 1942), however, used film as a way of transporting sound into physical exhibition environments. An American artist Maryanne Amacher (1938–2009) utilized psychoacoustic techniques to construct spatial visual illusions through sound. Whilst led by creativity, these conceptual quests could also be read as willful acts against the institutional apparatus and the gendered restrictions behind art production, display, and experience. Even when excluded from computer labs or performance halls, Bute, Amacher, and Rhodes remained true to their visions. Rather than conforming to the limitations and reducing their practice to traditional compositional forms, or the so-called ideal sonic parameters, these women rejected the techno-fetishist approach to sound and instead utilized sonic and audiovisual media as an open-ended instrument, consequently extending our relationship to the senses of hearing, seeing, and touching.

Painting Sound: Mary Ellen Bute

> We need a new kinetic, visual art form—one that unites sound, color and form. (Mary Ellen Bute n.d.)

Mary Ellen Bute was one of the first female film practitioners to explore the relationship between image and sound in abstract form. Whilst working alongside male artists associated with the Absolute Film and Visual Music movements, including Oskar Fischinger, Walter Ruttman, and Viking Eggeling, Bute offered a unique experience-led approach to her artistic research. The artist explored audiovisual motion, harmony, and rhythm with the intention of transforming visual shapes into sounds. According to media theorist Sandra Naumann, Bute "sought to arrange the visual material to principles as intrinsic as those used in music" (Naumann 2015, 511). Using analogue film as an auditory instrument, the artist constructed hand-drawn animations, which consisted of abstract lines, shapes, and forms. These would then be transformed into audiovisual orchestrations.

Bute's conceptual goal was to extend the boundaries of the participants' auditory perception, inviting the viewers to *see* her films *through* sound. Between the 1930s and the 1950s the artist created over a dozen short films, including *Rhythm in Light* (1934), *Tarantella* (1940), *Imagination* (1948), and *Abstronic* (1952). Bute was interested in how audiovisual abstraction would affect bodies; specifically, whether two-dimensional temporal works, once in a synchronous audiovisual contract, could induce a more embodied connection to the artwork experienced. The artist imagined that once abstract images and sound would co-connect in space, they would be able to induce a physiological "stimulant by its own inherent powers of sensation" (Bute n.d.).

Whilst many of Bute's audiovisual artworks relied on preexisting musical accompaniments, including Bach and Shostakovich's compositions, *Tarantella* (1940) incorporated an original soundtrack built in accordance to the images drawn. Bute used mathematical techniques "to develop a series of rhythms," which "derived from arithmetical operations" (Naumann 2015, 511). The artist relied on "mathematical operations to create [. . .] a series of rhythms that the composer translated into dance" (Naumann 2015, 529), a dance that was later transformed into colors and forms.

The musical accompaniment of the four-minute audiovisual composition consists of dissonant rhythmic piano lines, which was developed in collaboration with a pianist and composer Edwin Gerschefski. The "dancing" sounds awaken and move the abstract visual material, including red and blue squares, spirals, and triangles, within the audiovisual screen space. Different animated shapes appear, dissolve, and reappear according to the sounds developing in time. With the "rapid succession of largely geometric shapes [. . .] reminiscent of oscillograms," Naumann writes (Naumann 2015, 529), the images in *Tarantella* become music whilst music becomes images—an audiovisual synchresis is able to emerge.

The opening credits of the piece, written by R. Bruce Elder, suggest that the appearance of color in Bute's films "freed" her talent. Whilst "before she had been constrained by a quasi-scientific conception of the parallels between musical and visual dynamics," now, "a more intuitive approach," or, in other words, more open approach to her explorations, enabled the artist to be "linked closer to Kandinsky, making it among Bute's most avant-garde productions" (Elder 1940). *Tarantella* would emerge, according to Bute, as a "stimulant" (Elder 1940), which, through rhythm and motion, would surpass the viewers' minds and incorporate the experiencers' *whole* bodies when engaging in the piece. The addition of synchronous sound only contributed toward the unity of senses. Through audiovisual abstraction, the visual forms would unfold "along with the thematic development of rhythmic cadences of music" (Elder 1940), this way forming a more interconnected relation between the experiencing subject's bodies and the sounding visual object. According to the artist herself, her core aim was to "bring to the eyes a combination of visual forms unfolding along with the thematic development and rhythmic cadences of music" (Bute n.d.).

By the 1940s Bute established what William Moritz calls "music for the eye comparable to the effects of sound for the ear" (Moritz 1986). The artist was convinced that film would enable us to see sound. Using technologically constructed audiovisual abstraction, Bute confronted the limitations of pictorial thinking and introduced a possibility of what I call *audiovisual thinking*—a critical as well as a perceptual space where sound and image would exist as united, rather than divided or separated. In other words, by creating a marriage between images and sound, Bute discovered a new dimension within the audiovisual contract, a dimension that would no longer rely on "literary meaning, photographic imitation or symbolism" (Bute 1941), but offer a more direct, embodied, and visceral chora. Bute's conceptual approaches to sound, as communicated using the mother tongue, bypassed the binaries between seeing/hearing and mind/body. The artist instead introduced the idea of seeing sound as whole-bodily.

Optical Sonicities: Lis Rhodes

Celluloid film, for Lis Rhodes (b. 1942), served as an auditory instrument for expanding the listeners' perception when experiencing sounding installations in physical gallery settings. The artist would transform film stock into scores, which she would compose using hand-drawn sounds, inscribed directly onto celluloid film, a method called *optical sound*, this way expanding the potential of the visual medium and obstructing its representational nature. When thinking *with* and *through* sound, Rhodes believed that by interfering with the heightened visuality of film and challenging its limitations, specifically, by inscribing sound into an image, sound would become visible and felt in the experiential space. Rhodes used this technique as a way of subverting the ideological position of the cinematic apparatus—the industrial and the mental machinery that would condition the participant's way of experiencing music and art.

For Rhodes, the process of sonifying the visual medium has always played a political function. As a feminist working in a primarily male-dominated field, Rhodes confronted the ingrained issues of gender and spectatorship within the arts and film tradition. She argued that art, in the way it has been practiced and understood, has been "directional" and with that, full of patriarchal lines and walls, which has led to an "inflexible chain" (Rhodes 1979, 120). The artist admitted the history of art as linear: "pattern is defined. Cut the line and chronology falls in a crumpled heap. I prefer a crumpled heap, history at my feet, not stretched above my head" (Rhodes 1979, 120). By obstructing the materiality of film and making it audible by hand, Rhodes sought to confront these ingrained patterns. The artist used her experimentations as a way of disrupting the art institution's patriarchal chain led by "shirts and shoulders" (Rhodes 1979, 120). Instead, by thinking *with* and *through* sound, Rhodes sought to unlock and dismantle this chain. With her compositions, she confronted the dominance of the image, and with that, dominance of patriarchal structures.

In *Dresden Dynamo* (1971–1972), for example, Rhodes began to dismantle the hierarchical imbalance between image and sound. The artist introduced dissonance and disruption into the sound-image relationship—a form of audiovisuality in which the image would no longer function as the leading element of the artwork. Quite the contrary, the visuals used would only come to life because of sound. Once together, both image and sound could continue in equal co-existence.

Dresden Dynamo was constructed using discordant sound patterns and abstract visual shapes, including "red, blue and black grids" (Mollaghan 2017, 209), which danced dynamically across the screen. When creating the work, Rhodes applied Letraset and Letratone directly onto clear film and discovered that "when applied to 16 mm film and passed through a projector, a certain grade of Letratone produced the sound of a middle C, a discovery that allowed her to compose a soundtrack of discernible musical tones relative to this tonic note" (Mollaghan 2017, 209). It was through a tactile encounter with the film material that the artist was able to liberate the medium from the limitations of the visual frame and transform film into a sounding composition. As Mollaghan argues, in *Dresden Dynamo*: "the soundtrack is the image and the image is the soundtrack" (Mollaghan 2017, 209).

The construction of *Dresden Dynamo* could also be considered as a political gesture. According to Mollaghan, the composition questions the "inequitable power structures and the suppression of the female voice in music and society" (Mollaghan 2017, 205). Through audiovisual dissonance, it interrogates "the dominant audiovisual relationship on both an ideological and a formal level in order to elucidate or redress these imbalances of power" (Mollaghan 2017, 205). In other words, the artwork obstructs the "visuality" of film stock as a way of resisting the alienation of women composers and artists in the field of experimental music and sounding art. In Mollaghan's words, Rhodes' vision was to: "compose music through the deployment of images in such a way as to highlight the scant critical or biographical attention paid to female composers working within the Western art music tradition" (Mollaghan 2017, 209). Whilst sound in *Dresden Dynamo* does not escape the two-dimensional screen space, the abstraction and the distortion discovered in the images and sound of the piece evidence the urge to push audiovisuality beyond the prescribed institutional structures.

Rhodes' later artwork, *Light Music* (1975) demonstrates how sound can be experienced beyond the screen frame. When creating the artwork, the artist positioned two film projectors in the opposite parts of a darkened exhibition room, with each projector facing each other. Both audiovisual machines would emit black-and-white minimal graphic shapes composed using the optical sound technique, allowing sound and sound-induced light to fill the architectures of the space. Sound, when in operation, would travel from one wall to another, interfering with the visual objects and the experiencing subjects in time, this way extending itself into the experiential space and transforming the exhibition room into a pulsating sounding sculpture. Sound, mediated through the light beams of the projectors, would develop a level of three-dimensionality, which would surround the experiencing subject's bodies, allowing them now to be *inside* sound. The visitors' bodies would inevitably become a part of the overall sounding and now visible sculpture mediated through the projectors. As noted by Mollaghan, by creating two sources of light: "Rhodes challenged preconceived notions of cinematic viewing by encouraging the audience to engage actively with the film from the inside" (Mollaghan 2017, 212). Rhodes' installation, thus, becomes a spatial auditory composition. As argued by the artist herself: *Light Music* "is not a complete as totality; it could well be different and still achieve its purpose of exploring the possibilities of optical sound" (Rhodes 1979). When in operation, the artwork creates a physical space in which seeing and touching sound becomes possible.

Rhodes used *Dresden Dynamo* and *Light Music* as instruments for obstructing the ingrained hierarchy of senses. As a creator, she refused to limit her conceptual visions when imagining sound or making sound visible, even with the knowledge that she would actively obstruct the ingrained cinematic order and contest the conventions of musical composition. As a feminist, she used her tactile and embodied experiences of seeing sound as a way of offering her experiences as truth and extending our perception of sound. Rhodes believed that by imagining sound and forming a more tactile connection with the sonic material used, institutional lines could be disputed and potentially dismantled. As Rhodes has suggested herself: "it is dangerous to step out of line—and lethal not to" (ICA 2012). It could be argued that the artist's artworks actively step out of line. Sound, for

Rhodes, became a sounding tool as well as a political "engine" inviting those outside the father tongue to subvert the prescribed social lines and transform spaces into tactile perceptual grounds where sound could be now seen and touched.

Sonic Geographies: Maryanne Amacher

An American experimental music composer and sound installation artist Maryanne Amacher explored sound in imaginary terms. Amacher's way into sonic experimentalism arrived from German composer Karlheinz Stockhausen and his theories of serial music and auditory spatialization.[3] Amacher, however, was more concerned with the experiential aspects of sound rather than composing technically skilled musical works. For example, the composer was particularly interested in the embodied aspects of sound, specifically, how bodies connect to sound, how sound influences bodies, and how bodies respond to sound and the environments in which things and events become audible. According to the artist: "how certain sounds are to be perceived in a sonic world becomes as important as the sounds themselves" (Amacher 2008, 10). The composer imagined sound as an ongoing expedition into sonic geographies—a way of discovering a connection between bodies and spaces through sound. In this sense, Amacher did not turn to technology to build formal relationships to sound. Instead, she used her research as well as her practice to explore the experiential processes of hearing and the embodied subjectivities that would arise from listening to electronically produced tones.

Throughout the 1960s up to the early 2000s, Amacher developed a number of large-scale site-specific sound installations that questioned the relationship between sound, bodies, and architecture. Already in 1967, for example, the composer began to create a series of works called *City-Links* (1967–1981). This installation sought to connect different remote locations using sound technology in real time. The artist used distant microphones to record audible tones, which were transmitted live through FM-quality telephone lines into a studio over a period of months and years. Amacher would then combine, layer, and superimpose the sounds captured, this way transforming sonic material into spatialized sonic compositions and sculptures.

Amacher's later works, including site-specific installations *Music for Sound Joined Rooms* (1980) and *Mini-Sound Series* (1985) pushed the question of bodily listening further. With these works, the artist sought to explore the potential of participating in sound beyond the conventional (stereotypically passive) forms of auditory engagement. She imagined the listeners as active producers of sonic environments, capable of creating their own compositions, mediated by bodily sounds as well as sounds discovered in their surrounding spaces. Amacher was particularly interested in exploring the idea of "ear-as-composer," questioning whether ears were capable of emitting their own sound and what "perceptual modes they [could] trigger" (Amacher 2008, 10). She believed that inner bodily sounds were "as important in shaping an aural architecture as the acoustic information: frequencies, tone colours, and rhythms" (Amacher 2008, 10). The artist referred to this psychoacoustic phenomenon as "ear

tone response" (Amacher 2008, 10), otherwise known otoacoustic emissions. Through exploration, Amacher discovered how the cochlea would not only perceive sound, but also produce sound, which would emit from the ear itself either with or without acoustic stimuli. By creating and experiencing computer-generated audible tones, Amacher was interested in activating the experiencing subjects' bodies, allowing the ear to perform as a recorder as well as an instrument capable of producing its own tones in time.

Amacher's works arose from her unique subject-led experiences of sound. In her text *Psychoacoustic Phenomena in Musical Composition: Some Features of a "Perceptual Geography,"* first published in 1977, the artist discussed the importance of building knowledge about sound through experimentation and experience. Amacher wrote: "The observations [. . .] originate directly from my experiences, sonically and perceptually. It is important to understand that since I was able to work with electronically produced sound it was possible for me to make these discoveries, *experientially* before considering how I would develop them musically: I had unrestricted time to observe what I was experiencing" (Amacher 2008, 10). It was through her experiences as embodied and lived that the artist was able to discover how ears were not only receiving sounds but also were emitting them. When discovering her ears could speak, she referred to her experience as truth: "even though I *knew* this was to be happening, lacking any musical theories that explored such vivid *ear tone responses,* I had to question them to a certain degree. How to accurately describe these affects? Could they perhaps be illusions, hallucinatory phenomena?" (Amacher 2008, 10). Even though Amacher's initial otoacoustic emissions discovery was admitted as pseudoscientific, lacking appropriate research and knowledge, the artist remained true to her experience. She continued to question this psychoacoustic phenomenon and utilized the experimentations as a conceptual material when creating works: "I continued, however, over the years to develop my music exploring such sonic perceptual responses as described in this text because these features were fully audible and present to me [. . .]" (Amacher 2008, 11). Despite the institutional cynicism and critiques, Amacher continued to push the boundaries of musical composition and explored how sound, when produced bodily and in connection with the environment, would affect our listening patterns. Her conceptual interrogations sought to reawaken the ears as well as bodies of the listeners, this way enabling them to form a sonic relationality between their sounding bodies and the external sounding world.

It could be argued that Amacher, when thinking *with* and *through* sound, spoke the mother tongue. She introduced sonic geographies as a way of forming intersubjective relations, experiences, and encounters with other sounding sonicities in time. For Amacher, sound was imagined and practiced as something that was lived and felt, rather than something that was always already given or claimed. Thus, whilst thinking *with* and *through* sound, she became indebted in the materialities of the lived world, consequently shifting from the rational and the objective organization of sound toward more tactile and embodied explorations, led by bodily connections with listening environments.

Touching Sound

Whilst Bute, Rhodes, and Amacher utilized images, light, and psychoacoustics to imagine and extend the sonic spectrum as well as the experiencing subject's perception of sound, some artists, including Daphne Oram and Judy Dunaway, relied on tactile and embodied experiences of electronics as well as physical everyday objects to inform them about the sociopolitical, technological, and institutional struggles and conditions. Daphne Oram (1925–2003), for example, hand-built the first optical sound synthesizer—the Oramics machine, consequently introducing new ways of producing and performing electronic music. Dunaway, on the other hand, turned to the sphere of the nonmusical, specifically, latex balloons—objects that are stereotypically associated with subjectivity, decadence, sexuality, and the so-called soft forms of knowledge. For her, these traditionally feminized objects have served as a form of sonic political activism—a way of mediating and amplifying the voices of those who had been oppressed and excluded from the hetero-male-governed spaces. It could be argued that these women artists and thinkers developed a tactile relationship to sound. Whether by drawing it or discovering it in nonmusical objects, they used sound as a tactile material to confront the institutional language of power—the father tongue.

Drawing Sound: Daphne Oram

Daphne Oram created the first electronic instrument that would translate drawings into sound. Sonic waveforms would be drawn directly onto paper and traced onto loops of 35 mm film, which, when added to the clutch mechanism of the device, would form sounds. According to Oram, Oramics would allow any composer to "draw, by hand, some dozen or more patterns which will give the electronic device not only the basic complex tone colours but the information on how they are to be blended, reshaped, pitched, phrased, dynamically controlled and reverberated" (Oram 2007, 1.4.x). Unlike its predecessors, the Oramics machine offered, as argued by Jo Hutton, "finer nuances of sound manipulation, greater flexibility and simultaneity in the creation of sound [. . .]. Concentrated listening to compositions using the Oramics system reveals a more lucid, free and at the same time more precise analogue of sound waveforms" (Hutton 2003, 54). In other words, Oram turned to her auditory imagination and used her technical skills to explore and amplify any hidden sonic material that would usually be deemed irrelevant, insignificant or unwanted. For Oram, the mission of the Oramics machine, was to offer life to any hidden sonic in-betweens and every delicate nuance of sound.

Being a woman and an electronic music composer in a predominantly patriarchal institutional setting, for Oram, was not an easy task. Whilst Oram initiated the BBC Radiophonic Workshop in 1958, soon after she decided to step down and set up her own private studio in order to develop her Oramics project.[4] The composer, however, struggled to find financial support.[5] Oram recalls meeting the BBC:

> I went to see the Head of Research and said I've got an idea of writing graphic music could I have some equipment please and he pulled himself up to his full height and said "Miss Oram, we employ a hundred musicians to make all the songs we want, thank you." And this imprinted on my mind and I thought you so and so, but that was the attitude, that was the official attitude, they had, the BBC Symphony Orchestra, and it was there to make all the music they wanted, and nothing else was of any interest. (Manning 2012, 139–40)

Despite the institutional ignorance, the composer persevered and continued to undertake her research independently. Driven by tenacious and stubborn character, Oram created a sound instrument would not only extend the parameters of optical sound, but also transform how artists and performers, when operating the device, would connect to sound. With the Oramics machine, composers would hand draw their notes using a graphic scoring system that would allow *any* sound to be imagined, processed, and then voiced by the machine.

Oram wrote about her experimentations with sound and music in her book—*An Individual Note* (1972), in which she discussed how philosophy, science and literature had informed her conceptual ideas and her research into electronics as well as the Oramics project. The composer was interested in how electronically produced tones, when in contact with the composer's mind, hands, ears, and the rest of their body, would inform and shape the sound imagined. She believed that the Oramics machine would be able to answer that question. The artist thought that: "Maybe, by pursuing . . . analogies between electronic circuits and the composing of music, we will be able to gain a little insight into what lies between and beyond the notes; we may be able to glimpse forces at work within the composer . . . which seem to have counterparts in acoustics and electronics" (Oram 1972, 5–6). In this sense, Oram's approach to sound was guided by exploration, openness, and fluidity. According to Hutton: "Oram's thinking favored the lucid flow of sound over time, elasticity of rhythm and tone, allowing sound freedom and space to take its course" (Hutton 2003, 53). Oram introduced a level of sensitivity and "sensual awareness of space," which, Hutton continues, counteracted the "harsh tones coming over from Cologne, Paris and Utrecht" (Hutton 2003, 52). The composer's route toward sound, thus, was less informed by objective organization of sound, and more inspired by tactile and open explorations of auditory shapes and forms from the drawing of sounds.

Maybe, Oram's interest in sound, specifically the sonic in-betweens and the unknowns hidden behind the notes, was led by her broader concern with the patriarchy and the elitism of electronic music tradition. Maybe, the composer was disenchanted by electronic music instrumentation and its ability to shield the technological processes that go into shaping and creating sounds, leading to creators who work within the peripheries, including the stereotypically feminized bodies, to remain outside; daunted, bewildered, and mystified by the operation of the machine, too threatened to question or intervene. Oram, as a visionary and a radical in her field, however, confronted and dismantled the mysticism behind electronic music production. By introducing an instrument for drawing music, she invited composers to be daring, to imagine, and to materialize their imaginations in a more

tactile way—by experimenting with electronics and by building their own unique sounds by hand from scratch. With Oramics, the composer has been able to make the invisible visible, the immaterial material, and the silenced unsilenced.

Sounding Politics: Judy Dunaway

Judy Dunaway (b. 1964), an American-born conceptual sound artist and composer, has been using latex balloons as her main instrument for composing music and constructing improvised performances since the 1980s. Drawing inspirations from Fluxus as well as John Cage's work, Dunaway pushed her sonic research and creative practice toward feminist politics, activism, and queer culture. Latex objects, for Dunaway, when composed and performed as music, have served as political statements, through which, the artist has sought to amplify and confront the issues of gender inequality, gender normativism, and anti-feminism. By thinking *with* and *through* sound, the composer's mission has been to raise awareness about the marginalization of certain communities and their labor conditions, including the rights of lesbian, gay, bisexual, transgender (LGBT), and sex workers. In a way, Dunaway's compositions could be considered as embodied explorations of the material struggles as well as mediations of the inexpressible trauma that has continued to haunt the bodies of those who, for one reason or another, have been pushed out from normative social systems. The artist writes:

> what drove me to make them [balloons] more than just a sound maker in my arsenal of effects and to make them a singular focus was the AIDS crisis. In the late 80s and the early 90s, I was living in New York City and many people, including my friends, were dying from AIDS. No one knew how to prevent the spread of the disease. Then it was discovered that latex condoms could prevent people from contracting HIV. This was when my obsession with using latex balloons as sound conduits began. (Dunaway, n.d.)

Dunaway performs using balloons as reeds, this way forming a physical connection with the material used. By inhaling and exhaling the balloons, the artist induces vibrations into the air according to her mouth movement. The sound, as produced by the instrument, then forms loud and dissonant noises. These, when echoing and resonating in performance settings, induce a sense of comfort as well as distress. Whilst the audible tones emitting from the balloons create a feeling of empowerment and liberation, simultaneously, the dissonance of the sonic material produced also causes a feeling of disquietude, as if the noises emitted from the balloons are trying to obstruct and interfere with patriarchal restrictions, ingrained forms of normativity, and gender binarism.

Dunaway's works, in this sense, are inherently political. They serve as feminist expeditions into the emasculation of the sociopolitical sphere governed by the laws of heteronormative patriarchy within the arts. It could be argued that performing using latex balloons is a way of exposing the inequalities of gender and labor and is willful. In Sara Ahmed's terms: "willfulness is thus required in ordinary places: where we live; where we work. Willfulness too is homework" (Ahmed 2017, 83). Sonifying latex and creating unbearably loud and harsh noises is Dunaway's feminist homework. It is her way of

dissenting and resisting bodily inhibition, which has been conditioning *some* bodies by Western patriarchy for centuries. Dunaway explains:

> Creating a large body of work for balloons has allowed me to develop a vocabulary outside the realm of oppressive classical heritage. It has raised the ordinary and mundane to the status of high art. I have fetishized this simple cheap toy in my music, as the violin has been fetishized for centuries by Western-European influenced composers. In an era where the progress toward a woman's control of her own body is threatened, I have coupled myself to a musical instrument that expresses sensuality, sexuality and humanity without inhibition. (Dunaway n.d.)

When using her body, her hands, and her mouth to perform latex, she does it without restrictions or taboos with the intention to initiate a "non-judgmental aural relationship" between the performer, the listener, and the sound produced (Dunaway n.d.). By doing that, the artist has continued to offer inclusivity and openness.

Embodying All Sound

Uncovering and embodying all possible sound of the world has been a mission to a number of artists and composers when thinking *with* and *through* sound. Since the 1960s, an experimental music composer Pauline Oliveros (1932–2016) sought to engage her *whole* body as a performer and a listener to sounding environments as a social act. This approach has enabled the artist to "take in and listen to everything that is around you; inside of you" (Oliveros n.d.). A Canadian composer and acoustic ecologist Hildegard Westerkamp (b. 1946) has also utilized all sound as a method for studying and connecting with our lived environments. She has explored how our ears as well as our bodies connect to nature and urban spaces. For Oliveros and Westerkamp, the idea of engaging in everything that is audible has empowered them to consider aurality in more social terms, imagining listening not as a directional or an isolated practice, but a communal event. They believed that by allowing our bodies to connect to the *whole* sounding world, we can bypass institutional lines and frames, consequently demolishing the boundaries between the outside and the inside, between a man and a woman, between nature and culture. For these artists, all sound has served as their mother tongue, a language of relation, a relationship between their listening bodies and the world.

Walking with Sound: Hildegard Westerkamp

A Canadian sound ecologist and composer, Hildegard Westerkamp (b. 1946) encourages us to move our bodies through the environments we inhabit and ask ourselves what it is that we are hearing. The composer argues that the world is full of sound, however, we can only learn about its treasures if we consciously activate our bodies and participate in it through listening. Westerkamp refers to these attentive sonic acts as "soundwalks" (Westerkamp 2006). For her, "a soundwalk is any excursion whose main purpose is listening to the

environment. [. . .] It is an exploration of what the 'naked ear' hears and how we relate and react to it" (Westerkamp 2006). The aim of sound-walks is to expose the listeners' ears (and bodies) to "every sound around us no matter where we are" (Westerkamp 2006). The composer suggests that our bodies not only absorb sound, but also sound out, this way contributing toward the construction of our lived environments.

Westerkamp, as a feminist thinker and practitioner, sought to extend the concept of *soundscape*.[6] Whilst the founder of the term, R. Murray Schafer, openly critiqued certain sounds, admitting urban sounds, for example, as "lo-fi," corrupted, and infusing "schizophonia," Westerkamp did the opposite. She shifted away from Schafer's determinism and offered a more open and a socially conscious reading of the term. She understood soundscapes, whether naturally or technologically constructed, as integral to our ability to participate in the world. For Westerkamp, soundscape served as a method for forming embodied and social bonds between bodies and environments:

> Start by listening to the sounds of your body while moving. They are closest to you and establish the first dialogue between you and the environment. If you can hear even the quietest of these sounds you are moving through an environment that is scaled on human proportions. In other words, with your voice or your footsteps for instance, you are "talking" to your environment, which then in turn responds by giving your sounds a specific acoustic quality. (Westerkamp 2007)

Westerkamp placed "a strong emphasis on human *experience*" (Duhautpas and Solomos 2014, 6) of *all* sound. As noted by Brandon LaBelle, Westerkamp's practice "relies on accentuating personal presence" and is "rich in subjective experience" (LaBelle 2015, 207). She has continuously used her subjective lived truths as a route toward learning about listening and the world. In her writings, the composer argued that listening should not be forced, bracketed, or directed: "quite the opposite: true receptive listening comes from an inner place of non-threat, support, and safety" (Westerkamp 2015). Sound, for Westerkamp, when listened to openly and without restrictions, opens us toward social connectedness—a form of being together as a relation. In this sense, Westerkamp's conception of sound could be considered as a form of sounding and resounding social commons that confronts the father tongue. Such togetherness, however, as Westerkamp's research and practice reveals, can only be possible if we reclaim and amplify our subjectivities and then open our *whole* bodies to the totality of sound. According to Brandon LaBelle: "Listening, for Westerkamp, asserts the possibility of unifying the individual, stitching subjectivity into the world, as a positive confirmation of being" (LaBelle 2015, 207). Arriving from a phenomenological stance, Westerkamp presents us with the notion that listening can serve as a form of collective embodiment that communicates using the mother tongue.

The composer explored the idea of all sound as an embodied practice in her auditory compositional works. In *Breathing Room* (1990) the artist turned toward the sound of her own body to question how her bodily gestures, breathing, and speaking affected the construction of the external world. In reflection, she wrote: "The breath––my breath––is heard throughout the three minutes. All sorts of musical/acoustic things happen as I breathe in and out. Each breath makes its own, unique statement, creates a specific place in time.

Meanwhile the heart beats on, propelling time from one breath to the next" (Westerkamp 1990). The composer realized that the act of breathing was not an isolated event, even though it emerged within her unique body. By sounding out into the world, breathing served as social. It connected with other living and nonliving subjects, objects, things, and events that surrounded the artist's body. As Westerkamp has suggested herself: "Listening as a totality is what gives soundscape work its depth, from the external to the internal, seeking information about the whole spectrum of sound and its meaning, from noise to silence to sacred" (Westerkamp 2003, 121). The artwork opened the possibility of releasing the chora—the gestures and expressions that surpass semantic structures, consequently building new forms of communication that are open to *all* bodies rather than some. This composition informs us that by taking a conscious step to listen to *all* openly and without borders, we can resist the dichotomies between "hi-fi" or "lo-fi," man/woman, mind/body, and nature/culture:

> Try to move
> Without making any sound.
> Is it possible?
> Which is
> the quietest sound of your body? . . .
> Lead your ears away from your own sounds and
> listen to the sounds nearby.
> What do you hear? (Make a list.) (Westerkamp 2007)

The Sonosphere: Pauline Oliveros

For Pauline Oliveros, all sound, or what she calls the "sonosphere"—"all sounds that can be perceived by humans, animals, plants, trees, and machines" (2011, 163)—gave her faith. When researching and composing sound, Oliveros explored expansive approaches to listening. The artist rejected sonic determinism and the militancy of organized sound and instead, searched for more open-ended sonic participation led by improvisation and the bodily experience of sound. Oliveros developed a methodology for engaging in *all* possible sound, which she called *Deep Listening*.

The purpose of *Deep Listening* was to motivate "personal and social consciousness" (Rodgers 2010, 27) so that a more inclusive space for making and participating in sound could emerge. Whilst the notion of all sound had already been echoing in John Cage's practice, Oliveros reconsidered the concept in more social terms. As argued by Douglas Kahn, Cage, when thinking *with* and *through* all sound, musicalized and, as a result, institutionalized every possible sound (Kahn 1999). Oliveros, on the other hand, turned toward the sonosphere to uncover social inclusion and interconnectedness, which she thought was missing in our listening habits.

Listening and sound making, for Oliveros, served as inherently political and social acts. As an active feminist, the composer engaged in all possible sounds to break down institutional and gendered walls. When performing, writing, and thinking *with* and *through* all sound, Oliveros actively engaged in women composers' rights and questioned the roles of gender with the intention to dismantle them:

I'd like to get beyond gender! I'd like to get to the faculties or processes that are available to the human being. And the fact that one process is associated with one gender is too bad, because I think that all processes should be available, and encouraged, in order to come out with balanced human beings who are able to access any resource they have, rather than being cut off from it (Oliveros and Maus 1994, 180).

When excluded by institutions or silenced by those in power, the artist persevered: "I've had to bang my head against the wall. [. . .] I talk a lot about these issues [. . .]. Everyone has to be involved in changing it, or else it does not get changed. It means that music has to be taught differently; it has to be inclusive" (Oliveros 2010, 31). Oliveros believed that opening our ears and bodies to all sound: the insignificant, the buried, and the disguised, would create the necessary change. *Deep Listening*, Oliveros argued, facilitates compassion and a more open understanding of one another: "New fields of thought can be opened and the individual may be expanded and find opportunity to connect in new ways to communities of interest. Practice enhances openness" (Oliveros 2005, xxv). The artist believed that the richness of auditory phenomena was endless, and immersing in all sound would not only allow us to access its treasures, but also to share them collectively, this way building more compassionate communities.

Listening globally and openly, for Oliveros, similarly to Westerkamp, introduces an embodied relationality between our lived bodies and the audible world. It can "heighten and expand consciousness of sound in as many dimensions of awareness and attentional dynamics as humanly possible" (Oliveros 2005, xxiii). Oliveros discovered this by actively engaging her own body in the world of sound. In *Deep Listening: A Composer's Sound Practice*, the composer wrote: "My performances as an improvising composer are especially informed by Deep Listening practice. I do practice what I preach. When I arrive on stage, I am listening and expanding to the whole of the space/time continuum of perceptible sound. I have no preconceived ideas" (Oliveros 2005, xix). For her, "*Deep* has to do with complexity and boundaries, or edges ordinary or habitual understandings [. . .]. *Deep* coupled with *Listening* or *Deep Listening* [. . .] is learning to expand the perception of sounds to include the whole space/time continuum of sound—encountering the vastness and complexities as much as possible" (Oliveros 2005, xxii). The exercises involve "[. . .] energy work, body work, breathing exercises, vocalising, listening and dreamwork" (Oliveros 2005, 1). This *work*, as Oliveros believed, is vital as it allows us to liberate bodies from their ingrained sociohistorical restrictions and expand the listeners' consciousness.

Oliveros used various musical instruments, including accordion and electronic devices, to enter the *Deep Listening* states. She would perform for long durations of time and incrementally open her bodily consciousness, together with the bodies of other performers, to every possible sound that would surround her presence, this way establishing a social bond with the environment. With each session the composer would expose her whole body, embody it, be a body, this way offering her experience as truth. Her truth, when performed, would not speak *at* you, but instead would speak *with* and listen *with*. Her truth, then, would not pursue to claim or assert, but offer itself as language of relation, a relationship.

Conclusion

This chapter has sought to serve as an introductory step toward a *different* history of what we now call "sound art" or "sonic arts." It questioned: Can the evolution of sound-based research and practice in the arts be told in a way that goes beyond the sociohistorical restrictions and limitations of sound from the position of gender? Can the history of thinking *with* and *through* sound in conceptual terms be considered, for example, using the mother tongue—the language of offering and connectedness, rather than the assertive voice of social power? The mission of this chapter, thus, was to un-silence the stories of those who explored sound outside the father tongue. When considering the histories of sonic thinking, research, and practice, this chapter actively diverted from the main historical narrative, which, as argued throughout, is *still* embedded within the hetero-patriarchal sonic ideals. Instead, it explored the voices of women who have actively contributed toward the evolution of sounding art research and practice since the start of the twentieth century.

The act of turning toward the histories of women sonic thinkers has taught us that thinking *with* and *through* sound openly and without restrictions has enabled some women artists and composers to surpass objective and technologically determined organizations of sound and to expand the potential of sound and listening in social, political, and perceptual terms. The case studies of this chapter sought to demonstrate how sound has been utilized as a tool for breaking out of the masculine forms of auditory thinking, dismantling the socially prescribed ideal sonic parameters, and confronting gender division. Artists, including Bute, Amacher, and Rhodes have visualized and expanded our perception of sound. By drawing sound, composer Daphne Oram introduced a more tactile connection between the sound composed and the sound perceived. Dunaway, on the other hand, has turned to sound as a form of political activism and confronted patriarch-led social norms and the limitations of the classical music tradition. Oliveros's and Westerkamp's practices empowered listeners to bypass the ingrained hierarchies of sound and to engage in all sound with the hope of discovering expanded forms of bodily consciousness and sociality.

These women, amongst many other women and nonbinary artists working with sound, have successfully challenged the outmoded patriarchal systems that continue to limit our ability to listen, sound out, and inhabit spaces. In Le Guin's terms, their practice has continued to speak the mother tongue, subversively, with the intention of offering rather than claiming. Their language, as sounding and sounded within the arts throughout the last two centuries, has extended social bonds, consequently initiating new ways of being with sound. Their way of thinking *with* and *through* sound have rediscovered the chora that had been previously lost due to patriarchal forms of verbal translation. In case of the women artists discussed in this chapter, the chora was able to resurface through sonic explorations, sonic activism, and forms of sociality as well as an embodiment of sound.

The sonic research and practice, as offered by the women artists discussed in this chapter, could be considered as sounding "feminist waves" (Rodgers 2010, 18), or what Nancy A. Hewitt calls "feminist frequencies" (Hewitt 2012, 658)—forms of sonic pressure

and movement that also perform cultural work. As these historiographic accounts reveal, women in sound, even when silenced or excluded from experimental music and sounding arts institutions, have continued to be willful. And whilst we might hear that *things are better for some of us than they were before*, when it comes to gender equality in the sounding arts field today,[7] I would argue that our work does not stop here. We should, in the spirit of Sara Ahmed, persist and continue to be confront the sociohistoric norms, which are still administered by the patriarchy-led systems. Taking an active step to reconsider and expand the histories of thinking *with* and *through* sound within the arts in relation to the question of gender is only a starting point. There are many sonic thinkers and practitioners who continue to research and create outside the father tongue frame, including women and nonbinary and ethnic minorities, whose thoughts and practices are yet to be unsilenced and accounted for. As revealed in this chapter, speaking the language of relation and sociality, speaking openly and without restrictions, has enabled some women in sound to form an army (Ahmed 2017, 84) and offer new forms of sonic knowledge that exceeds the limitations of "masculinized" sonic thinking. Thus, it is our task, as writers and feminist thinkers in sound, to continue to offer the necessary critical space for considering the work, frequencies, and waves of those whose sound is still considered as "out of tune" (Ahmed 2017, 40) so that the sounding feminist army can only grow.

Epilogue: Toward New Mountains

Let us return to the moment when Ursula Le Guin and Pauline Oliveros met each other for the first time—the moment when they decided not to talk objectively *at* each other, but instead, listen *with* one another. By doing that, they actively refused to be spoken *at*, together. Both—as a relation—a relationship, demurred, protested against direction or orientation. They stood against carrying a face that was assigned by *him* and *them*. They did not see their presence together as directional or facing forward, but as expanded, erupting in all directions: left, right, up and down, inside and outside. By speaking the mother tongue, they spoke with the *whole* of their sounding and sounded bodies. The mother tongue empowered them both to reject the rigid boundaries of the father tongue, through offering something and actively *not* claiming something.

Le Guin and Oliveros, when talking and listening to one another, allowed themselves to be subjective, to be embodied, to be a body, offering something that emerged from being an embodied social body. Their encounter with one another tells us that in order to be able to offer, however, we must challenge the limitations of the subjective-objective dichotomy; we must allow ourselves to imagine, to see, and to engage in *all* that is audible. If we let the ears be oriented and directed, the rationality and objectivity take over, then the sociality or connectedness may get lost, then we may be able to offer less. After all, when we control our ears we become focal listeners, subjected to power and authority.

Speaking and listening-*with* using the mother tongue, thus, means speaking subversively. After all, the mother tongue, as this chapter has argued, is an act of activism. It is an active act. As Le Guin tells us, even when silenced, we are still a vibrating force: "if you're underneath, if you're kept down, you break out, you subvert. We are volcanoes. When we women offer our experience as truth, as human truth, all the maps change. There are new mountains" (Le Guin 1989, 160). Whilst becoming a mountain range is not an easy task, through struggle and work, we continue, we persist, and we rebel. The historiographic accounts of women in sound, as discussed in this chapter, demonstrate how sound can be used as an instrument for building new mountains. It has shown that when thinking *with* and *through* sound using the mother tongue: through experiencing, sharing, offering, and co-connecting sonically and without borders, we can trespass in a man's world and surpass its gendered and dividing structures.

"Specific Dissonances"

A Geopolitics of Frequency

Alastair Cameron and Eleni Ikoniadou

"It can be said that the university merely put up with the arrival of 'newcomers,' for whom university knowledge is not their just due, but rather an adventure to an unknown land—first: the arrival of girls, next: youth from less privileged classes, and then: immigrants," Isabelle Stengers and Vinciane Despret tell us in their book *Women Who Make a Fuss* (2014: 4). The authors draw on Virginia Woolf's (1938) advice to her sisters, against jumping to join the grand procession of educated men, their fathers and brothers, by merely following their methods and repeating their words. For, she argues, it is "an indisputable fact that 'we'—meaning by 'we' a whole made up of body, brain and spirit, influenced by memory and tradition—must still differ in some essential respects from 'you,' whose body, brain and spirit have been so differently trained . . . Though we see the same world, we see it through different eyes."

If twentieth-century art and science alike were characterized by a widespread anti-humanism, it is only most recently that nonnormative practices and collectives have begun to infiltrate the ranks of academia. Ideas of losing the self through practices of becoming other and multiplicity have for decades influenced those seeking alternatives to a knowledge culture founded in the European *cogito*; a stable subject, long called "Man," capable of mastering the world of objects and inferiors. But Woolf's "different eyes" have taken longer to come to prominence, impelled not only by the critique of knowledge and rationality, but by the wider failure of Western universalism and the (re)emergence of a complex identity politics across mainstream contemporary culture. Under these conditions, as Woolf tells her brothers, it is a matter of "remaining outside your society," and instead "finding new words and creating new methods."

Study is not, and has never been, solely the preserve of academics and institutions. Perhaps today it is no longer even done at universities; in the thrall of "the new standard," keenly adopted, without struggle, by the "converted colleagues" (Stengers and Despret 2014) of neoliberalized higher education. Under these conditions, Fred Moten and Stefano Harney argue that the "only possible relationship to the university is a criminal one. It cannot be denied

that the university is a place of refuge, and it cannot be accepted that the university is a place of enlightenment. In the face of these conditions one can only sneak into the university and steal what one can" (Moten and Harney 2013, 26). By contrast they describe study as "what you do with other people. It's talking and walking around with other people, working, dancing, suffering, some irreducible convergence of all three, held under the name of speculative practice . . . The point of calling it 'study' is to mark that the incessant and irreversible intellectuality of these activities is already present" (Moten and Harney 2013, 110).

It is almost half a century since Deleuze invoked new relations between practice and reflection, conceiving "a system of relays within a larger sphere, with a multiplicity of parts that are both theoretical and practical." Who speaks and acts? Deleuze asks: "It is always a multiplicity, even within the person who speaks and acts,. . . Representation no longer exists; there's only action—theoretical action and practical action which serve as relays and form networks." These considerations might be applied by today's para-academics, study groups, and collectives, to whom remains the "struggle against the forms of power that transform him [/her/they] into its object and instrument in the sphere of 'knowledge,' 'truth,' 'consciousness,' and 'discourse'" (Deleuze and Foucault 1977, 206–8). The practices across which this essay "relays" are themselves circuits that evade categorization, operating between art and music, discourse and theory, in order to disturb, even to rupture, our given reality. However the dialectic of a universalized (and masculine) revolutionary subject and a homogenous state power implied by Deleuze (as if present and historical experience could be universalized) is obsolete today. The struggle demands that other voices be heard, that the world be seen with "different eyes," narrated with "new words," transformed by "new methods." Study too must find new spaces and rhythms.

In the inaugural Mark Fisher memorial lecture at Goldsmiths, University of London, in January 2018, Kodwo Eshun summoned all those

> who find themselves at odds with their subject, in a struggle with their discipline, unable to reconcile themselves to their existence; those whose dissatisfaction and disaffection and discontent and anger and despair overwhelms them, exceeds them; and find themselves seeking means and methods for nominating themselves to become parts of movements and scenes that exist somewhere between seminars and subcultures, study groups and hangouts, reading groups, drawn together by the impulse to fashion a vocabulary by a target and a yearning, by an imperative, quoting Fred Moten, "to consent not to be a single being." (Eshun 2018)

How to think with and analyze the present intellectuality of activities, spaces, and modalities that exist separately from the logical, positioned, and operational present? If we take for granted what John Akomfrah understands as a necessity for "some identities" to have politics and aesthetics bound up; and if artistic and theoretical experimentation responds to an urgency to emerge and be named right here and right now, rather than wait for recognition by history, then it seems important for theory to open up to the collective apparatuses whose practice "metabolises the egresses required by the changing needs of our present . . . to intervene in the futures whose object we are" (Eshun 2018).

This is not merely about widening participation, as part of the self-critique of official forms and institutions, by admitting the other (sex, class, race, people). Rather, study must itself become fugitive, evading the categories, structures, institutions, and orders of the "State." It must operate "on the ground, under it, in the break" (as Moten says), in order to reactivate the question of the human from the standpoint of dispossession, the marginalized, those who resist categorization. Fugitivity, for Moten and Harney (2013), is not only a mode of escape, exit, or exodus, but what it means to think of being as separate from settling, a being that is always in motion. For Saidiya Hartman (2014), fugitivity is about reducing certain imposed narratives of becoming a subject with specific social trajectory, through a divergence, a wandering, a "waywardness," as she calls it, "the art of making life in the context of extreme deprivation, dispossession and assault."

The dispossessed are those who have been denied selfhood, perspective, citizenship, home; those whose own thought is unwanted yet necessary, disloyal, subversive, fugitive, queer. To be sure, geopolitically speaking, they are the many not the few, so how can these masses—the "ante-normative" (with an *e* instead of an *i*, signifying that which comes before, not after, the normative), who are numerous, loud, tumultuous, creative—remain vulnerable to the power of "a single source," who "doesn't dance, who has no skin, who can't be seen or heard?" (Moten 2015).

Under these present conditions—and in relay with emergent social and cultural practices—new approaches to sonic thinking are required. The sonic has always suggested another dimension to those theorists concerned with evading the strictures of the symbolic and visual fields, and even with accessing a primal, unmediated realm. But this essentialism often remained deaf to the importance of context. What does "making within that context" of dispossession and fugitivity involve—practically, socially and aesthetically?

In the work of Nigerian-American musician, artist, and producer Chino Amobi, electronic sound and digital technologies "destabilise minds and spaces" and "open-up new levels of understanding" (Ryce 2017). The ambient "systems" that sound art assumed to be "self governing, so which may not need intervention," epitomized by Brian Eno's *Music for Airports* in 1978, are rescored in Amobi's 2016 EP *Airport Music for Black Folk*, to account for the everyday black experience of border crossings. The project came out of a residency in Berlin, which saw Amobi flying through various European airports, and it is a short collection of tracks named after cities like "Malmo," "Berlin," "Rotterdam," and the opening track, "London." Amobi's tracks also qualify as ambient music. However, here, the entitled invitation by Eno for "calm and a space to think," is replaced by brutal and haunting sonic textures, the seven tracks oscillating from melancholy to creepiness, anxiety, and trauma.

Amobi's NON Worldwide project, formed in 2015 together with producers from London and Cape Town, is part record label, part radical art project, part social network. NON uses the Internet to write a new history for black, queer, and trans communities who have been silenced from the ruling narratives. His own debut album, *Paradiso*, is named after the Amsterdam club where the NON project was conceived, but its title also points to

an alternative, atemporal world, in which "the strength of trans-individuation and the minor subject" might "break through the fallacy of prescribed subjectivity." As he explains, "*Paradiso* is design fiction, a hyperobject that I move through . . . I think of it in terms of architecture, the space that bodies—especially disenfranchised or marginalised bodies from the South—take up. Thinking about that narrative and recoding and dealing with history in a nonlinear way through the sound."

In *Black and Blur* (2017), Moten considers the potentials of a "black proletarianization of bourgeois form" (or what he characterizes as "the sound of the sentimental avant-garde's interpolative non correspondence to time"). In such a practice, he proposes, the "insidious demand for recognition," may be articulated in the performative object that resists subjection and "rearticulates the condition of possibility of the liberatory" (Moten 2017, 33). This is Amobi again: "I was thinking a lot about non-spaces. I think of the non-space as a conceptual fragmentation between cultures where voices speak. And within that fractured and destabilised field there's an ability to rewrite prescriptive narratives and assumptions about those voices and ideas" (Ryce 2017).

The locus of this struggle—and of this study—is found not in the canonical texts, lecture theaters, or recital halls of the "academy of misery" (Moten and Harney 2013), but in galleries, artists' spaces, raves, recording studios, pirate radio stations, zines, community centers, on rooftops, and in basements, where experimental practices and collectivities are tested, where bodies congregate, new affects, visibilities, and audibilities are produced, demands are enunciated, new subjectivities synthesized. Here new temporalities are also composed, in refusal of the strict linear time of a freighted modernity.

Bolivian-American musician Elysia Crampton has said that non-Western approaches to time, music, and history—such as the concept of *taypi* in the belief systems of the Aymara culture of the Andes, on the iconography of which she gives overhead projector (OHP) lectures before her performances [as recently at the Biennale de l'Image en Mouvement in Geneva in late 2018]—open up a "a sort of juncture, where the space-times of the here and now and the unknown or de-known co-mingle" (Geffen 2018). An earlier sound and video performance "Dissolution of the Sovereign: A Time Slide into the Future," brings together dense percussion, Andean rhythms, theatrical dialogue, deconstructed club music, cosmic ambience, and violent video footage, in order to tell the story of eighteenth-century Aymara revolutionary Bartolina Sisa. It is an amalgamation of history—Sisa led an army of thousands in a revolt against Spanish colonial forces and was ultimately killed—and science fiction—involving artificial intelligence (AI) mechs (in the film *AI: Artificial Intelligence* by Steven Spielberg, the term mecha refers to an advanced humanoid robot species featured in the film) thousands of years into the future, uncovering the fossil remains of Sisa, which end up empowering an uprising of spider-humans imprisoned in the Earth's crust.

The piece synthesizes differences of timelines, genres, soundscapes, and histories to express Crampton's anti-colonial and transfemme notion of futurity. "The future is our domain. The here and now is a prison house," a voice announces amidst the ringing of sirens; summoning a people, Eshun's dissatisfied and dispossessed, a global network of

"voices that are often denied the chance to speak." As Crampton explains in an interview: "We should be careful to consider exactly what future we are defaulting to, and what ways we have been taught to engage this default-future" (Kalev 2015). Her work exposes the sonic as necessarily connected to more complex notions of being, ones that "reveal the inherent violence involved in the formation of a sovereign self" and "that are, and have always been, in opposition to the state." "As someone who is brown, someone who is queer—struggling to exist as both—my relationship with the future has been precious because it's where my positivity can take flight, where the narratives I embody/live/create, jettison out and into being, full of hope and energy" (Kalev 2015).

Thinking sonically now demands that we engage with new radical redefinitions of temporality and futurity that account for and protect collective joy and tumultuousness. To occupy and continuously collectively generate a spontaneous, extramusical, dissonant space, is to refute the white noise of subjectivation. Study today must be encouraged to produce experimental forms and affects, identify singular collectivities, develop informal para-disciplines, so as to disturb the infrastructure of a stable subject of consciousness, knowledge, and history that still legitimizes official discourse. Moten writes of black performance as the "becoming object of the object, this resistance of the object," through which "utopia is reconfigured in a morning song, at morning time, by a moan of pain and joy" (Moten 2017, 33). Not merely suggesting a program for sonic practice, Moten's concept of fugitivity is itself derived from the "Black radical tradition" foregrounded in experimental music, particularly jazz. This fugitivity is sounded, he writes, where the saxophonist Amiri Baraka slides away, goes off the track, moves against the grain, or where, in Miles Davis, according to Moten, "Dissonance escapes into a kind of resolution . . . the new knowledge of homelessness and constant escape." As he puts it: "Freedom in unfreedom is flight and this music could be called the most sublime in the history of escape" (2017, 85).

This chapter likewise attempts to locate a theory and practice of sonic culture on the run, on a line of flight from the imposition of the normative, from sovereign operations, from the call to be harmonious. Instead, it seeks to amplify "disorder," "noise," "cacophony," "wildness" (Moten and Harney 2013), producing dissonances, disturbances, ruptures. We are concerned with artworks, recordings, groups, collectives, subcultures, and peoples, for which sound is utilized not just to transmit counter-political messages, as in the tradition of protest songs. In each of the practices we discuss, the forces, relations, and limits of audibility itself are also at stake. They attune us to the relays of what Steve Goodman (2009) calls a "politics of frequency."

When LRADs (long-range acoustic devices) are deployed on "harm mode" by the New York Police Department (NYPD) (2015), we are reminded that noise in itself can no longer be held up as revolutionary, as the avant-garde of a century ago had hoped. Attention must now be paid to specific dissonances, to what has been barely audible to date: a different "art of making life," or indeed of suppressing and negating it. It is a matter of measuring the precise thresholds of audibility through which past and present conditions and experiences of dispossession and invisibility might be heard, and alternatives to the dominant culture be given voice.

A Private Ear

Beirut-based artist Lawrence Abu Hamdan's multiform works explore listening practices and the forensic use of acoustics, language, and phonetic dimensions of legal or political issues, through both sound art and forensic audio investigation. Formally trained as an artist and musician, he operates as a "private ear," conducting audio investigations, analyzing cases that range from police murder, asylum seeking, prison torture, and other such advocacy-related investigations—what he calls "forensic listening." The first work clearly feeds into the latter, as he states, "artists become witnesses to crimes at the threshold of the image and detectability, because it's at the limits of visibility and audibility that artists are trained to observe, document, and reproduce events" (July 2018).

In 2016, Abu Hamdan worked with Amnesty International and Forensic Architecture, Goldsmiths, to produce an acoustic investigation into the Syrian regime prison of Saydnaya, 30 km north of Damascus, where over 13,000 people have been executed since the protests began in 2011. The remoteness and inaccessibility of the prison by independent observers and monitors renders the prospect of any firsthand information about its inner workings impossible. The artist conducted interviews with survivors in an attempt to piece together an acoustic image of the prison drawing from their memories and testimonies. As the detainees are mostly kept in darkness, blindfolded, or made to cover their eyes, they develop an acute sensitivity to sound. In Abu Hamdan's words, they become "earwitnesses," and this shift from eye- to ear is a deliberate move by the regime in order to render the testimonies of survivors difficult and non-credible. Perhaps unsurprisingly, this unreliable, secondary and peripheral status of the sonic is also what constitutes it an ideal practice within which to deviate from the given reality (and ultimately change it). By tapping into these recorded acoustic memories, Abu Hamdan was able to reconstruct the prison's architecture and psychophysical conditions. Using "ray tracing," a digital visualization tool used in architectural design to map any potential acoustic leakage throughout a building, the artist attempted to approximate the prison's interior by spatially mapping the sonic memories of the detainees.

His investigation relied on three key elements emerging from the research: the inmates' acoustic memories, their voices and whispers, but also their silences, that is to say, on the linkages between sound and its suppressions. Interestingly, during interviews, Abu Hamdan discovered that in 2011 the prison was emptied in order to house new detainees, arrested after that year's political protests against Assad's regime. This new wave of survivors later reported a drop in the level at which detainees were allowed to whisper in Saydnaya after 2011, which the artist calculated as a 19dB difference; measuring the precise ratio of a new regime of violence.

As Abu Hamdan soon realized, the enforced silence of the detainees and their over-sensitized hearing as a result of this silence, amplified both the trauma of the experience and its memory. In the resulting exhibition, *Saydnaya*, visitors feel this experience through the "trauma-architecture or pain projection" (Valinsky 2018) of the room. The shape and form of the space, the walls, the overall structure of the building, rely on sonic traces (such

as the recording and analysis of the level of whispering between inmates) to outline the reality of the prison. For Abu Hamdan, "sound and speech act as propositions for soliciting evidence that is not based on individual units of inspections, but the idea that truth value can derive from the relational qualities of sound" (July 2018). *Saydnaya* zooms in on the threshold of audibility, between silence and hyper-hearing, between whispering and speech, sketching out the convergence of political forms of listening with the physical and material conditions of sound.

Since completion of the official investigation, Abu Hamdan has been collecting a growing body of evidence "that pertains to the project's more fragile truths; works in which human memory, architecture, violence, and the processes of reconstruction are entangled and become irreducible to the language and urgency of human rights and advocacy" (project description). This archive serves a double purpose. Not only is it a growing body of work relying on earwitness testimonials to reconstruct spaces, but also an alternative to the sonic effects used by Hollywood to give impressions of violence, which are at the very least unsatisfactory, according to Abu Hamdan. His ultimate aim is to devise new techniques with which to access sonic memories, where gunshots could sound like "the popping of balloons," or the assassination of Robert F. Kennedy like "somebody dropping a rack of trays" (July 2018).

Such personal audio impressions of events are just as important as the sonic evidence itself, as demonstrated in *Earwitness Theatre* (September 21–December 9, 2018), a recent commission at Chisenhale Gallery, London, extending from the artist's archive.

Alongside the performance *After SFX* and film installation *Walled Unwalled*—both shown at Tate Tanks, London, in October 2018—the tripartite installation at Chisenhale accentuates the centrality of our sonic training in reconstructing the experiences of Saydnaya witnesses. Held in dark cells, deprived of speech and sight, former detainees' memories of their ordeal were determined by the sensory conditions imposed on them, resulting in an acute aural sensitivity to the space and time of noises—guards' footsteps, slamming cell doors, beatings, strained whispers. Sealed inside a claustrophobic, soundproofed central chamber built in the gallery space, an audio essay describes Abu Hamdan's attempts to measure the exact decibel levels of these whispers. Tracking their modulations as, over time, the prison became a "death camp," he sets out to demarcate the acoustic threshold of life and death.

Outside this chamber the space is silent. Diverse objects are arranged on shelves and the floor; among them a car door, various bats, popcorn, sand, lighters, a stack of flatbreads, an upturned stand for metal trays. At first glance, it almost resembles one of those semiotic reassemblages typical of contemporary art displays. But these are the tools of a custom sound effects library, compiled in detailed discussion with former inmates, in order to more adequately reengineer the terrifying qualities of frequency, amplitude, timbre, and resonance of the everyday environment inside Saydnaya.

Projected onto the rear wall, a text writes itself out to the rhythms of Abu Hamdan's absent voice. Functioning as an A–Z of his special effects (SFX) library, it intersperses commentary on the artist's audio-forensic investigations and on wider-ranging case studies, such as the recent trial of athlete Oscar Pistorius or the death of young African-American

Freddie Gray in the back of a Baltimore police van in 2015. In such tribunals, "earwitness testimony" and complex sound analyses were prominent considerations in reaching legal judgments. Having himself previously provided decisive evidence in human rights cases against the Israeli Defence Force (IDF) and UK immigration services, Abu Hamdan is sensitive to how such reconstructions of violence demand "an entire lexicon of percussive gestures." However, he emphasizes here that it must also deal with our sonic imaginary, since what we "hear" is indelibly conditioned by the ubiquity of film and TV SFX.

Across talks, performances, and seminars, Abu Hamdan has stressed the fact that when we speak about sound "we never only speak about sound." Counter to the essentialist claims of traditional sonic theory, the exhibition demonstrates that the aural field is never unmediated; nor should it be. Instead the construction and critique of truth is a matter of uncovering the ear to the strange complicities of the expert witness and the Foley artist, the theater of the courtroom and the sound effects studio. Sound "in itself" cannot be trusted.

For Abu Hamdan, a return to testimony through sound has the added value of creating alternative lenses through which we can look at historical facts and events. His work blends lines between real murder cases with fictional trials aiming to reimagine the legal record; he examines how audible evidence is currently produced and how it can be produced otherwise; and he explores how forensic listening is at the same time an emancipatory and surveillance tool, depending on how and by whom it is used. Far from the idea that forensics have an absolute hold on the truth, Abu Hamdan's truths exist in that bleed between relations, in-between art, science, theory, fiction. This kind of sonic thinking is intended to intensify gray areas and expose the inseparability of the object from its context, of sound from image and of the material qualities of sound with the politics of listening. As a valid mode of truth production, "art comes to its truths and tells its truths through the spacetime of the gallery" (Abu Hamdan 2018).

New Resonance

"A certain contingent of the sound art community (not a small one) is plagued by a sort of idealization of sound art's medium-specificity," Hong Kong musician and artist Samson Young has written on his website, rejecting "the culturally conservative and artistically regressive tendencies of the variant of sound art that idealizes the auditory, as though the sense of hearing occupies an ethically superior position" (the website quotes are both contained in this sentence). Instead, Young elides the questions of sound art vis-à-vis both composition and other media work: "for me it's all very integrated—I do my research, and sometimes it ends up being music, and sometimes it ends up as drawings, or installation" (Snow 2017). Young's 2015 exhibition *Pastoral Music* (Team Gallery, New York) emerged during a period of research into the weaponization of sound, which had as its background the prodemocratic Umbrella Movement protests of 2014, in response to Beijing's refusal to grant full suffrage to Hong Kong citizens. Notably, this is a geopolitical zone that had long been cut off from the commemoration of conflicts typical

of Western nations. Around the walls were a series of vivid, drawn sonic diagrams—not visual scores but transcriptions—visualizing the acoustic properties of various historical weapons. These "Studies for Pastoral Music" in pencil, ink, watercolor, and modeling paste, included the 4 Gauge Elephant Gun, the M18 Claymore Antipersonnel Mine, and the Colt Walker Revolver 0.44 Calibre.

Throughout the exhibition period, wearing military fatigues, Young sat in the center of the space, providing a Foley soundtrack to a six-hour video of footage of night bombings from the Gulf wars. Using a custom percussive kit of multiple sounding objects (airsoft pistol, audio interface, bass drum, compressed air, contact microphone, cooking paper, cornflakes, electric shavers, FM transmitter, laptop, mixer, ocean drum, and more), to reproduce the sound of distant and proximate explosions, the resultant "rescore" was fed to visitors listening on handheld radios via an FM broadcast. This work echoes Abu Hamdan's in drawing our attention to the function of the sonic imaginary in recovering trauma. In Young's work, likewise, as the performance's title *Nocturne* would further suggest, the idioms of warfare and the romantic, of destructive noise and productive music, are blurred.

Young highlights the case of the World War II Ghost Army, whose ranks were populated with artists and sound designers in order to produce battlefield deception tactics—"essentially musicians as soldiers" (Obrist 2016, 56)—as a precursor to his own project, which emphasizes the distance involved in the Western experience of bombing. The piece exposes how "footage of night bombings are really seductive—they look and sound—in a perverted way—like fireworks. The fact that I am attracted to them speaks to how far my lived reality is from the brutality of these events" (see Gall 2015). This performance work is "conceived of as a 'Sonic Warfare Training Program,' with the artist taking on the role of training combatant; by the end of the show, he will know the aleatoric composition by heart" (as the Team Gallery exhibition guide puts it). In his book *Sonic Warfare* (2009), Steve Goodman writes that if war "saturates modern societies right down to the microphysical fabric, then it does so using an array of distributed processes of control, automation, and both neurophysiological and affective mobilisation: the military-entertainment complex as a boot camp therefore . . . Entertainment itself becomes part of the training" (Goodman 2009, 34). What is pastoral music today? *Nocturne* seems to ask us. "Since the Industrial Revolution, people have romanticized nature," Young has said: "Today places of conflict have become our new sites to romanticize . . . night bombing and warzone videos on YouTube . . . get hundreds of thousands of hits. This is obviously hugely problematic, but there's no denying that some people find these images incredibly seductive—they look and sound like gentle and distinct fireworks" (Obrist 2016, 56).

Yet, as with the household items used for the Foley of night vision bombing raids—or prison atrocities, as in Abu Hamdan's case—the spectrogram of an explosion sound makes it "obvious how many things you are not hearing," Young argues. The spectralized image was a "historic moment." Since then "the boundaries and limits of auditory perception have been redrawn." Here, technology reminds us "that hearing is a condition that we [still only] aspire to" (Obrist 2016, 50).

Like *Nocturne*, his multimedia work *Canon* (2015) references the idioms of traditional Western composition, even as it moves away from them in practice. Young still composes using musical notation, as he says, all his work tries "to process the [classical] training that I went through . . . and the very specific worldview that this training gave me" (Snow 2017). Even in a gallery context, configuring sound, objects, drawings, and videos he "still thinks in counterpoint," which resulted in the ongoing series of graphic works, *To Fanon*, in which he irrevocably vandalizes his own notational scores with scribbles, crossings-out, and overlayings. As Young writes in his online text *Lest I forget who I am*: "How does one stage an effective resistance today? Fanon's question must be asked anew: how does one protest in the language of one's perpetrators?" The question is among a series posed in this text: "How does one live outside of one's own musical training and auditory conditioning? Could one hear one's voice outside of one's body?" If musical notation is "a system of symbols as signs of power," how does one "orchestrate and compose without reproducing the power structures that are implicit in these terminologies? What is the new silence, the new decay, the new reverb, and the new resonance?" But it might equally have been asked of the site and context in which *Canon* was first performed: Art Basel, Basel, Switzerland, in 2016.

Above the main expo hall of the glitzy international fair, Young stood on a scissor-lift behind an LRAD, dressed in 1980s Hong Kong police uniform. Through this device he directed recorded and performed imitations of birds' distress calls with a "bird whistle." Avian communications of "imminent danger . . . a signal to flee" are beamed across the vast span of the hall to a second "listening space," from which, behind caged wire, the targeted auditors sat on a park bench embossed with the word "Skyluck," with "a very nice view of the fair" (as Young puts it in the project booklet). Nearby, a simple plastic bowl had been colored red and fitted with rudimentary pumping equipment to function as a bird fountain.

The LRAD is designed to project a focused beam of at high volume (of up to 150/160 dB) over long distances, "optimized to the 1–5 kHz range where human hearing is most sensitive," as the manufacturer claims. Capable of producing physical and psychological damage, the device has been used as a deterrent for protesters and pirates, and more recently against Black Lives Matter protesters in the USA. LRADs are also used at airports and power stations as "bird scarers," deployed to force them to flight. As Goodman speculates, a "politics of frequency" would attend to "the way in which vibrational force would be captured, monopolized and redistributed." On one side is a "tactical deployment of sound . . . subordinated to the strategic aim of crowd dispersal, to the dissipation of a collective energy." On the other side is a tactical deployment, "whose objective is that of intensification . . . the heightening of collective sensation." In between exists an ambiguous spectrum, which "indicates some of the emergent features central to the strategies and tactics of control within contemporary capitalism" (Goodman 2009, 11).

Canon thus points to the possible entanglements of the "canon" of Young's own sonic practice with the sound cannon, an apparatus designed to repel fugitives and their unwanted song. It specifically references the *Skyluck* crisis of 1979, which resulted when a cargo ship carrying 2,700 Vietnamese refugees was refused permission to dock in Hong Kong harbor, and spent months offshore until at last running aground and sinking. Its human cargo was finally transferred to the burgeoning processing camps for fugitives from

the chaos in Vietnam, and given red bowls like this bird fountain—visible everywhere in historic photographs of the camps—for washing, eating, and storing their meagre possessions. In the wake of *Skyluck*, each night for a decade or more, a Vietnamese-language radio message, ostensibly prewarning the boat people arriving in Hong Kong of official procedures, was broadcast seaward to scare them off, like the birds. Young remembered this soft precursor to the LRAD from his youth, noting how it entered popular culture in Hong Kong: the first four syllables of the unwelcoming transmission, with their rhythmic, angular, "melodic" quality became a typical "sonic signpost" for the boat people.

"We might theorize about a transnational composer," Young writes on his website, "but where is a truly transnational music to be found? Transnationalism ignores the rich contradictions that activate the act of border crossing in the first place: the lived reality is that people stay mostly in one place unless pushed or pulled in another direction (Dirlik). Transnationalism is dangerously suppressive, it renders individual voices indistinct."

Moten agrees with this: It conjures an "abstract and imagined space." Instead, what is needed is a "federation of disrupted locales" (Moten 2017, 116). A canon of conceptual sound practitioners that is predominantly white, Western, and male might itself be understood as a deterrent, a signal to flee.

Such considerations also emerged in the process of Young's research. He had some difficulty getting hold of an LRAD from the suspicious Beijing distributor, but the German distributor of the same technology was delighted to provide a unit for the Art Basel exhibition, highlighting the complex position of artists vis-à-vis the structures in which they operate: "Within such a cross-cultural contact zone," Young writes on his website, "essentialization of the 'West' serves two pragmatic purposes—to enable participation, and to allow marginalized groups to temporarily reclaim cultural spaces in a very privileged site within the dominant culture itself."

In recent years, Young has been hyped by the specialist art press, ubiquitous in the global economy of art fairs and biennials, and received research funding and prizes backed by the major global companies, for whom this transnational system offers high-end marketing opportunities. "I think it's pretty obvious to people when somebody is selling her or his soul," he remarked to *Forbes* magazine. "Between that and a relentless rejection of the market, there are many nuanced shades of grey" (Miquiabas 2015). Alongside *Canon*'s performance, a glossy video profiling Young was produced for the major sponsor Bloomberg's "Brilliant Ideas" series. During the company founder Michael Bloomberg's three-term mayorship of New York City (2001–2013), the NYPD had likewise obtained (in 2004) LRAD cannons. It would claim they were "an effective and safe communication tool" that would only be used for public announcements, and then subsequently deployed them to issue high-amplitude commands dispersing civic protests from public spaces during the Occupy Wall Street movement (2011). However, in a further escalation, the LRADs' so-called "deterrent feature" was activated against New York Black Lives Matter collective demonstrations, in response to the Eric Garner rulings in 2014 (as well as in multiple trans-American cases, well documented on YouTube). This would lead to a collective lawsuit due to resultant "hearing loss, migraines, ringing in the ears and other injuries."

Rather than what Young calls the "neo-formalism that sound art has smuggled into the gallery space . . . a *mourning* of the bankruptcy of pure forms as an aspiration," it is these dissonances that become the site of practice. "How does one resist the demon without giving the demon one's thoughts?" he asks in his website text "Lest I forget who I am."

Black Noise

In 2016, British musician Dean Blunt's *One2One* exhibition at Cubitt Artists gallery, London, divided up the space using the temporary hoardings normally used to partition off building sites. On these was displayed, framed, what appeared to be a stock advertising image of the kind that adorn these hoardings around regeneration sites. Here is the aspirational lifestyle your new build apartment will buy you into, it seemed to say; a young couple enjoying coffee and laughing together. If this might suggest a "melancholy composite of our alienated world's membra disjecta, limiting its spectator to an obstinate planarity, but intimating more" (Neofetu 2016, 72), the situation vis-à-vis the viewers was complicated further. A Mosquito anti-loitering device (typically set to 17.4 kHz, a frequency only audible to adolescents, but here set at a lower frequency) blasted the space, driving people out onto the streets, where the artist had installed a powerful floodlight. Due to ongoing noise complaints by the gallery's ever more affluent neighbors, it was forced to demand that people head back inside. As Daniel Neofetou writes in his review in *The Wire* magazine, "[t]he show raised the umbrage usually provoked by Blunt; people were angry at what they perceived as an obnoxious and lackadaisical effort from a dilettante. However, the significance of the fact that a black artist, who was born and raised in the now notoriously gentrified Hackney, led a bunch of mostly white and middle class art scenesters to feel displaced in an environment which they thought was their own, went unnoticed" (Neofetu 2016, 72).

As Moten writes of black performance and music, vibrational and theoretical practices can affect "the production, collection and arrangement of new singularities (which is to say new ensembles)" (Moten 2017, 117). Such ensembles can contest prescribed futures and invent unthought-of forms and effects, open sites of "dissonance" that disrupt and redistribute thoughts and decolonize bodies and histories. He asks,

> Has this specific dissonance . . . born in ongoing modes of accumulative exclusion that are unique in their severity and bred in what has been and continues to be a radical detachment from power, attained hegemony not only by way of the circulatory system of an unprecedented cultural imperialism, but also because it continues to bear the trace of a radical, anticipatory opposition to state power that constitutes the fundamental element of an identity? (Moten 2017, 115)

For the Philadelphia-based Black Quantum Futurism collective, known for their radical theoretical texts and performances over the past few years, the response to such inquiries focuses explicitly on the means of representing both the past and the future. They write that it is necessary to "understand how the political (or scientific, or traditional linear science fictional) already has you confined and proceed to unravel it from the inside," via

procedures or stratagems in which "there is no difference between the experimental and the theoretical" (2015). Founder member Camae Ayewa, who performs as Moor Mother, describes her music as "collapsing sound to create a frequency of discord and meditation, a fundamental paradox of pushing through a reality while simultaneously experiencing it" (Black Quantum Futurism 2015, 9). In her compositions, history too is contested, and time becomes an unresolved spiral of sound and voice. "I use sound as an agent of resistance," she has said. The opening track of her album *Fetish Bones* (2016), "Creation Myth," layers (signature) harsh oscillator noise over collaged fragments of intercut jazz and gospel music, while her voice, processed, alien, announces that the "*idea is to travel throughout the race riots / From 1866 to the present time*"; initiating a polyphonous noise, as if channeling the "shriek(s) in the night," of the spectral "souls of black folks" invoked in W.E.B. Dubois's famous text of 1903 on the African-American struggle for voice (Dubois 1968, 75). The violence of centuries of oppression rages in these fugitive voices: as "Creation Myth" announces, "*I've been bleeding since 1866 / Dragged my bloody self to 1919 / And bled through the summer being slaughtered by whites / A flux of chaos came after . . .*"

According to Achille Mbembe (2003), late-modern political criticism's privileging of "normative" theories of democracy and the concept of reason has no use for so many living today. The old Western-centric analyses imagined the ultimate expression of sovereignty as the production of general norms by a demos made up of free and equal men, posited as full subjects capable of self-understanding, self-consciousness, and self-representation. Politics, therefore, was defined as twofold: a project of autonomy and the achieving of agreement among a white male collectivity through communication and recognition. This, we are told, is what differentiates it from war. However, as witnessed in many places and systems throughout the world, Mbembe points to "those figures of sovereignty whose central project is not the struggle for autonomy but the generalized instrumentalization of human existence and the material destruction of human bodies and populations" (Mbembe 2003, 14). And, we might add with reference to the LRAD's deployment against urban protesters: ears.

Mbembe has highlighted the West's long-standing "power and capacity to dictate who may live and who must die" (Mbembe 2003, 11). This sovereignty is "expressed predominantly as the right to kill"—most starkly in occupied zones and colonies "in which vast populations are subjected to conditions of life conferring upon them the status of living dead" (Mbembe 2003, 40). However, such figures of sovereignty are "far from a piece of prodigious insanity or an expression of a rupture between the impulses and interests of the body and those of the mind. Indeed, they, like the death camps, are what constitute the nomos of the political space in which we still live" (Mbembe 2003, 14).

"*No use for crying / They catalog buying / And everything for sale*," Moor Mother raps on "KBGK," rejecting a world in which "*they choppin up souls; two for five*": a regime in which even death is commodified for "*white academics to write about / the uncle toms to hashtag and blog about.*"[1] As Marx knew (even if he failed to empathize with the non-European worker), capitalism is a vampire. "The most gothic description of Capital is also the most accurate," Mark Fisher surmises: "Capital is an abstract parasite, an insatiable vampire and zombie maker; but the living flesh it converts into dead labour is ours, and the zombies it

makes are us." Yet this "long, dark night of the end of History has to be grasped as an enormous opportunity. The very oppressive pervasiveness of capitalist realism means that even glimmers of alternative political and economic possibilities can have a disproportionately great effect. The tiniest event can tear a hole in the grey curtain of reaction . . ." (Fisher 2009, 15, 80–1).

However, Moten warns us, it is necessary to resist "carrying all the history of diaspora, all the history of proletarianization" into the "too-smooth" European dialectic of history proposed by Marx. The old discourse of the proletariat as the universal class must be rethought. The "line of that dialectic has got to be broken by another dialect." What is needed, Moten tells us, is "the infusement of lyric into historiographic narrative." The "new universal is listening" (Moten 2017, 11–12). This infusion of the sonic into the "commodity/image frame," as proposed in Deleuze's theory of cinema as audiovisual disjuncture and excess, works as the disruption—via other voices and perspectives than that of Marx's Western subject—of "ethnography, art, history and what is not in between" (Moten 2017, 26–7). Moor Mother's poetry likewise summons the cacophonous speech of the dead and the silence of those long invisible in Western culture in order to oppose these very conditions: "What is the speech act that rises in the air while its object passes underground? Resistance . . . Only the act of resistance resists death, whether the act is in the form of a work of art or in the form of human struggle" (Deleuze 1998, 18–19).

"All of it is now," Toni Morrison wrote of the *Zong* atrocity of 1781, in which 132 Africans were cast over the side after the starving slave ship had mistakenly sailed past Jamaica. Because of such origins, black radicalism is always "done necessarily in relation to water or under water, something occurring in sound, as sounding, as depth" (Moten 2017, 13). This depth (that of the drowned voice returning) itself reconfigures the dialectic of modernity to take account of the establishment of insurance against loss in transit—a nascent global finance system that facilitated the triangular trade; at a fixed rate per murdered head: "an ocean-crossing bill-of-exchange like those which sustained the trans-Atlantic slave trade and made of it as much a trade in credit as a trade in commodities." Perhaps, then, modernity begins not in 1789 but in a whirlpool of atrocity and profiteering at the center of the Atlantic system. "Time does not pass, it accumulates," Ian Baucom writes in *Spectres of the Atlantic* of this Sargasso zone—the center of the whirlpool where the wreckage of history floats—"and as it accumulates it deposits an ever greater freight of material within the cargo hold of a present that is, in this sense, eternally after the enlightenment present . . . The sea is history. The sea is slavery. History is slavery" (Baucom 2005, 325–9).

The linear, strict dialectical time of European modernization—which "consists in continually exiting from an obscure age that mingled the needs of society with scientific truth, in order to enter into a new age that will finally distinguish clearly what belongs to atemporal nature and what comes from humans, what depends on things and what belongs to signs" (Latour 1991, 71)—is rerouted. To think relevantly about time "means abandoning conventional views," which "perceive time as a current . . . with the future emerging necessarily from the past and following that past, itself irreversible," Mbembe writes. But the "time of African existence" is "not a series but an *interlocking* of presents, pasts, and

futures." It is "made up of disturbances," calling into question "the hypothesis of stability and *rupture* underpinning social theory" (Mbembe 2001, 16).

As Black Quantum Futurism (BQF) cofounder Rasheedah Phillips writes, "[t]ime and space need not be predetermined from pre-existing conditions." Time is "not its own entity in the African consciousness; it is a component of events and an experience that can be created, produced, saved, or retrieved. Life is made up of events, and events are defined by certain relationships, patterns, and rhythms" (Black Quantum Futurism 2015, 24). The manual *Black Quantum Futurism: Theory and Practice* (2015) describes "a new approach to living and experiencing reality by way of the manipulation of space-time in order to see into possible futures and/or collapse space-time into a desired future in order to bring about that future's reality." The group draw on "quantum physics, futurist traditions, and Black/African cultural traditions of consciousness, time and space. At the point where these three traditions collide," they write, "exists a creative plane that allows for . . . African-descended people to actually see 'into,' create, or choose the impending future." Its primary concern is with abandoning a "linear mode of time, which dominates time consciousness in Western society"—one that "is built into our language, behaviour and thought, the past is fixed and the future is inaccessible until it passes through the present." Yet, as Phillips points out, quantum physics supports the claim that this linear time is not an "inherent or a priori feature of nature" (Black Quantum Futurism 2015, 26, 24, 11–12).

Dyschronia itself is a diagnosis. It means that "something in the present is not going well, it is not going as it ought to go," as Jacques Derrida explains in *Spectres of Marx*. "Can one not yearn for a justice . . . a day belonging no longer to history," he asks. "And is this day before us, to come, or more ancient than memory itself?" (Derrida 1994, 20–3). Yet, if their work likewise foregrounds a time "out of joint," a recent BQF zine, exploring the death of Sandra Bland (who died in a Waller County Texas jail in 2015) through its "intersection with astrological events and the afterlife of events," questions whether justice is enough for Bland and those who mourn her:

> I DON'T WANT NO JUSTICE
> WHAT HAS JUSTICE
> EVER GIVEN ME . . .
> WHAT I WANT IS YOU ALIVE
> 500 FEET TALL
> BREATHING FIRE . . .
> CRUSHING
> EVERY STRUCTURE
> THAT EVER STOOD
> IN OUR WAY
> EVERY VOICE. (Black Quantum Futurism 2018)

Black Quantum Futurism is not only a collective praxis; but "a bold theory" that "uses the boundless aspects of quantum physics and communal and ancestral memory to search for new meaning and methods in order to reshape the future now." As BQF write, "we are using our African unconscious to predict future events/rhythms, to prepare for changes in

one's environment/universe, and to prevent the ongoing extermination of a people" (Black Quantum Futurism 2015, 8–9).

Moten argues that the black radical tradition is "sounded in the impossible return to Africa," in a turn "towards a specific exteriority," that is "not only an insistent previousness in evasion of each and every natal occasion but the trace and forecast of a future in the present and in the past . . . the revolutionary noise left and brought and met, not in between" (Moten 2017, 13). He proposes the specificity of black music and performance: "this dispossession, this refusal, this objection" expressed "in all of its spatiotemporal complexity, in the full range of its irregularities," as it is felt, in song, dance and percussive rhythm, seeks the "outside" that "disrupts reproduction from within the very process of reproduction" (Moten 2017, 117). The theories, zines, films, websites, workshops and activism of BQF, and Moor Mother's sonic practice alike, respond to specific experiences of black, queer and female subjects, who are (in Kodwo Eshun's words) confronted with "real-world environments that are already alien," and thus develop a politics and practice of frequencies that are "fictionalized, synthesized and organized into escape routes." In the face of continuing injustices, one must "people the world with audio hallucinations," Eshun writes (1998, 103, 121).

Contiguous Architectures

> Utopia . . . cannot now be imagined as lying ahead of us in historical time as an evolutionary or even a revolutionary possibility. Indeed it cannot be imagined at all . . . It would be best, perhaps, to think of an alternate world—better to say the alternate world, our alternate world—as one contiguous with ours but without any connection or access to it. Then, from time to time, like a diseased eyeball in which disturbing flashes of light are perceived or like those baroque sunbursts in which rays from another world suddenly break into this one, we are reminded that Utopia exists and that other systems, other spaces, are still possible. (Jameson 2009, 612)

From the early 2000s, whilst rave culture was being lamented by writers such as Mark Fisher as a casualty of the wider cancellation of the future under neoliberal capitalism, the emergent grime scene was complicating radical electronic music's accelerationist trajectories, overlaying its ecstatic futurism with rhythms, sounds, and lyrics informed by the specific "murk" of living on East London's estates. Grime producers were proud to be "mucky," as Dizzee Rascal put it in 2002. Its palette and lyrics were directly engaged with the everyday life of black youths growing up in the shadows beyond Canary Wharf's glass towers and New Labour's regeneration programs. Grime was indicative of an emergent culture demanding our simultaneous attention to conditions that are at once site-specific and digitally globalized.

However, it was no less futurist than its underground music precursors for being concerned with present conditions. This was a sonics of resistance produced on play stations and in garage bands, in youth centers and schools; a vibrational and virological means through which a singular collective might make claims on a state-prescribed future

from which they had been excluded, "in the name of remaking the inner city," as Dan Hancox writes in his recent history of grime. Indeed, it is "not a stretch to suggest that Canary Wharf was the source of grime's unique incarnation of Afrofuturism" (Hancox 2018, 23). However, if this was a libidinal skyline for many East London grime artists they did not desire *that* future, looming threateningly over those left behind in zones of exclusion, but one in which those left to the rooftops of condemned buildings would take possession of these vertical sites of power.

In 2003, the nascent scene gathered in a pirate radio station, occupying a wooden box atop a tower block, and were filmed for the upcoming underground documentary *Conflict*. Featuring most of the key artists, the video is emblematic of the moment of grime's formation. In its final sequences a fight breaks out among two of the MCs who have been restlessly swapping the mic, and the scuffle spills out of the makeshift sound studio onto London's dusk skyline, as if rupturing the fabric of the real. The tower block was later bulldozed to make way for the Olympic stadium. Three years later, one of the key characters in the film and in the fight, and one of grime's most promising MCs, Crazy Titch, would go down for life on murder charges. His opponent, Dizzee Rascal, would return a decade later to perform his ubiquitous crossover hit "Bonkers" at the 2012 Olympics opening ceremony, while the producers and protégés of the Roll Deep, East Connection, Boyz in da Hood, and Nasty Crew collectives gathered in this video dominate the pop charts today. The other future embryonically captured in the *Conflict* DVD—where the grime of the streets and the takeover of London's vantage points are inextricable—is now ours.

If the commerciality it would achieve complicates the radical status of grime music today, it retains its agenda: at its core, in its very success, engaged with overturning the "*experience* of defeat, a shattering experience that annuls historical teleology: it is an end of history, which is an end of narrative as well, and leads to the stubborn silence of the vanquished and the enslaved" (Jameson 2009, 557). It was fitting when, at the 2018 Brit Awards, chart-topper Stormzy demanded reparation for another high-rise building become death zone: "Where's the money for Grenfell?"

These concerns with the reoccupation of exclusionary urban architectures and the recovery of silenced voices feed directly into the work of artist and writer Laura Grace Ford (formerly Laura Oldfield Ford). As Mark Fisher wrote, introducing the 2011 anthology of Ford's *Savage Messiah* zines (2005 onward), "the voices she speaks in—and which speak through her—are those of the officially defeated: the punks, squatters, ravers, football hooligans and militants left behind by a history which has ruthlessly Photoshopped them out of its finance-friendly SimCity." The zine "uncovers another city," underneath the "banal science fiction telos" of neoliberal "London 2012" (or what Fisher describes as "Restoration London"). It is a "perambulation through the shadowscapes"; through a city "haunted by traces and remnants of rave, anarcho-punk scenes and hybrid subcultures." The spectral city (a space wandered by the "ghosts of brutalist architecture, of '90s convoy culture, rave scenes, '80s political movements and a virulent black economy of scavengers, paddlers and shoplifters" that "haunt a melancholy landscape"), is "a site for drift and daydreams," as Fisher puts it. Against the pressure to be a subject of capitalism's relentless productivity, which he calls "bland delirium," is another form of delirium that refuses to

work": a struggle for a different form of time: "Fugitive time, lost afternoons, conversations that dilate and drift like smoke, walks that have no particular direction" (Oldfield Ford 2011, v).

> Back to the Westway . . . A dinted portakabin houses a pirate radio station, nocturnal grime scene. DJ Fang, UK Funky, Lost Souls, MC Gambit. A tantalising link with Grenfell tower, pink lights glowing in balcony windows . . . This decaying fabric, this unknown terrain has become my biography, the euphoria then the anguish, layers of memories colliding, splintering and reconfiguring. (*Savage Messiah*, #3, Laura Oldfield Ford 2011)

Each *Savage Messiah* edition is a collage of stark photography of derelict sites, ripped posters, and biro-drawn portraits of punks and raver's faces, whose open expressions, refusing erasure, are starkly contrasted to vizored police riot squad illustrations. Interspersed with these montages, the typewritten text switches between and confuses modes of description: on one hand, memories of wild nights, living rooms with the curtains drawn, 5 a.m. glassy-eyed snogs, on the other, architectural features, districts, roadways, the histories of the city: "The repressed desires of the city flow through hidden pipes and conduits and become counter narratives . . . The river perpetually threatens to break out of its confines in a volatile, intoxicated state" (#6). Into delirium: the inextricability of the libido and the "spinal landscape" (Ballard 1990, 31), of the personal and the political, of pasts and futures. Ford invokes "the polytemporality of the city . . . the polychromatic riot of London's histories travel in shimmering, tangled lines" (*Savage Messiah*, #6).

> Underneath all reason lies delirium, drift. Everything is rational in capitalism, except capital or capitalism itself. The stock market is certainly rational; one can understand it, study it, the capitalists know how to use it, and yet it is completely delirious, it's mad (Deleuze in Guattari 2009, 35).

In this way, anachronism and polytemporality become a "weapon": in the flux and dyschrony of texts, drawings, and torn photographs; but also in an aesthetics that recalls the 1980s DIY punk and post-punk culture of collage and scrawl, and the iconography of "rogue dance and drug cultures that mutated from rave" (Oldfield Ford 2011, xiii). The hauntological drift does not only refer to the past, to "abandoned dreams [that] reside here," in "cracks in the pavement." It also reactivates the possible futures that have not quite been forgotten and left behind, the libidinal pull of those cherished alternatives. "Stratford City 2013: looted, burned, destroyed" one drawing (from 2008) is titled. It is prophetic or hopeful. "Here in the burnt out shopping arcades, the boarded up precincts, the lost citadels of consumerism one might [yet] find the truth, new territories might be opened, there might be a rupturing of this collective amnesia," Fisher writes (Oldfield Ford 2011, xvi).

Critically, as Fisher's introduction also points out, Ford's graphic and textual montages owe at least as much to music as to visual culture. Hallucinatory memories of raves and squat parties constitute a sonic cartography: bands, subcultures, the sound booming from passing cars, scattered through the text. Remembered soundtracks construct a system of alternative coordinates, overlaid, echoing still, like ghosts in the sites from which the "poor, dispersed and hidden from view" have been driven out. "You can hear these deserted places," the zine text tells us, as it wanders the cracks along the Westway.

> Test department. 303. 808. Traces of industrial noise . . . Xmas all dayer with Crass . . . Spiral Tribe, Mutoids, DIY soundsystem. Paths could be traced here. A fractured lineage, contestation of space. (*Savage Messiah*, #3, Laura Oldfield Ford 2011)

Increasingly, sound has been used directly by Ford to produce these drifts in the form of installations and performances. Field recordings, fragments of narcotically slowed found-music, and spoken texts are assembled, to respond, sonically, "to the psychic and emotional contours of the city." As she said of a recent three-part audio work, *Open Your Palm, Feel the Dust Settling There*, performed live at Somerset House in London in June 2018, "[t]he channelling of voices based on real encounters allows for an intersubjective relationship with the terrain, an approach to sound and text as a form of psychic ventriloquy." Here, too, in the absence of the general uprising promised in 2011 and rapidly snuffed out, in the same spaces of West London wandered over years ("*Hammersmith Hospital . . . Costa . . . Subway,*" "*long, rambling drifts, buoyed up with rum, and sugar*"), is a delirious mode of construction: personal longing, geography, and the tragedies of history blur together: "*those were our coordinates,*" the narration says. "*Turning back towards White City I see the shell of that tower . . . at the centre of my vision, rising over the Westway, a symbol of everything that's gone wrong,*" Ford's dream-like voice intones, describing passing photographs of the Grenfell missing. The work manifests a dream-like identification of the lost self with the minor, the forgotten, the fugitive, as a mode of hidden communality, and reconnection: "*how many of them illegal? Evading someone?*" A funereally anaesthetized RNB track fades in behind Ford's voice, as the ghosts assemble, following the sound: "*sometimes, under the Westway, you can still hear traces of those parties, acid trax pulling in the concrete . . . you could only find them by following the echoes, listening for the bass coming up from the ground.*"

Ford's 2017 exhibition *Alpha/Isis/Eden* at West London's Showroom Gallery reconstructs these familiar elements in the gallery space. "It's the same project [as the zines]," she insists. Fisher describes it as a "sprawling, tuberous collage"; Ford as "an ongoing mapping of ruptures like the London riots, the breaks in the flattened time of a 'continuous present'" (Mclaughlin 2017). Here the drift of her zines is remapped to the dimension of space and sound. The exhibition title refers to housing blocks in the area that have been marked for demolition; but that also evoke the mythic time of goddesses, looped beginnings. Generically modernist, vaguely luxurious publicity lifestyle images for local property regeneration projects (appropriated from hoardings in this "vexed area," of "liminal zones, places stranded between abandonment and speculation") are blown up, tinted pink (perhaps a nod to the color-transformation undergone when 35 mm film stock degenerates), their composed perspectival space crammed with tightly scrawled handwritten texts and glyphs, it is "a conjuring act—an attempt to call back all that this image of a perfect high-rise room for sale erases" (Hatherley 2017). Ford herself says:

> Streets are indelibly marked by moments of socio-political intensity—uprisings, occupations and raves, trauma, anxiety and militancy—as well as the tremors and faultlines of your own past. The purpose of my walks is to identify something lingering, fizzing in the present. I'm not thinking about memory as a sanitized image, but as a texture in the moment, the sense

that a place is crackling with agency. For me, this spectrality allows for a revisiting and reactivating of emancipatory currents. (Mclaughlin 2017)

Within this exhibition, it is the audio element—produced for the Showroom exhibition in collaboration with London musician Jack Latham (a.k.a. Jam City)—that, swirling round the gallery via quad-speakers, overlays an alternative world of desire and resistance, disrupting these billboard images already fading into the flatness of the past. It is a different strategy to Dean Blunt's harsh Mosquito whine. Subsumed pulses, clanks, crackles, sub-bass drones and gloopy synth lines, fragments of field audio (traffic sound, news reports of gang activity, footsteps, grime tapes) are manipulated, slowed, and circulated, threatening and entrancing, among the photographic blowups, while Ford's voice, heavily processed with delay and reverb as if drugged, summons the memories and drifts of "*. . . a vast unmapped territory . . . the labyrinth . . . cinema . . . a place which William Blake identified as a portal . . . Those dreams I sometimes have, tectonic plates shifting . . . scenes of jagged separation.*" At times the serene, glassy narration is itself subsumed in harsh digital processing, which sounds like stone-tape voices escaping into noise from the city's walls.

Afterthought

Sonic culture has opened onto new relays, across music, contemporary art, and theory in the twenty-first century. However, modern avant-garde concerns with the emancipatory potential of sound in general have shifted toward the production and audition of what Moten calls "specific dissonances." These may be heard in the provisional and partial collection of fugitive sonic practices we have traced here—whether at the threshold of life and death in Syrian political custody, in black and nonnormative electronic musicians' revolts against Western modernity's models of time and space, or in tests of the long-range acoustics of art display and crowd dispersal. Together, they begin to constitute a program for study concerned with the conditions of "freedom in unfreedom" (Moten) that practice and theory must address today.

At the edgelands of music culture, contemporary art, and publication, we can begin to trace a sonic "aesthetico-politics," in Jacques Rancière's terminology. The "essence of *politics*," he claims, "consists in interrupting the distribution of the sensible by supplementing it with those who have no part in the perceptual coordinates of the community, thereby modifying the very aesthetico-political field of possibility." Each of the practices we have discussed, albeit at different registers and in different contexts, works to disturb the

organizational system of coordinates that establishes a distribution of the sensible or a law that divides the community into groups, social positions, and functions. This law implicitly separates those who take part from those who are excluded, and it therefore presupposes a prior aesthetic division between the visible and the invisible, the audible and the inaudible, the sayable and the unsayable. (Rancière 2004, 3)

Together, the practices we follow propose a means of re-visioning our conditions of temporality and futurity. They thereby operate at the level of a counter-politics, one that consists of redistributing the right to be seen, to be heard, and to speak, as well as the right to exist in a past, present or future time.

This provisional inquiry has attempted to show that thought, histories, and voices existing on the outside, in the "wild beyond," can enable us to think differently about the production of knowledge itself. In challenging the commonplace association of sonic thinking and making with the cisgender European model, we set out to expose little-known, repressed, dissident, or otherwise marginalized voices, hitherto excluded from the historical record. As we have argued, the intrinsic relationship between fugitivity and sound is reinforced by contemporary sonic art and musical paradigms. Having been consistently excluded from the category of the human, marginalized and nonnormative groups are ideally positioned to mobilize the otherworldliness and alienness of the sonic.

Fugitive thinking that attaches itself to the refuge of the collective mass is dedicated to unknowing and unlearning, to disturbing the silence and professionalism of the rational subject and to "making it dark." Fugitivity is not concerned with exiting the cave and becoming illuminated, as it can only occur in darkness, loudness, anonymity: in the safe spaces of the nightclub with no-judgment, no-harassment, no-photos policy; in the free words and worlds by anonymous, pseudonymous, alias voices disowning copyright; in the zones of exclusion and sonic resistance at the periphery of the metropolis. It is not concerned with the moment of emancipation, but with the work of "constant escape" (Moten 2017, 84).

To operate from the para-academic realm of fugitive sound, means to attempt to overthrow and overturn most of the work done by the domestic type of sound studies in its short-lived institutionalized life. Yet, this is necessarily a double flight: to flee from the dominant, the imposed, "the academy of misery," is simultaneously to flee from oneself. "Escape from some notion of freedom, of having achieved" (Moten 2015). Escape from the habit of being a single being, a body, somebody, owning things, owning other bodies. It is a matter of tracing the forces working underneath and against the neoliberal and patriarchal outlawing of noise, cacophony, and disorder, instead seeking to amplify them.

Following these assemblages, subcultures, and great unions, as "a way of turning one's face violently towards the present" (Eshun 2018), we find ourselves amidst the upheaval of incessant rhythm, psychedelic pandemonium, unapologetic tumultuousness, and joy. Joy, after Moten and Harney (2013), is a fundamental hallmark of the experience of underrepresentation, of unreality, of the undercommons, and the only way to protect it is by practicing it. "One has to inhabit the crazy, nonsensical, ranting language of the other. Inhabit and even cultivate this absence" (2013, 7).

A Universe in a Grain of Sound

The Production of Time and Sonic Fiction in Machinic Sound Art

Tobias Ewé

A particular kind of sonic fiction is taking root in the time, noise, and machinic processes of sound art. These fictions are created by technical parts and various notions of time that modulate the received narratives around a work of art.[1] Using the sonic fictions created from artworks by Morten Riis, Anna Friz, and Robert Morris they reconfigure their practices into more than autotelic systems conveying a singular and contained representation. These artists work exoterically to reshape a world beyond their own. As theorist and filmmaker Kodwo Eshun states, using the "material that gives rise to the symbolic or fictional" (Eshun 1998, 174) these artists find a "universe in a grain of sound" (Mark Sinker, in Eshun 1998, 180).

The artistic materials used by the machines in this article include neologisms, steam machines, performances, tape recorders, practice-led research, static, pistons, cybernetics, and speculative disorientations. These materials come together to form machines of potentiality, "where aesthetic effects recursively grow into new artistic realities" (Priest 2013, 200). In the work of Morten Riis, a new history of electronic music is excavated by rethinking the composer as a repair person, and their instruments as technical tools; Anna Friz expands a childhood world of people living inside radio receivers whilst interfering with the infrastructural network of national radio broadcasting to unbalance the relationship between signal and noise; and Robert Morris tears apart the otherwise conflated distinction between object and process in art, only to bring it back together in the shape of a minimalist sculpture.

These artworks are all in some way machinic, with the underlying assumption that our understanding of machines is modulated through Gilles Deleuze and Félix Guattari's insistence that machines are irreducible to technology. As machines, they are apparatus consisting of interrelated parts with unique functions—technologically or otherwise. As artworks, these functions include at least some level of aesthetic representation, duration

and creativity to fabricate sonic fictions that mesh with current realities. As machines (and particularly as sounding machines) they involve a temporal process allowing the physical interaction between its parts. To understand time beyond machinic movement and its connection to sonic fictions, we have to retrace a brief history of time to see how the metaphysics, mechanics, and capital of time run hand in hand. Unlike the more quotidian fictions produced by literature, music, films, and other aesthetic pastimes, sonic fictions write themselves directly into the current reality as *hyperstitions*.[2] Each of the artworks by Morten Riis, Anna Friz, and Robert Morris produces a hyperstitional reality—and thus a notion of time—through sonic fictions based on breakdowns, failure, nonsense, and paradoxes.

What is it that the sound artist creates? If, as Deleuze suggests, a philosopher is someone who creates concepts from the flows of thought, and a musician is someone who creates sounds from a continuous acoustic flow (Deleuze 1998, 78) then perhaps a sound artist is someone who creates *sonic concepts*. Of course this is not the entirety of what a sound artist creates, and it is crucial to never let go of either the physical oscillations or the emotional affects that an artwork might convey. Regardless of the affordance of a given artwork— some of which might not even include the physical presence of sound—it seems safe to say that the creation of contemporary art is the creation of a concept, or what we might call a fiction. The immanent flows are given, whereas creation consists in dividing, organizing, and connecting these flows (Deleuze 1998, 78). Artworks are thus extracted from a system of singularities appropriated from a flow of what we might call *sonic thoughts*.

Accidents

Musician, instrument-builder, and researcher, Morten Riis, created the work *Steam Machine Music*—a semiautomatic instrument consisting of parts such as a steam motors, a zither excited by pulley wheels, a rhythm generator built from Meccano parts, electric Lego motors, perforated paper loops, and a slew of other components. Yet the artwork is more than the sum of these parts. Alongside the instrument, Riis published the book *Machine Music: A Media Archaeological Investigation*, which unpacks the contents of his practice-led Ph.D. research. The machinic instrument/art object *Steam Machine Music* stretches beyond its mechanical elements and includes Riis's performance of it as well as his writings around it. It is therefore necessary that the following section analyzes both his music machine as well as his ideas behind it.[3]

The music machine is a multifaceted entity in which a "complex shifting between material physicality, symbolic pre-determinacy, and divine metaphorical conviction is unfolded" (Riis 2016, 203). The steam motor of *Steam Machine Music* is in many respects a far cry from the technological breakthroughs that made it possible to create music by the proverbial "push of a button." Yet, *Steam Machine Music* still references the diverse technological leaps that made contemporary electronic music possible. Riis describes the work as "a prototype of electronic music: a mechanical musical instrument that itself

defines the term 'electronic music'" (Riis 2016, 20) outside the historical, technical, and aesthetic narratives that have attempted to define the field since the 1950s.

As an assemblage of mechanical parts, *Steam Machine Music* is nothing more than an inert musical instrument. It needs Riis's hands to unleash and tend to its music, which puts Riis in the schizophrenic role of inventor, composer, musician, and repair person. The last position is what informs Riis's work; he wants to "excavate an expanded understanding of what electronic music is through a notion of machine music as 'seen' through the ears of the repairman" (Riis 2016, 21). Perhaps infectiously inspired by Kodwo Eshun's *More Brilliant Than The Sun*, Riis wants to examine how malfunctions and "errors in the machine's programming" that mold electronic music and create what Eshun calls "a new audio lifeform" (Eshun 1998, 189). Instead of a history of electronic music driven by technological advancement, Riis suggests an alternative sonic history focusing on the by-products of technology. A historiographic reversal where the sound of the machine's error becomes just as important as the machine's intended sound—in accordance with Eshun:

> [M]ost of the key musics have been accidents, they've been formed through errors. (Eshun 1998, 189)

This is more than an aesthetic inversion that moves focus from the artist's intended piece to its glitches and breakdowns. The errors make audible the cracks in the functioning of the machine, which reveal both intrinsic machinic sounds, and the meddling hand of the repair person. This double relationship is described in historian and philosopher of technology Lewis Mumford's *Technics and Civilisation*: "However formidably automatic the machine may look, there is always a man lurking in the background, adjusting it, correcting it, nursing it . . ." (Mumford 1934, 16). If the machine is truly "half slave, half god" (Mumford 1934, 16) then the same should be true of the human, as heard by the machine.

The difference between musical instrument, tool and machine can be difficult to specify when considering objects that are neither self-executing algorithms nor tool-like flutes and drums that need human activation to function. With reference to Martin Heidegger's distinction between the *ready-to-hand* (when unconsciously we use a tool as a simple means to an end) and *present-at-hand* (when the tool reveals itself to us through its breakdown), Riis suggests that "[w]hereas the instrument is something that is driven by hand, the machine is guided by hand" (Riis 2016, 28). Where more traditional instruments, such as percussive or string instruments, must be played as a tool under the full authority of the musician, Riis suggests that *Steam Machine Music* at most can be encouraged to do the musician's bidding. The repair person can never preempt the machine's idiosyncratic character nor its looming collapse. This *present-at-hand* leads Riis in his work with a machine that has both practical-technical, as well as philosophical, implications for the degree of success in his musical performance. *Steam Machine Music* is at once an object, but is also *interobjective*. It is a performance, but also an intervention into electronic music history.

The machine's own sound—the machinic noise—is a fundamental aspect of machine music. Riis finds an important distinction in Italian futurist painter and composer

Luigi Russolo's noise machines—the *intonarumori* (Russolo 1986 [1916], 7)—often referred to as the introduction of noise into music (Bijsterveld 2008, 142). But according to Riis's definition of noise, Russolo's *intonarumori* are not the original machines that injected noise into music history, since the noise they produced was created by *manual* labor—not *machinic* labor. Despite Russolo's insistence that his music was more than an impressionistic imitation of noise (Russolo 1986 [1916], 86), Russolo's noise *is* an imitated noise, since it was never a noise inherent in the machine itself. The noise of the *intonarumori* is figure-posing as ground, aesthetics posing as ontology. When noise is truly unbounded and chaotic it cannot be controlled or composed at the hand of the human.

Instead Riis marks the inception of noise in music with avant-garde composer George Antheil's composition *Ballet Mécanique*, performed by mechanical pianos in 1924. The raucous sounds produced by the mechanical pianos were by-products of the instrument—an inherent yet untamed function of the machine (Riis 2016, 43). Yet Riis goes further in his record of noise, and states that noise has always been a fundamental element in music history as a by-product of any instrument. No matter the level of technological, technical, or acoustical sophistication, there is always a certain residue of noise in their sound. Electronic and mechanical musical instruments alike are more than mute perfect translators of symbolic and algorithmic ideas. They have their own sound, and leave their clear impression on the development of electronic music. This inherent character of the machine is exactly the aesthetic drive behind *Steam Machine Music* and most of Riis's compositional *oeuvre*.

The inescapable presence of noise points to the constant presence of failure in the machine's operation. The machinic diagram contains no noise, since noise is a signature of failure in the machine. Noise is what keeps homeostasis at bay and perfection out of the inventor's reach. The move from symbolic diagram to real machine is the introduction of noise as the witness of malfunction.

For French philosopher Michel Serres, signal and noise are the basics of communication. The relationship between the two determines the meaning transmitted to the receiver. In order to hear the voice on the telephone line, information has to be subtracted *from* noise. These are the physical properties of signals and transmission—the signal-noise ratio present in all electronic communication, which determines the loss of information due to the material limitations of a given communications system.

In Serres' trifunctional model of the sign the parasite (or noise) attaches itself to the sender-receiver relation. The parasite is not to be understood as a sudden disturbance to that relation but as an immanent part of the relation itself. Noise comes first. In terms of base communication, Serres writes that "[t]o hold a dialogue is to suppose a third man and seek to exclude him" (Serres 1983, 21). Unlike American cryptographer, mathematician, and cyberneticist Claude Shannon's coupling of information with entropy (or signal with noise), Serres aligns himself with the cybernetics of mathematician and philosopher Norbert Wiener, who characterizes "information as the negation of entropy or negentropy" (Brassier, in Malaspina 2018, x). Bringing information theory into the cultural realm, Serres asks "what fury orders fury? Noise is not a phenomenon, all phenomena separate

from it" (Serres 1983, 50). Unlike communication—which is dialogical and contained within an enclosed system between subjects—noise describes a much broader range of cultural-technical phenomena.

Interference in the Static

The work of Canadian radio artist Anna Friz illuminates the specifics of Serres' concept of noise. Friz has a background in community and arts radio, and continues a crucial line of Canadian artists such as Dan Lander and Hildegard Westerkamp who shaped the spectrum of radio art in the 1970s and 1980s. Friz describes her practice as self-reflexive radio and transmission, which takes the shape of broadcasts, installation, or performance—"radio is often the source, subject and medium of her works" (Hall 2015, 134). As a practice-led researcher, much of her writing similarly deals with the history of transmission through the Brechtian term *transception* (Brecht 1963), which describes an attempt to transform the radio from one-way mass communication into a medium that could link communities as well as individuals. Poet and playwright Bertolt Brecht's ideal radio was a transceiver—a machine for both sending and receiving, which would build a network of communicators in a feedback loop of sociality and expression. Reinterpreting *transception* to privilege empathy and active listening, Friz proposes an "expanded phenomenology and ontology of wirelessness" (Friz 2011, 6) through which theorizing transmission, communication, and media culture takes on a less rigid approach by calling for a *becoming-radio* of future human communities. *Becoming-radio* is thus the interstitial space in a circuit of transmission that includes "listeners, soundmakers, eavesdroppers, boxes, antennas, keyboards, desires, dreams, and nightmares; where no position is fixed" (Friz 2011, 117). Through *transception*, the human enters into this complex relationship that not only flows from the transductive capabilities of the radio device, but according to Friz, the "*transceptive* potential" of "*becoming-radio*" comes from the minoritarian embodied performances of radio community and practice (Friz 2009, 46).

This transceptive quality is present in Friz's pirate intervention and performance *The Clandestine Transmissions of Pirate Jenny*, which was primarily performed between 2000 and 2003, but has continually been recreated and modified since then. "Are there little people who live inside the radio?" begins the piece, which sets the basic premise for the fictional world Friz creates. The piece builds on Friz's childhood imagination, that the voices emanating from the radio receiver were actually people living inside it, imagining that when she would "turn on the radio, the little people begin to talk; change the station, and they change their voices. I imagined the radio to contain a miniature theater in which the people performed whenever I wanted" (Friz 2008, 141). Building on this childhood memory, Friz creates a fiction by tying these ideas back to material reality. Instead of materializing her fiction from thin air, Friz turns around and adds matter to an existing fiction. Taking her claim of little people inhabiting radios at face value, Friz is compelled to ask about the working conditions for these radio performers with the downsizing of

employees in national broadcasting services and the actual diminution of physical space with the development of smaller and portable radios. Is dissent brewing in the land of radio (Friz 2008, 141)? *The Clandestine Transmissions of Pirate Jenny* asks what would happen if one of these little voices broke free and stopped being at the beck-and-call of our aural desires. But instead of plotting revenge Jenny becomes a pirate and transforms her radio receiver into a transceiver, so she can both monitor incoming signals as well as disperse her voice across the radio waves in the hope that she might find others like her, living both *in* and *on* the radio.

Choosing the role of the pirate, Friz inserts herself and Jenny in a radio art discourse of transnational hacker culture. In her essay on cyberfeminism and radio art, musician and sonic cyberfeminist Natalia Masewicz-Ścibior uncovers this connection between hackers, pirates, and feminist Science and Technology Studies (STS) scholar Donna Haraway's cyborgs. Piracy signals a technological mode of transgressing binaries (of man/woman, sender/receiver), and "adopting the position of an outsider" (Masewicz-Ścibior 2018b), who can infiltrate the largely male-dominated culture of radio technology and production. The connection between (Internet) piracy and radio waves allows Friz to understand radiophonic space as a "vast, uncharted, virtual territory" (Masewicz-Ścibior 2018b), not unlike to the placelessness or non-place of the early Internet culture.

Moving toward a xenofeminist critique, Masewicz-Ścibior challenges Friz's own emphasis on the embodied subject. Instead, she suggests that Friz's artwork creates a radiophonic space for "a state oscillating between embodiment and disembodiment" (Masewicz-Ścibior 2018a), where human and machine enter a symbiotic relationship "without implicating any gender bias" (Masewicz-Ścibior 2018a). In *The Clandestine Transmissions of Pirate Jenny*, the radio transmitter becomes a cybernetic object that assimilates a human body into a machine. In xenofeminist discourse, the subject undergoes a radical alienation from the body in their call for new universals and gender abolitionism (Cuboniks 2015). Their political program entails an "ambition to construct a society where traits currently assembled under the rubric of gender, no longer furnish a grid for the asymmetric operation of power" (Cuboniks 2015). Gender abolitionism is thus an update to our understanding of gender in the light of the current advances in biology and technology, while vehemently opposing the suppression of gender's social manifestation. In line with technofeminist philosopher Sadie Plant's *Zeroes + Ones*, gender is not something given or performed, but rather "engineered, and as such it is prone to revisions and further metamorphoses" (Masewicz-Ścibior 2018a). Channeling Haraway, Masewicz-Ścibior insists that the woman does not dissolve into a machine, since both woman (as a gendered body) and machine can be seen as mutually co-existing mutations of one and the same.

One iteration of the work took the form of a studio composition on national public radio. Jenny's voice sounds faintly over the static of the prerecorded radio program as she repeatedly calls out for help. Static interferes intermittently as Jenny attempts to be heard over the gushing radio waves. In this iteration, Jenny essentially positions herself as the message (or signal) attempting to break free from the rest of Friz's artwork. Since the radio static in the artwork is a purposeful imitation of noise—a soundscape created from intercepted signals, radio scanning, and static—it is still a part of the artwork's signal,

although it may act as a representation of noise. By calling out into the recorded radio static, her voice literally interrupts the signal and creates order out of the representational background noise. Noise itself becomes the signal.

The multiple iterations of *The Clandestine Transmissions of Pirate Jenny* all renegotiate the relationship between signal and noise, reception, transmission, and transduction in different ways. The piece has been cut up and reimagined as "an unlicensed radio intervention in Montreal [. . .], as a late-night 'takeover' of a c/c radio station, as a live theatrical performance (using walkie-talkies and live radio sampling), and as a studio composition on national public radio" (Friz 2008, 142).

In the unlicensed radio intervention made for CKUT FM in Montréal, Friz presented the piece as a real-life intervention into unlicensed radio frequencies. Here Jenny not only spoke to the listeners from Friz's homemade static, but Jenny's voice was physically inserted into the regular shortwave frequencies just beyond CBC One's 88.5 MHz with the use of a homemade low-watt transmitter. Jenny is positioned both *in* and *as* noise between the sender and receiver. This intervention meant that if the listener's radio receiver was set just slightly detuned—slightly off CBC's 88.5 MHz—they would hear Jenny's plea within the scheduled programming. In this iteration, Anna Friz inserts Jenny as both noise and communication—noise and signal. Friz shows not only that noise is that from which meaning can be extracted, but that noise can carry meaning in and of itself.

Creative Clamor

One consequence of the signal/noise distinction is the creative possibilities of noise. Serres himself mentions it poetically yet succinctly when he describes how "[f]orm—information that is phenomenal—arises from chaos-white noise; what is knowable and what is known are born of that unknown" (Serres 1983, 50). This is a natural consequence of Serres' claim that noise and signal can change positions according to the position of the observer—as in Friz's artwork, noise can actually *be* signal.[4] Serres' third man is displaced by Jenny and/or Friz as they continuously shift their positions on the trifunctional model of the sender-receiver relation. According to Serres, this is how chaos is organized (Serres 2007 [1982], 126). Serres reconceives the human world as *embedded in* the chaos of nature. Inasmuch as noise is the informational nonsense that must be reduced in order to accurately hear the message, it is simultaneously the chaotic origin from which messages are fashioned. This distinction may appear minuscule, but the two positions have vastly different consequences. It is the difference between noise as manageable excess (the cultural technique of communication) and noise as a creative force (the cultural technique of noise). In *The Clandestine Transmissions of Pirate Jenny*, Friz collapses the former conception of noise since the scheduled radio programming fades from signal to noise without changing its material transmission. Signal and noise "cease to be binary opposites but [become instead] intertwined concepts" (Friz 2008, 142) that turns noise into meaningful sound. Pirate Jenny knows that she is born of static when she says, "if you are receiving this message and can't respond, please send more

static . . ." Without this intertwining or collapse of signal and noise, the artwork would lose all potency—not only conceptually, but also in terms of what is at stake for the stranded Pirate Jenny. If there is no noise, Jenny loses her voice and thus her very existence.

Friedrich Nietzsche proposed a similar notion of chaos (or nature) as an opening for creativity. Sound theorist Christoph Cox follows Nietzsche's material philosophy through a Deleuzean vector to identify sound as an "anonymous flux" (Cox 2011, 155). Selecting particular information from this flux is the activity of artists who—rather than create sound—shape it from the noise already present in the world. Nietzsche specifically writes on how matter is itself creative and transformative without external influence. The world is always in a state of becoming, which takes form and then changes again in a natural flux that is "without beginning, without end [in a] Dionysian world of eternal self-creating, of eternal self-destroying" (Nietzsche 2003 [1885–1888], 38). Positing noise as a creative force, the leveling of distinctions now goes even further than the disruption of the human/nonhuman and culture/nature. With the *will to power*, noise collapses these distinctions to the point where creativity (and perhaps even art) could be the product of the nonhuman.

Jenny taps into this monster of force—born out of the paradox between immanence and immersion she has neither beginning nor end. She is at once distinguished by the presence of her own voice, the voice of the hosts, DJs, and singers she impersonates, and "a creature *of* the radio" (Friz 2008, 142) distributed across radio waves, yet in(side) each radio that receives her signal. Simultaneously multiple and singular, Pirate Jenny is decidedly nonhuman—a *body without organs*. She is both *created from noise*, thereby expanding the amount of noise by her presence, and *creating further noise* in each radio she inhabits. Radio static is what creates the sonic fiction of Pirate Jenny, but static simultaneously makes her audible by oscillations in the listener's ear. Yet there is more to noise. The following section will look at how noise is more than creativity, but the very condition for thought. Epistemological noise is always present.

The Ungrounded Ground

In the figure/ground relationship between signal and noise, noise is often assumed to be an unchangeable ontological entity without regard for the epistemology that haunts it. In this view, noise has brought with it the supposed scientific certainty of its cybernetic origins into every other theory it comes in contact with. In philosopher and media theorist Cecile Malaspina's book, *An Epistemology of Noise*, she sets out to unravel the many theoretical contexts where noise and information have been deployed. With a grounding in the cybernetics of Claude Shannon and Norbert Wiener, Malaspina undertakes a transdisciplinary approach to cybernetics, tracing the varying concepts of noise and its correlates through mathematics, finance, music, computation, acoustics, psychiatry, statistics, and more. Grounded firmly in philosophy, Malaspina turns noise from an *object of thought* into "a variable within the process of thought" (Malaspina 2018, 168). She articulates the epistemology of noise with its ontology (what noise *is* and how it relates to *knowing*), with which she shows that there is an often overlooked political dimension to

the conventional distinction between epistemology and ontology. There is a reason that something as ontologically grounding as noise can be applied across such wide fields.

Noise is exactly so conceptually polymorphous because it is not about types of phenomena, but about the relation between contingency and control. As philosopher Ray Brassier points out in his introduction, Malaspina's book is an epistemic intervention. Information entropy in cybernetics tells Malaspina that "it is uncertainty that knows" (Ray Brassier, in Malaspina 2018, xii)—this is the grounding power of judgment, which is itself based on "ungrounding" as a condition of normative grounding. In other words, the thing that certain judgment is grounded upon is itself uncertainty. In Kant's critical legacy, the a priori describes the conditions of possibility of cognition—the concepts necessary for unified experience to take place—and the a posteriori describes what is experienced on the basis of these concepts. With a slight challenge to Kant's insistence on the a priori and reason as the ground of experience, could it be possible to imagine experience based on the absence of these concepts? Malaspina shows us that epistemological noise always haunts our attempts at knowing.

Repairing the Clock

From the noise of reason, we now move to how machinic noise influences timekeeping devices. As an introduction to the co-constitutive relationship between the concept of time and development of machines, we return to Morten Riis's work and the role of the repair person.

One goal of Riis's practice is to reject the traditional historical and technological understanding of electronic music, which so far has focused on a symbolic and non-material conceptualization where utopian and aesthetic virtues are privileged over the production and material conditions of music.

One of these conditions is the machine's ability to measure and create time. Riis suggests that the discovery of the theory of relativity dislocated the conception of time as linearly driven by absolute causality. As with the technological and philosophical breakthroughs brought on by the theory of relativity, so too did music change to accommodate new concepts of time. When mechanical discrete time is regarded through the point of view of the repair person, a different notion of time is unfolded: "Time as something absolute [now becomes] a hypothetical and abstract condition that is impossible to attain" (Riis 2016, 165). However, it is not just the break with linear time that opens up new creative possibilities, but also the hyper-precise and ordered time that these inventions bring about. Inventions such as the electron microscope and the atomic clock enabled greater precision (for example in synthesizers) and therefore a multiplication of creative opportunities. Electronic instruments need the uniformity of time and measurement.

Riis's academic work entails an important critique of German media theorist Wolfgang Ernst's claim that machines are themselves recorders of historical time. The eternal rotation of cogs and the machine's precise continuity leads Ernst to conclude that machines can be

understood as reliable timekeepers. According to Ernst a clock is nothing more than a mechanical way to visualize the machine's cogs in sixty intervals. Yet as Riis's practice-led research shows, even a clock can stop working. Ernst omits this central aspect of machinic fallibility, from which it follows that machines can never be more than a symbolic measure of time. Machines in the real world break down and create broken and bewildered time lines that never live up to the calculated consistency of their schematics. As will become apparent in the following section, the schematics of clocks and time itself depend on the epistemic tropes of a given era. Even schematics never live up to time.

Where chronology forces a linear temporal hierarchy, what determines the hierarchy of machinic operations?[5] Riis explains that when we take our outset in the machine's electric and mechanical circuits instead of simply regarding the past based on historical documents, we create new modes of understanding our media history. Riis writes that he "tried to dig deeper into the notion of technology-based music from a starting point in the operational machines themselves, liberating us from the otherwise chronological and symbolic limitations that traditional history writing forces upon us" (Riis 2016, 203). As will become clear in the following sections: after Karl Marx, machinic time (that is to say, clock-time) is inextricably linked to the creation of both the subject and the sonic fictions of capitalist time. In Riis's theoretical framework, if the machine—and not the human—writes the history of electronic music, then who decides what narratives we derive from the machine? These techno-sonic time mechanisms might originate in the machine, but the decoding of these operations is where the media archaeologist and historian impose their own epistemic hierarchy of what to center in their historical fictions. History, after Kant, is by definition structured by the human subject, and fallible exactly because it is created *within* time. If there is a history of and by machinic operations, it cannot be accessible to any human.

Riis writes that "[t]he proposed philosophical and theoretical framings arise from the actual technological objects themselves; thus theoretical issues are not read into the machine, but emerge from a close encounter with the physical machine" (Riis 2016, 204). Machines cannot be predetermined by their schematics or symbols, since that would be to forget their material makeup. For Riis, art has the ability to make machines into aesthetic expressions that bring us out of the deterministic language that views mechanical parts as symbols to fulfill a certain task.

However, if the theoretical frameworks arise from the machine itself, then they must undoubtedly also arise from the researcher that activates them. As Serres and Malaspina explain how all signals and perceptions are determined by informational and epistemological noise, so does the media archaeologist's philosophical, scholarly, and social background all determine the condition of thought—thus letting human chronology back into the writing of history. To center the machine as interpreter is also a centering of the media archaeologist as the interpreting link between machine and text. This brings us no further away from the striating forces of traditional humanist historiography. A history of machines is still a humanist history, unless it can undo time. To understand time beyond machinic movement and its connection to how artworks create sonic fictions, we have to go back . . .

Time, Briefly

Time has gone through many transformations since its beginning. Although the artworks discussed are largely contemporary, a brief history of time is necessary to understand the epistemological nature of time as a fundamental division between object and subject. Dependent on the mechanical regularity of their interconnected parts, machines inhabit a dual role as both keepers and producers of time, which has fundamental consequences for the fabrication of fiction. The following genealogy of time is essential to understand how the creation of sonic fiction in artworks is tightly woven into the concept of forgetting in the face of capital's construction of a continuous historical time.

In her Ph.D. dissertation, *Capitalism's Transcendental Time Machine*, philosopher Anna Greenspan proposes that the division between inside and outside is not a spatial distinction, but a temporal one. Through various accounts in the classical Western tradition, time was equated with astronomy and the cyclical changes of celestial movements (Greenspan 2000, 13). Time was thus intrinsically bound to physical movement, and an ongoing process of variation. In the classical concept of time, all existence was trapped in this constant process of becoming. Outside this trap was cyclical time's opposite; the concept of eternity. Offering a world beyond sensible appearances, eternity constituted a realm of stasis defined by unity and constancy rather than multiplicity and becoming. Where time was phenomenological, eternity was wholly inaccessible to humans. Plato thus defined time as the "movable image of eternity" (Greenspan 2000, 11), endowing cyclical time with interiority and placing eternity on the exterior.

Revolutions of Time

From the Platonic conception of time split into a priori eternity and a posteriori lived time, Greenspan traces two temporal revolutions that lead to the contemporary notion of time. The first was instigated by Immanuel Kant in the *Critique of Pure Reason*, and the second takes place alongside the dawn of capitalism, which connects to the invention—and subsequent innovations—of timekeeping systems based on the clock.

Greenspan suggests that, after Kant, "the division between inside and out is not a spatial determination but a temporal one" (Greenspan 2000, 2). By placing time as the a priori precondition of change, Kant locks us in time. Rather than experience and movement acting as the creator of time, Kant makes time the creator of all experience. Transposed onto the world of the sonic, it is therefore not sound that gives an artwork temporality, but temporality that makes it possible for an artwork to sound.

This is where time truly entangles itself with the world. Another way to explicate the intricacies of Kantian time is through the insistence that it is not "time itself which varies, but rather that variation inheres in that which exists in time" (Greenspan

2000, 7). There is thus an important division between time and that which is *in* time. Time is now split from the a posteriori experience of material cycles—that reconfigures time into an a priori abstract grid—which becomes a technological or cultural technique that structures philosophy and socioeconomics. The most tangible difference from Platonic time is that the stasis of eternity is now replaced by a constant fixture of structural time. This allows for a formal time that is not wholly split from material time, connecting transcendental time (a priori) to empirical time (a posteriori). As an experiential element of the world, we comprehend sound art *in* (empirical) time—or put differently, as a representation of time. After what Deleuze called the *first great Kantian reversal*, movement is no longer synonymous with time, but instead simply a *representation of* time (Deleuze 1984, vii).

Kant's schism between time and that which is *in* time mirrors itself in capitalism through the difference between clocks and calendars. Tying time to capitalism and the material preconditions of thought was the second revolution of time, as established by Marx. The mechanical clock was invented in the Late Middle Ages, and is one of the key inventions in shaping the modern subject. The invention of the mechanical clock gave rise to an abstract, secular, homogeneous, measurable, and autonomous conception of time, as distinct from the historical, astronomical, and qualitative time of the calendar. As with Kantian time, clock-time disregards the movements of the outside world. By implicating clock-time in the co-construction of capitalism, Marx too locks the (capitalist) subject in time.

Although both the calendar and the clock preexist capitalism, Greenspan makes the argument that it is only in capitalism that the two timekeeping devices become "an abstract distinction in the nature of time itself" (Greenspan 2000, 117). As also delineated by Morten Riis, the ever-increasing precision and ubiquity of the clock—innovations made possible by capitalist production—makes this abstract distinction apparent. The qualitative time of the calendar as it relates to seasonal, thermal, and atmospheric differences, is juxtaposed with the quantitative time of the clock and its homogeneous and standardized precision. In Marx's distinction, it is in the time of the calendar that variation takes place. Most notably, calendrical time is the measurement used in the creation of historical narratives. History, for Kant, is fallible precisely because it is created by humans within time. The concept of history breaks down in the confrontation with Kantian time, since history itself is dependent on the Platonic conception of a transcendental (objective) time beyond the subject.

Where Kant places the transcendental production of time in the subject's synthetic processes of reason—thus making it a question of epistemology—Marx places the production of formal time in the dialectical forces of history. For Marx, the a priori are not fixed, but shaped by a contingent historical formation (Greenspan 2000, 10). The historical materialism proposed by Marx corresponds with Kant's conception of time, but deviates with regard to what lies outside time as its primary force of production. What grounds time? Beyond capitalist time Marx maintains a form of variable time with a distinctive logic, which is what ultimately creates and defines capitalist time.

Chronos and Aeon

These two temporal revolutions—Kantian and Marxian—are both picked up by Deleuze and Guattari in *Capitalism and Schizophrenia* when they propose a reworking of Kant's transcendental philosophy, not based in idealist representation, but in an *immanent materialism* (Greenspan 2000, 12). Under the influence of a Spinozistic conception of the world existing on a single plane or substance, Deleuze and Guattari conceive of immanent circuits of production they call *machines*. Unlike the artworks discussed here, these machines are not technical apparatus, but instead diagrams for the intensive multiplicities that fashion and populate an exterior body—the *body without organs*. The Deleuzoguattarian revolution of time takes place in their redefinition of eternity by letting go of the opposition between the interiorized variable time of becoming, and the exterior unified transcendental time of eternity. Transcendental materialism replaces this opposition with the difference between two planes of composition that machinically create the distinction between extensive and intensive time, *Chronos* and *Aeon*, respectively. Chronos is associated with the plane of organization and development, whereas Aeon pertains to the immanent plane of consistency—a notion of eternity bound not to a "unity of a transcendent beyond," but a Spinozist "flat multiplicity of an immanent outside" (Greenspan 2000, 27). The key term to describe Deleuze and Guattari's philosophy is that of *immanence*, as opposed to *transcendence*.

In terms closer to the discussion of time in Kant and Marx, Deleuze describes Aeon as autonomous time, counter to Chronos as the empirical and historical structure of time. Aeon is the pure and empty form of time that acts as an ungrounded ground upon which Chronos emerges (Deleuze 1990, 165). Emptiness means that Aeon does not manifest itself in actual time—it is composed of events that in turn compose a virtual plane of intensity that haunts extensive time. These events are simultaneously wholly abstract and fully material, and most crucially "transfigure the boundaries between inside and out" (Greenspan 2000, 7). Abstract material events exist on an exterior plane beyond the interiority of time, yet they are decidedly non-eternal. This will become particularly relevant to the discussion of the multiple temporalities in the artwork of Robert Morris.

Another way to think of immanence is that—unlike transcendence—there is no outside to attain but instead a becoming that one makes oneself worthy of. As a materialist philosophy of process, the *plane of immanence* is fundamentally a materialist assertion that everything has a physical grounding. The plane of immanence is thus the condition of possibility for everything from Chronic time to aesthetic expressions. However, as with the distinction between figure and ground (signal and noise, actual and virtual) time and aesthetics is not a two-way street. The expression of Aeon in Chronos does not fully represent Aeon, just as aesthetic representations of time do not contain the complete nature of time. Claiming this would be to collapse the plane of immanence into an *onto-aesthetics* that diminishes both the multiplicity of expressions and the possibilities available to the virtual.

Professor of music Brian Kane outlines that the problem with *onto-aesthetics*—a term borrowed from philosopher Nelson Goodman—is that it relies on a category mistake all too prevalent in sound art and studies of sonic materialism. In his article "Sound Studies without Auditory Culture," Kane shows how theorists such as Christoph Cox have foregrounded sound art that aims at disclosing its ontological condition as key examples of sonic materialism, although Cox is by no means the only culprit of this fallacy, and sound studies is not its only arena. According to Kane, onto-aesthetics confuses "embodiment" with "exemplification" (Kane 2015, 12). In the former the artwork *embodies* a condition in which an object *is* of a certain kind, whereas in the latter the artwork *exemplifies* something and *is like* a certain property. Embodiment, like ontology, does not come in degrees—it is all or nothing. Ontology is not capable of being exemplified, but it can be represented. In *Immanence and Immersion*, Will Schrimshaw develops a concept of immanence unbound from the aesthetics of immersion. He explains that the problem of Cox's onto-aesthetics is that Cox binds the immanence of the creative sonic flux to the immersive aesthetics of artworks such as La Monte Young's *Dream House* (Schrimshaw 2017). In other words, it is only aspects of elements of ontology, ground, virtuality, and noise that can be represented in art—the fullness of their concepts cannot be contained.

As Deleuze and Guattari write in *What is Philosophy?*, there are planes of immanence distinct from *the* plane of immanence; "there are varied and distinct planes of immanence that, depending upon which infinite movements are retained and selected, succeed and contest each other in history" (Deleuze and Guattari 1994, 39). The various historical and aesthetic concepts of time laid out here all populate the plane of immanence, yet in their difference shows the variable-yet-indivisible nature of the plane of immanence as an *image of thought*.

At once singular and created by pure variation, "the plane of immanence is ceaselessly being woven" (Deleuze and Guattari 1994, 38). Where pure variation weaves the plane of immanence, so too is Aeonic time being weaved by the variations brought on by capitalism. As Greenspan notes, "in developing the technology of the clock, capitalism has discovered and unleashed something entirely new in the very nature of time" (Greenspan 2000, 79). Not only does capitalism have a creative hand in developing the concept time, it also ties transcendental time to material time as posited by Deleuze and Guattari. Yet although capitalism is what unleashes something new in the nature of time, it is out of the potentiality of Aeon that this novelty is created. Capitalism may well be the instigator, but creativity itself emerges from the interaction between clocks and temporality—machines and time.

Where the calendar records time, the clock is a machine for producing time. Clocks produce hours, minutes, seconds, and thereby implicate everything in their creation, as well as their own internal processes. In the words of Lewis Mumford, the clock "marks a perfection towards which other machines aspire" (Mumford 1934, 15). And precisely this desire for perfection drives even the imperfect machines in the sound art presented in this article. Even those marked by imperfection and fallibility do so with a very particular kind of failure in mind; be it of a mechanical, semiotic, or temporal nature. This is lucidly explained by composer and sonic theorist Eldritch Priest, "Failure is about

an engagement with the potential of potential rather than a satisfaction of a potential's ideal. Thus to fake failure is and is not to fail to fail, for failing to fail is a success of sorts whose accomplishment is itself a type of failure" (Priest 2013, 205). So, within the framework of failure-dependent art, it is worth remembering that failure is the purposeful fabrication of a successful fiction.

Chronic Capitalism

Capitalism needs Chronic time to construct its fictions of historical progress. Time is a necessary part in the machine of capitalism due to the future-oriented cogs in the wheels of investment, which is always on the lookout for future gains, credit, interest, and debt. All elements tied to an unknowable future presented as if history was a steady upward curve. The illusory power of this upward curve stems not merely from a metaphysical concept of capitalism, but from the faith in the veracity of so-called historical facts. Nietzsche writes that "world history is opinions about supposed actions and their supposed motives, which in turn give rise to further opinions and actions [...] a continual generation and pregnancy of phantoms over the impenetrable mist of unfathomable reality" (Nietzsche 1997, 156). The opinions of history that beget further opinions turns into a feedback loop of historical production, where the "facts" about the past become further occluded by phantoms that are at once receding into the rear view mirror of Chronos, and simultaneously reified by the ordering forces of capitalist time.

Yet history is not a smooth linear passage of time, but littered with speculative ruptures and limits that makes it thoroughly discontinuous. Capitalism needs creativity because it fundamentally needs to create a fiction of continuous history, whilst "feeding off unplanned, uncontrolled, unconscious mutations" (Greenspan 2000, 190). Creating fictions is a core necessity for capitalism to hide its breakdowns and failures in order to sustain its illusory sense of historical progress. Capitalism is, in this sense, a repair person tending to the errors in time and patching them with new fictions.

The fictions capitalism creates exist in Chronos as history, and the only way to escape capitalism is thus to escape history through an *absolute deterritorialization*. Deleuze and Guattari reconceive Nietzsche's *strong of the future*—the "revolutionary, popular, minority, mutant machine" (Deleuze and Guattari 2005, 422)—as the *people to come*. Tapping into the primary process of capital, the people to come denotes a movement that "uses global, integrated capitalism as the raw materials for new formations" (Berger 2018). While history aligns with capitalism and the state, then the minoritarians and nomads of people to come will be swept up in the *flux of becoming*, where they destabilize the perceived homeostasis of Chronic time through a creative instability affirmed by a Nietzschean anti-memory.

Nietzsche opposes history to the sub-historical or superhistorical *untimely*. In Deleuzean terminology, we can view Nietzsche's *untimely* as a *haecceity* or *becoming*—in other words, forgetting as opposed to memory, the map as opposed to the tracing. Outside

of history is where creativity may happen, since "creations are like mutant abstract lines" (Deleuze and Guattari 2005, 296) that are unburdened by the task of representing the world. These creations are not beholden to the fixity of history, rather, they are purposefully forgettable. Artworks are like this, especially in their processual creation, since they essentially assemble a new type of reality, that history can only reclaim later and through an inadequate punctual system (Deleuze and Guattari 2005, 296).

Forgetting in the face of historical time is a key mode of creating sonic fictions outside Chronic time. It is therefore that art has an unique role to play in forgetting. As Deleuze and Guattari write: "Memory plays a small part in art [. . .] It is not memory that is needed but a complex material that is not found in memory but in words and sounds: 'Memory, I hate you'" (Deleuze and Guattari 1994, 168). As Greenspan remarked, memory and historical time is created through organization of disparate blocks of broken time—what independent researcher Edmund Berger summarizes as "the cumulative order of the past laying claim to the present" (Berger 2018).

Art—particularly modern and contemporary art—does not organize Aeonic time, but works through disassembly and synthesis by cutting up and rearranging blocks of time into new composites and mutant forms. This condition shows that art does not concern itself with the impact of the past on the present, but with "prying open the present to the future in a way that profoundly transforms the present" (Berger 2018). This is more than the vague tautological claim that art is creative. Instead the *people to come* and the end of history touch on the fact that the creativity of art is inextricably tied to building time machines from the nuts and bolts of Aeonic time, so that these machines can create a future time for new (sonic) fictions.

Although the capitalist machine—precisely like the Deleuzoguattarian machine—is not a technical apparatus as such, the machinic processes Deleuze and Guattari utilize refer to social processes that are rooted in a cybernetic realm where machines learn and adapt through error. "Capitalism, an intelligent social machine, has learnt this rule" (Greenspan 2000, 191). In line with the central claim of Riis's *Steam Machine Music*, Deleuze and Guattari emphasize that machines work and write only by breaking down, so "it is in order to function that a social machine must not function well" (Deleuze and Guattari 2005, 151). This same logic is as true for capitalism as it is for art. *Steam Machine Music* "works"—it creates effective fictions—because it carries a constant potentiality for failure; the fictions of Anna Friz's *The Clandestine Adventures of Pirate Jenny* are a direct function of the misuse of home-built and corporate radio technology and a breakdown of the signal-noise distinction; and as will become clear further down, the ability to collapse process and object into Robert Morris's *Box with the Sound of Its Own Making* is only possible through the paradoxical representation of a breakdown in time. Ruptures, breakdowns, anxieties, and accidents are not threats to the system, but a necessary function of the machine. It is my claim that artworks—even those without material components (electric or otherwise)—function as machinic social processes. For an artwork to function, it must include a breakdown or rupture in the continuous process of historical time.

Process and Reality

From art's necessity of rupture and breakdown, the following demonstrates how a process itself can be a rupture in time. In the late 1950s, the search for non-retinal art led many conceptual artists to move toward "pure concept [and] language as its physical manifestation" (Cox 2014, 97). Yet Cox points to a number of conceptualists, such as Robert Barry, Christine Kozlov, Robert Morris, and Bruce Nauman, who took the leap toward sound as an "ephemeral material at once invisible and powerfully physical" (Cox 2014, 97) that offers an inherent critique of aesthetic reification. When art is no longer about the result, but the process, it is more adequately captured through the temporality of audio "than by the inert visual thing" (Cox 2014, 97).

The artist and composer Robert Morris was on the precipice of many art movements since the 1960s, from minimalism to performance art, and always with an interest in materiality, form, and labor. In 1961, Morris created *Box with the Sound of Its Own Making*—one of his first sculptural works after he abandoned painting. *Box with the Sound of Its Own Making* is a hollow 9.75 square inch walnut cube, crafted by Morris himself, containing a recording of this very process. The muffled sounds resonating from within the box includes the sawing, hammering, drilling, screwing, and sanding that went into the creation of the box. In its finished form, the walnut box is placed on a black plinth of the same length and width. Hidden inside the sculpture is the playback machinery, consisting of a small speaker within the box and a wire entering the supporting plinth or sometimes the back wall, in which a Wollensack quarter-inch reel-to-reel tape recorder was mounted, playing the three-and-a-half-hour recording of the box's construction.

Morris's own writings and comments on the piece have often focused on his interest in the split between the process of making an artwork and its resultant object. In *Box with the Sound of Its Own Making*, Morris not only thoroughly separated process and object, he also managed to bring them together again within the artwork—a conflict that he had never quite been able to grapple with in his painterly work (Morris 1968). With the introduction of sound into his practice, Morris was able to exhibit the very process of his artwork's making. Making process the very subject of the artwork, the box "resonates as a self-referential object" (LaBelle 2015, 81). In sound artist and theorist Brandon LaBelle's thorough history of sound art, he suggests that the process is split in two, between the process that is heard, and seeing the result of that process. With his interest in sound's material and relational interactions, LaBelle chooses to focus on Morris's investment in the space as an artistic medium. LaBelle defines Morris through the spatiality of sculpture and his intellectual and discursive use of sound (LaBelle 2015, 52), but does not parse out the complexities of the temporal paradoxes created through the collapse of the object and its labor. He connects Morris's investigations into the relationship between body and object—viewer and artwork—to the general popularity of Maurice Merleau-Ponty's phenomenology in the United States in the 1950s. Yet what makes the feedback loops of this process truly

unique is the fact that the sonic evidence of the process that makes the resultant object itself that object. This is the "intellectual riddle" that Morris stages. Is *Box with the Sound of Its Own Making* a static art object that refers to its own creation, or is it an impossible-yet-continuous *autopoietic* encounter?

The object collapses not only idea into the process, as LaBelle suggests, but it collapses time itself. The audience perceives not only the past process, but also the process-as-object, as it operates "on the virtual plane that haunts history, empirically realized as a future that acts on the present and a present that acts on the past" (Greenspan 2000, 194). The past becomes the present not through a mediated experience of the process, but through its expression as present. However, as Deleuze and Guattari demonstrated, there can be no present, only past and future events. What *Box with the Sound of Its Own Making* does is thus recursively collapse the past into its future. It is not a representation of Aeon, but a demonstration of its function. There is no a posteriori expression of Aeonic time, as that would lead to an onto-aesthetic conflation, but Morris's work *does* abide by an Aeonic logic, that represents an element of this virtual category of time.

Another consequence of using the medium of sound is the introduction of time. Defining the materiality of the object as a function of its sonic time, Morris leaves Platonic time of material movements behind and ties time to the production of being itself. The sound of Morris's sculptural process may be the sound of physical movements, but these movements are not what creates time in *Box with the Sound of Its Own Making*. Time is represented as the very precondition for our experience of the artwork. Without time, *Box with the Sound of Its Own Making*, would lose not only its experiential sonic potency, but also its conceptual meaning. Without time, *Box with the Sound of Its Own Making* would just be a box—or even nothing at all. Morris works within a Marxian time, freed from eternity yet shaped by the labor of his artistic process. Our sense of the walnut box changes through the sonic experience of the time it took to create it.

Time is further collapsed by the subsequent reinterpretations of Morris's artwork. Most recently, designer and artist Emma Rae Norton created *Website with the Sound of Its Own Making* (2018). This twenty-minute recording of Norton building a minimalist website loops endlessly on the very website that it documents the process of making. Referencing not only the same collapse of audible labor onto the finished object, http://websitewiththesoundofitsownmaking.net/, exemplifies a recent trend of brutalist websites that, in their ruggedness and lack of concern to look comfortable, are a reaction against the lightness and optimism of contemporary web design. Just as Friz reintroduced the tension between the disembodied and embodied space onto the radio waves, Norton wants to "reveal the underlying 'material' that is a part of all web pages" (Norton 2018). By bringing the often forgotten labor of website creation to the fore in an era otherwise defined by presets and automation, Norton shows the malleable and procedural creativity of a medium, that in spite of its perceived ephemerality is not far from Morris's robust box.

Between the walnut box, its supporting plinth, and the hidden tape recorder, *Box with the Sound of Its Own Making* is actually three discrete boxes (LaBelle 2015, 83). At the time of its creation, the sheer size of a reel-to-reel recorder would have made anyone curious about the source of the sound seemingly emanating from the small box. But what if the

goal is not to uncover a singular "real" and authentic box amongst the three? Morris's box might not be several boxes if we take his claim seriously that the work is fundamentally about uncovering the artistic process. If this is the case, then the box is not a finished "real" artwork but an ongoing procedural change. If we step out of time and listen to *Box with the Sound of Its Own Making* through *temporal* rather than *spatial* relations, we understand that it is the same box, whether we focus on its wooden materials, ideal form, the sound of its making, or the sound it's making. The box was always sounding, since the sound was always potentially present in his sound-*transceiving* creation, and in the experience of the sounds emanating from the hidden tape machine.

Sonic Fiction

The artworks discussed all address the physical as well as the metaphysical nature of sound while gesturing toward something beyond human comprehension. Unlike Christoph Cox's sonic materialism that attempts to find a place amongst the speculative materialists through an attention to ontology (Cox 2011, 2018), or sonic artist and theorist Salomé Voegelin's phenomenological and experiential paradigm (Voegelin 2013, 2014) that can only speak to (human) phenomena, artist and media theorist Eleni Ikoniadou proposes a third way for sound studies. In "A Sonic Theory Unsuitable for Human Consumption," Ikoniadou shows how sonic events also take place beyond the living and perceptible, and that which is known to the senses is only one possible subset of a "broader vibrational continuum" (Ikoniadou 2017, 252). Ikoniadou does not discard physical oscillations in favor of some fully imaginary sonics, but comes closer to a transcendental materialism, where materiality is taken as the ground upon which speculation can take place. Instead of thinking of the sonic as something aural, haptic, or otherwise perceptual as a result of some action or being, Ikoniadou wants to address the "'if space' inbetween, what we all agree to be the real [. . .] and certain more unreal dimensions" (Ikoniadou 2017, 252) by asking how we can account for sound's immanent relationship to the uncertain and unknowable. In Kantian terms, Ikoniadou asks how we can account for the harrowing abyss of the a priori—how can we come to know that which our reason is incapable of knowing? Her answer soon becomes; through the abolishment of reason itself.

For Ikoniadou, this uncertain dimension of sound has been explored most thoroughly through the practice of *sonic fiction*—a third dimension between theory and fiction that channels the alien, unknown, and (borrowing Steve Goodman's concept) *unsound* that lies beyond sensory and rational comprehension but nevertheless has something significant to say about "this world." Sonic events, therefore, go beyond the living and the perceptible, and exhibit a relationship to *counterfactual* and *counterfictional* thinking (due to their often paradoxical, nonsensical, or incomprehensible nature) through the "zones of transmission between life and death, to subaquatic, Cthulu-esque, non-human forms of life" (Ikoniadou 2017, 252). Machines only function because they break down, and because art deals in fictions these breakdowns "function in industrial capitalist cultures as a form of

nonsense" (Priest 2013, 197) that capitalism feeds on. Nonsense in this sense is an integral part of sense-making:

> Once the demon has been summoned, ensuring its reality is nothing more difficult than a matter of propagative efficiency. (Ireland 2017, 14)

Ikoniadou admits that sonic fiction is an unconventional research method that involves the creation of concepts, and new spaces of possibility "with an extreme indifference towards the human" (Eshun 1998, 5), as promoted by Eshun in his book *More Brilliant Than The Sun*. The artists and academics who employ sonic fiction use experimental tactics not just to reflect a sonic reality but to produce it. These methods become a form of disorientation integral to the study of the present and production of the future. Sonic fiction is a subset of the practice of hyperstition—a concept elaborated by CCRU[6] (pseudonymously known as the Cybernetic Cultures Research Unit) as "fictions that make themselves real" (CCRU 2017, 35). Hyperstitions are the already widespread fictions existing somewhere between "a universe, a religion, and a hoax" (CCRU 2017 [2001], 12). According to CCRU, there is little difference between the three, since all involve an engineering of manifestation, or "practical fiction, that is ultimately unworthy of belief" (CCRU 2017 [2001], 12). If we do as Morris's artwork compels us and step outside time to regard the full process of the object, then we will see that nothing as it appears to us is true, because everything is under production. In Deleuzean terms, "because the future is a fiction, it has more intense reality that either the present or the past" (CCRU 2017 [2001], 12). This intensity of the future is what sonic artists make use of in order to create fictions. Whether the artworks employ the practice of *hyperstition* depends of course on your definition of reality. Through their accidents, breakdowns, and nonsense, the artworks generate a "real without origin or reality: a *hyperreal*" (Baudrillard 1995, 1). If we accept Greenspan's reading of Kant as stating that reality is created through time, then the mere creation of alternative temporalities in the artworks discussed would count as fictional creations of reality.

The most immediate problem that these artists and researchers face, is the *deterritorialization* and subsequent *reterritorialization* of their work. The engagement with facelessness, pseudonymity, and schizophrenic auto-production is the almost inevitable attribution of real names and ownership to a given theory or artwork. For many practitioners of sonic fiction, in the "struggle to leave behind obscurity, [they seem] to have acquired too much fondness for the light" (Ikoniadou 2017, 259). *Absolute deterritorialization* is still beyond the horizon.

Referencing the still nascent field of sound studies, Ikoniadou warns against scientific positivism and falling into the same traps that most visual fields of knowledge are currently trying to undo. As she mentions, sonic fiction is a minor art/science/method best suited to a minority people, or a Nietzschean-Deleuzean *people to come*. Working against the anthropocentric and still largely male orientation of sound studies, Ikoniadou wants sonic fictional research to suggest that sound could be an entity within its own right. Furthering the move away from enlightenment, rationalism, and vision, the sonic could have its own logic, thoughts, and interventions aligned instead with fiction, nonsense and *absolute deterritorialization*.

This use of fiction should not be understood in opposition to what was formerly known as facts. Instead, fiction functions as a factual modulator that can rewire our epistemic position. Sonic fictions can teach us about the world through their counterfactual grounding in it. In the words of Eldritch Priest who writes about hyperstitions and music, the symbolic processes that allow us to "manipulate the material environment exhibit a certain independence from the material world while at the same time remaining indissolubly linked to material conditions" (Priest 2013, 196). Fictions do not arise from pure imagination. In order to be a/effective, they must be tied to a material truth, whether that is the process of sawing a box, a mechanical instrument, or the presence of radio static. The sonic events that Eldritch Priest calls *sorcery* (Priest 2013, 247), such as delusions, unexplained hums, failures, and mishearing a false sound, are not the opposite of facts. Instead these xenophonic occurrences confirm the notion that designating something as a historical fact is itself absurd (Ikoniadou 2017, 261). With the knowledge that facts are mere fictions by another name, artists can apply this to create their own *counterfictional* narratives. If, as Nietzsche suggests, "all historians speak of things which have never existed except in imagination" (Nietzsche 1997, 156), the implication must be that material existence is ripe for the rewriting according to our own imagination.

In considering machinic sound art as producers of sonic fictions, both noise and time present themselves as fundamental elements of any machinic or sonic process. Insofar as machines and sound both produce and are produced by noise and time, the production of sonic fiction is intrinsically tied to these material processes. Opening noise and time up to a consideration between signal/noise and Chronos/Aeon, sonic fiction is placed onto an immanent transcendence of creation, freed from narratives focusing exclusively on human creativity, technical schemas, or pure representation. Morten Riis's *Steam Machine Music* creates sonic fictions through its inherent potentiality for failure in the machine (as a timekeeping device); Anna Friz's *The Clandestine Adventures of Pirate Jenny* uses home-built and national radio technology to rupture the signal-noise distinction in a multiplication of temporalities; and in Robert Morris's *Box with the Sound of Its Own Making* process and object are collapsed through a paradoxical sonic fiction brought on by a breakdown in time. Each artwork produces a hyperstitional reality—and thus a time—through sonic fictions based on breakdowns, failure, nonsense, and paradoxes.

Part VI

Making Sound
Building Media Instruments as Sound Art

21

The Instrument as Theater

Instrumental Reworkings in Contemporary Sound Art

Sanne Krogh Groth and Ulrik Schmidt

Instruments have played a key role in the developments of sound art, from its early manifestations in the beginning of the twentieth century to the present. The use of scientific, nonmusical instruments such as the tuning fork, the metronome, the siren, and the revolver in musical composition and performative sound practice in the late nineteenth and early twentieth centuries forms one of the historical backgrounds for the development of postwar sound art and experimental music (Jackson 2012). Technical media such as radios, gramophones, and tape recorders along with various everyday objects (e.g. stones, household machines, barrels etc.) have also been integrated into the sound art vocabulary as instruments for performance, interaction, and installation.

In the 1950s John Cage famously integrated the radio as an instrument for producing and manipulating sound in his *Imaginary Landscape IV* (1951) and in the television performance *Water Walk* (1959), in which he explicitly claimed to play music. During the same period, French Henry Chopin performed *poésie sonore* live with basic tape recorders as manipulated tools for live sampling of his vocal performance. From the 1930s onward musical outcasts such as Harry Partch and Moondog built custom-made instruments (e.g. Moondog's Trimba and Oo). These forms of experimental practice with alternative or rebuilt instruments not only inspired later composers of experimental music, such as minimalist composers Steve Reich and Philip Glass. They also paved the way for a central form of practice in contemporary sound art characterized by the use of alternative—often distorted, disintegrated, and decontextualized—instruments as a means to contemplate aesthetically on the socio-material and political conditions for producing, manipulating, and listening to sound in the twenty-first century.

However, when considered within a contemporary art context, sound art is often understood in direct relation to performance art, installation art, and, to some extent, conceptual art (Licht 2007). Despite this, the use and reconfiguration of instruments,

musical and nonmusical, constitute a historical background for the development of sound art as a field, and they are still a vital factor in today's performative sound art practices. Such current instrumental practices, we argue, not only expose a "musical" layer of sound art that is still operational in large parts of the field. They also stress a latent political dimension of contemporary sound art that is often overlooked concerning what we call a sound-oriented *instrumental critique* as a form of sonic expression.

The performative use of instruments in contemporary sound art is complex and diverse and it is beyond the range of this study to investigate it in all its details and multiple manifestations. Instead, we will focus on a single, central aspect of the sound-oriented instrumental critique, namely the political negotiations and critical artistic manipulations of specifically *musical* instruments and practices in contemporary sound art. Hence, we consider three examples from three different contexts within the field of contemporary sound art to explore different aspects and manifestations of sound-oriented instrumental reworkings as a form of dramatized expression, often involving different forms of nonmusical or anti-musical instrumentalizations.

First, however, we will provide a contextual basis for our analysis by exploring the aesthetic, cultural, and political implications of sonic and musical instruments and the engagement with the instrumental production of sound and music by asking the basic questions: What is a sonic instrument? And how can we understand "sonic instrumentality" as a form of sound-oriented instrumental practice?

What Is a Sonic Instrument?

Technics and the technical use of objects as instruments for understanding and manipulating the surrounding environment were constitutive for the evolutionary process by which our species distanced itself from other humanoid species and made possible "the invention of the human" (Stiegler 1998). Similarly, instruments with the specific purpose of making sound have been key in the historical development and cultural understanding of sound and music. As technical instruments, they have formed the horizon of auditory cultures, from their early manifestations to the present post-digital globalization, and from the early instrumental use of voices, body parts, wood, and water to the industrial machineries, telephones, automobiles, and loudspeakers of the modern soundscape (Thompson 2004). Without instruments and the technical development and manipulation of them, there would be no sonic culture as we know it.

Musical instruments play a key role in this context. They not only make music and musical sounds possible. They contribute essentially to the material shaping and distribution of the sound of music in a particular culture and historical period. The instrumentality of music, in other words, is not simply a technological fact; it has deep and direct aesthetic implications (Patteson 2015). Alperson describes what he calls a "commonsense view" on musical instruments in which they are understood as "discrete, selfsubsisting material objects, intentionally crafted for the purpose of making music by

performing musicians" (Alperson 2008, 38). However, developments in technology, music practice, and sonic culture since the mid-twentieth century have severely challenged this commonsense understanding of instruments and their role in cultural practice. Today, all objects capable of producing sounds can be used as musical instruments, and throughout the twentieth century, the introduction of electronic instruments and computers radically expanded the notion of what a sonic instrument can be and what it can do.

Such technological developments have made it increasingly difficult to differentiate between instruments and media as the latter are commonly understood, on the one hand, as tools or machines for (artistic) sound production and, on the other, as a means of communication and representation. As Jonathan Sterne argues, "it is old news to say that the technologies of sound recording are musical instruments. This simple fact is a defining feature of much contemporary musical creation" (2007). For that reason alone, he concludes, it "is time to collapse 'instruments' and 'media' in our analytic schemes. In doing so, we can develop a more robust political and aesthetic account of music—and indeed all forms of communication" (2007). In other words, most technological instruments today can function as forms of media, and most media can be used as instruments.

The Instrument as Assemblage

The distinction between instruments and media, then, is not embedded in ontological differences in the objects themselves. Rather, as Patteson argues, the specific instrumental capacities of a given object or medium is something that emerges "from patterns of use. Technologies do not impose upon their players a uniform technique but rather, at most, inbuilt tendencies or inertial forces—attractors, so to speak, in the phase space of creative possibility" (Patteson 2015, 8). And, as Alperson argues, with specific regard to musical instruments,

> when thinking of the ontology of musical instruments, we need to keep in mind the continuity, often seamless continuity, between the physical instrument and the player's bodily connection with the instrument. Many musicians put the matter clearly when they speak of their instruments as extensions of their bodies. The truth is that it is difficult to say where the instrument ends and the rest of the body begins. In this sense, musical instruments are embodied entities. (Alperson 2008, 40)

The close relationship between instrument and body, together coordinating a specific set of potential instrumental practices, makes it difficult to view instruments simply and commonsensically as "discrete, selfsubsisting material objects," as we have seen Alperson describe them. The instrument is in essence a relational object, implying a potential performing body to engage with the specific creative possibilities it affords. Even in its most simple form and from the first moments of its creation, an instrument functions as an *assemblage* in the Deleuze-Guattarian sense of material couplings merging objects, bodies,

functions, and material capacities into a singular, yet multiple form (Deleuze and Guattari 1980). By such an assembling of different elements into a functioning whole, the instrument not only provides possibilities for making sound. It also implies a specific regulation of bodily practice similar to what Michel Foucault has called an "instrumental coding of the body" into "a body-weapon, body-tool, body-machine complex." This instrumental coding is twofold, says Foucault. "It consists of a breakdown of the total gesture into two parallel series: that of the parts of the body to be used [. . .] and that of the parts of the object manipulated" (Foucault 1995, 153).

Against this background we pursue a broad understanding of sonic instrumentality as a form of coded and regulated practice. It is a way of doing things by *adapting* to a set of material and sociocultural *preconditions* for exploring, producing, and organizing sound in performance. By using an instrument, one must, at least to some extent, adapt to it by *becoming instrumental*. In this way, the instrument becomes a platform in its own right for the critical exploration, creative production, and performative practice in sound.

Key Aspects of Instrumentality

It is this specific instrumental practice as a form of regulated engagement with the instrumental assemblage that is negotiated and criticized in much contemporary sound art. Before we will investigate this further in concrete examples, however, we need to explore the characteristics of instrumental practice a little further. To do so, we propose a few general characteristics of sonic instrumentality that are also key in understanding the critical negotiations of this in contemporary sound art: standardization, repetition, objectivity.

Standardization

As Myles W. Jackson has argued, *standardization* is one of the key aspects of sonic instrumental practice, both in the sense of an adaptation to standards and as standardization of practice (Jackson 2012). Jackson shows how early modern instruments in the nineteenth century such as the tuning fork, the siren, and the metronome were first invented to enable scientific studies of sound and to use controllable sound in physiological and psychological research by way of a standardized and measurable production. By way of standardization, the tuning fork, for instance, was "used to measure pitch precisely and describe the results of acoustic interference" (Jackson 2012, 204). Similarly, the siren aided in studying the repetitive periodicity of sonic vibration and the metronome in standardizing time and tempo (Jackson 2012, 206–7).

Furthermore, this instrumental standardization, we argue, works on two levels: It standardizes the sonic material and it standardizes the conditions for sonic practice. For this reason alone, standardization should not be restricted to scientific experiments with sound. On the contrary, it plays an essential role in sonic instrumentality on a general level. Instruments carry with them a set of standardized conventions for manipulating them that

one must know and learn before being able to properly use the instrument at all. You must learn to adapt to the instrumental coding provided by the instrumental assemblage. This learning practice is often perfected through years of repetitive disciplining of bodies directly adjusted and developed in accordance with the material attributes assembled in the specific instrument. Around this practice we typically find a diverse and highly developed set of institutions, which again contribute to the further development of cultural conventions for musical composition, for listening and expressing oneself, and for ritual and political gatherings. Therefore, in a broad cultural and historical perspective, the development of instruments and standardized instrumentality is closely related to the development of cultural institutions for teaching, performing, experiencing, and profiting from music as instrumental practice.

Furthermore, instruments are typically not unique, singular objects but objects that are built and produced according to a standard defined by the group of instruments to which the particular instrument belongs. Guitars, as an example, form a group of instruments with great variability among the different types, but the sound production and instrumental practice afforded by the guitar is still defined by a standard for how a guitar looks, what it sounds like, how it is played, its history, etc. The sound of a particular guitar is an expression of a "guitar standard" as an inherent form of specific instrumentality (Evans 2005, 37).

Likewise, the different notes on a piano are not simply isolated sonic incidents created by different mechanical sound sources (hammers on strings) and held together in an abstract diagram we call a piano. The sound sources and the mechanisms that produce them are immanently coordinated expressions of the piano's frequency range and timbre structure as an instrumental standard for sonic production. Thus, while a piano may sound different in the lower registers compared to the higher ones, we hear all sounds as coming from the piano as a single instrument fusing all sounds into a single material form shaped in and by the piano's instrumental resonance chamber. We hear the sound of a single piano because all individual sounds are materially adapted to the piano standard.

Repetition

In addition, standardization of the sonic material is essential to instrumental production on a more general level. By adapting to the overall timbral structure of the instrument standard, the particularity of each individual sound is leveled out in a more balanced scheme for sonic production. The guiding principle behind this form of instrumental standardization is *repetition*. All instruments are built on this same basic imperative: to repeat. The mechanism and procedure for producing each singular sound in the instrument is repeated in the next into a whole ensemble of local mechanisms mirroring each other. One key repeats another key on the keyboard, one act carried out by the instrument is repeated in the next. And the more technologically advanced the instrument is, the more precise the repetition. In modern mechanical and electronic instruments this principle of repetition is elevated to center stage by the introduction of standardized methods for reproduction, looping, sequencing and automation.

The principle of repetitiveness on the level of instrumental sound production again has a direct influence on how instruments are used, since the principle is continued on the aesthetic level of instrumental practice where it directly affords repetition not only of singular frequencies or tones, but of whole sonic structures and compositions. Indeed, this very principle of repetitiveness through instrumental standardization is in fact a key precondition for the development of an advanced musical culture. The standardization of instrumental sound production enables repetition, and repetition again enables the production of sonic difference as the form of *variation* we—commonsensically—call music.

Objectivity

Third, with instrumental standardization and repetition comes an objectification or de-subjectivation of the sonic material, which will be expressed to a greater or lesser degree in each individual instrument. Objectification is the process of reducing the particular and expressive individuality of a sonic event in favor of an overall, generic, and less individualized and subjective instrumental sound. While instrumental standardization affords repetition, it does so by neutralizing material differences among the individual sounds of the particular instrument in order to make them adapt to the overall standard. Objectification, on the other hand, is the reduction of the particular expressive qualities of each individual sonic event into a less expressive, less individualized, less subjective quality. Sonic objectivity can thus be seen as the reduction or lack of human expressivity in favor of the sonic material's immanent instrumental expressivity.

So, you can say that in the instrumental practice objectification is the process of directing the affective energies and semantic qualities of sounds from the performing individual as expressive subject and toward the material production of sound in the particular instrumental object. This distinction between subjective and objective sonic properties is not absolute but qualities that are expressed in a graduated field between the sonically more or less instrumental. The more instrumental a sound is—that is, the more it adapts and is shaped according to the conditions of the instrumental assemblage—the more objective it sounds.

Instrumental Critique in Contemporary Sound Art: Dramatization of Instrumental Practice

After this inquiry into the ontology of sonic instrumentality we can now direct our attention toward the role of instruments in contemporary sound art. Just as sound art in general challenges the ontology of music, so does it question the ontology of conventional musical instruments and practices. From an overall point of view, the use of instruments in sound

art can thus be summarized in the idea of a challenge of the understandings, materialities and practices guiding the conventional musical use of instruments. Hence, sound art instruments typically appear less distinct than the standard musical instrument and the conceptualization of sound art instruments are often in direct contrast or opposition to the appearance, practical affordances, and aesthetic expressions surrounding conventional musical instruments.

Where the musical instrument is characterized by being standardized, the sound art instrument is often destandardized into singular and particular objects and forms of expression. This reworking of conventional musical instrumentality is often aggressive and performatively excessive to the extent that it turns the reconfiguration of sonic instrumentality into a form of *dramatization*, an instrumental theater and a theater of instruments, of the practices they afford and the sounds they make.

For instance, de-standardization appears through deconstructive hacking practices of various well-known analogue and digital instruments; through DIY practices establishing a critical basis for innovative instrument-building; through sound installations that address the original shape, context, and function of a conventional musical instrument by critically exploring and transfiguring its functional, spatial, and auditory appearance; through instrumentally automated installations where the absence of the live musician in the instrumental assemblage becomes a statement and uncanny aesthetic effect in itself; or through deconstructions of the instruments' material affordances and the associated transformation of the bodily interaction in and with the instrumental assemblage as a defamiliarized and unconventional musicianship, often distorted on the wedge of absurdity.

Those diverse forms of de-standardization, de-figuration, decontextualization, and defamiliarization of musical instruments and instrumental practice are what we bring together in the notion of an *instrumental critique* in contemporary sound art. With the musical instrument as a backdrop for inspiration and conceptualization, sound art critically engages with a unique form of sonic instrumental practice somewhere in between contemporary art practice and musical conventions. Examples of sound artworks that find their basic driving force in such critical negations or reconfigurations of the musical instrument and musical instrumentality are countless. In the following we will focus on three examples highlighting different aspects of instrumental critique as a form of dramatization.

Our first example is the German artist Horst Rickels and his critical disintegration and decontextualization of one of the instrumental icons of Western sacred music, the pipe organ, into an objective, automated, and secularized environmental sound installation, distorting the idea of instrumentality as guided by human manipulation and control. Then we analyze a recent work by Danish artistic duo Vinyl-Terror & -Horror, *The Magic Of* (2018) to show how sculptural reworkings and distortions of conventional instrumental technologies for reproducing sound, such as turntables, create a synthetic mechanical theater of uncanny instrumental presence by displacing the instrumentalist by mechanical and audiovisual reproductions. Finally, we discuss the Indonesian experimental music duo Anggarayesta's use of the self-built "e-bab" to perform a subtle

instrumental critique of artistic and musical conventions in Indonesian and global performance culture by transforming a traditional instrument of national folklore into an electronic noise machine.

Deconstruction as Instrumental Liberation: Politicizing the Sacred

Many, especially older, attempts have critically commented upon bourgeois European culture by including reworkings of classical instruments in their work. Especially the piano seems to have been a favorite object for *destruction* (e.g. in George Maciunas's *Piano Piece #13* when hammering nails into the keyboard); *preparation* (in numerous pieces by John Cage) and *sculpturing* (e.g. in Paul Panhuysen's *Two Suspended Grand Pianos*). In such manifestations, implicit connotations of the piano such as *Bildung*, virtuosity, attunement, and romantic musicianship are negotiated and commented upon in a critical sense that deconstructs, but also expands the sound and function of the instrument.

Since the 1980s, Holland-based German composer, artist, and trained piano constructor, Horst Rickels (b. 1947), has been a central figure in a tradition of sound artists building their own instruments. Early in his career, he got in contact with the Dutch art group Het Apollohuis in Eindhoven, founded by Remki Scha (1945–2015) and Paul Panhuysen (1934–2015). Besides being an art historian with deep interests in music and transdisciplinary art, Panhuysen was also the founder of the Maciunas Ensemble in 1968.

Throughout Rickels' oeuvre we find an interest in the reworking of another iconic Western keyboard instrument, the church organ, typically splitting it apart and stripping it bare of everything but its essentials, in order to rebuild it into a new instrument or sound installation with only the pipes of the large instrument left. As Rickels explains, the "organ keys have been removed so the focus is on the pure and continuous sound produced by the pipes. I am not at all interested in the classical virtuosity that is associated with organ playing" (Rickels, quoted in Voort 2012, 6).

In a 2012 work, exhibited during the November Music festival in Den Bosch, Holland, metal pipes in various sizes were installed and distributed individually at approximately one meter intervals around a space in an old powder house. A network of tubes led air to each pipe to make it sound while simultaneously connecting all pipes visually into an omnipresent organism between the living and the machinic, between lung and infrastructure. The auditory product of this lung-network was a complex noisy soundscape of sustained drones ranging the whole spectrum from very high frequencies to very low. The individual pipes were not tuned to a specific tonal system or harmonic chord, but sounded rough and uncoordinated, blending with the omnipresent sounds of the blowing machinery. Hence, the pipe organ was reworked into an organism of individual and independent components that challenged its overall collectivity and

joint tuning. The organ was no longer a single instrumental whole connecting different voices in accordance with a standardized, coordinated structure for pitch, timbre, and volume, but a spatial collection of individual automated noise makers, stripped bare of their instrumental capacities to adapt and relate: from the sacred instrumental omnipresence of ecclesiastical rituals to an automated industrial ecology of post-human, post-religious expression.

In another project, a joint collaboration with Ernst Dullemond (November Music 2016), Rickels rebuilds the pipe instrument into a set of individual instrumental objects to be played in live performance. Wooden pipes are reworked into large recorders played by the recorder quintet Seldom Sene, accompanied by an additional set of hydraulically activated wooden pipes. Together, the (played and automated) pipes performed a score by Aspasia Nasopoulous. Compared to a conventional musical performance, the scored work was constantly met with a sort of "material resistance" from the performing instruments: partly because of the large sizes of the pipe-recorders, and partly because of the imprecise timing of the hydraulic pipes. The lack of instrumental precision and control became a key performative effect in its own right by way of which the performance exposes the latent conventions of instrumental adaptation and standardization characteristic of musical performance. It was as if the instruments could not—or did not want to—be controlled by the performers or subordinate themselves to the abstract regulatory conditions of the score. In that context, they appeared with a dramatic resisting voice and agency of their own, a critique of their ability to adapt to the instrumental assemblage.

Rickels' background in 1960s socialist art movements is thus noticeable in his different stagings and reworkings of the instruments. In his own words, he wants to detach the organ from "the church and from the system, an organ consists of. Politically, to me it is a concern of setting the organ pipes free—because they are . . . like the factory workers!" (Rickels in Anderberg 2018). He is not only concerned with the agency of the detached, decontextualized, and "liberated" instruments, but also with their potential for a sonic reconfiguration of space and with the contextual layers that a given site can add to the installation. The space he chooses for installing his instruments are therefore preferably spaces in which life, art, and music co-exist: "It should be normal for art to permeate our lives. Spaces have their own 'historic baggage'—they are alive" (Voort 2012, 9).

Hence, Rickels' work is more than reconstructing an instrument for the sake of changing its function and sound. He deconstructs the role of the musical instrument as a symbol of conventional, religious, and spiritual rituals by "setting it free"—not only from its original instrumental function, but also from concert halls, Protestantism, and sacred spaces as such. Through this decontextualization, his work becomes a critical comment and performative reflection upon instrumentality itself: upon the role of the virtuous musician in music and the sonic arts, of music as an absolute and autonomous art form, and of instrumental practice in general as formed by material standards, societal norms, and cultural conventions.

A Theater of Uncanny Instrumentality

For more than fifteen years Berlin-based Danish artist duo Vinyl-Terror & -Horror (Greta Christensen and Camilla Sørensen) have continuously made use of vinyl records, turntables, and loudspeakers as core elements in their artworks. Graduating from the Royal Danish Academy of Fine Arts their point of departure originates from visual and sculptural practices. Despite this, they have continuously worked within the sound art domain with both mechanical installations and live performances. Their works stress aspects of time, sound, space, and various representations of music. And, with countless references to horror movies, cinematic special effects, and Foley conventions, they also have a strong sense for drama and dramatic timing, adding mystery, uncanniness, and humorous details to their work. Vinyl-Terror & -Horror is terror and horror synchronized with Rube Goldberg-style slapstick mechanics into a synthetic theater/archive of our audiovisual culture, past and present.

A strong signature to be traced throughout their oeuvre—a signature they share with the cinematic sound design from which they take their inspiration—is the precise focus on and accumulation of audiovisual details. Carefully selected vintage vinyl records are cut up and glued with other records to (per)form new synthetic bits from the forgotten depths of our sonic culture. Records are fastidiously scratched to repeat specific sequences or dramatically smashed to create noise. Record covers are cut up and sometimes combined with other covers into surreal collages to be exhibited on gallery walls. The hacked and self-designed turntable sculpture-machines are both used in large-scale kinetic installations and in live performances. In the installations they are carefully customized to serve a specific visual or auditory expression; in performance, as Christensen and Sørensen express it, "there's just stacks of modified or broken vinyl, various record players, and us" (Harris 2017).

The duo's recent work, *The Magic Of*—a large-scale installation presented as part of the solo exhibition *The Magic of Vinyl, Terror and Horror* at Den Frie Udstillingsbygning (Copenhagen 2018)—carries characteristics that are well known from other parts of their oeuvre, but it also introduces new aspects. Entering the room we experience a three-part installation: on the left there is a 30-cm vertical slice of an upright piano. The sides are open, so that we can see the mechanics inside, while the top and bottom are still complete. On the short keyboard, a hand is occasionally projected playing the same little piano phrase over and over again. The sound relates to a nearby running turntable with a prepared vinyl record on it, and to a light rosy record cover with the title *Chopin Klavierabend* on the floor leaning toward the piano.

In the middle of the room, a larger installation isle with six loud speakers is placed. Two of the speakers are attached to a metal frame on which one of them can run back and forth on a two-meter trail as if it was the curtain, opening and closing a show. In this part we also find a speaker occasionally emitting short bursts of theatrical smoke from somewhere inside, and a turntable on the floor with video projections of turning vinyl records.

The third part of the installation is a panel of videos projected on the end wall showing seven musicians performing a transcription (made by violinist and composer George Kentros) of the very sounds we hear in the installation's chaotic yet meticulously synchronized audiovisual drama. The screen is divided into seven parts, isolating each performer in a separate space within the same image. The musicians are only present on screen when they play and leave the image whenever their instrumental part is silent. A speaker placed in the main installation, lit by a spotlight, plays an LP with the mezzo-soprano and tenor part. The speaker next to this (the one that moves) doubles this sound while it also adds recordings of noises from mechanisms such as turntables and electronic wire connections. The music itself makes a bizarre one-off composition of repeating patterns accumulated from scratched records of old, forgotten soundtracks, copied on the various musical instruments, and doubled in what seems to be the "original recording" of the mechanical slapstick drama.

The artifacts all refer to well-known technologies, instruments, and repertoires within the Western music tradition. Like robots they appear as highly advanced and intelligent with their joint choreography, meanwhile they also carry strong references to a past long gone. All performing entities—musicians and machines alike—become cyber-musicians performing a nostalgic post-human universe of wasted technology. Hacked, chopped up, and deconstructed technologies merge with regulated and strangely constrained mediatized musicianship into an uncanny utopian-dystopian double scenario of the commonsensically familiar and the strangely unknown.

Figure 21.1 *The Magic of Vinyl, Terror and Horror*, Den Frie Udstillingsbygning (Copenhagen, 2018). Photo: David Stjernholm.

The different machines in the physical space and the different videotaped musicians on screen perform both as isolated soloists and together as an ensemble. In this way, the installation, on the one hand, appears as a straightforward and conventionally designed musical performance. On the other hand, it also represents a universe that does not appear fully explainable to us—there *is* magic in the present, as the title suggests. But it is a magic that, by repeating itself in the loop, reveals itself and becomes a reflection of "magic"— together with reflections of concepts such as "theater," "turntables," and "piano." When studying the loop, we start predicting the instruments' repeatable function, behavior, choreography, etc. The instruments' apparent agency starts to fade and their capacities as graspable, standardized, and instrumental objects become more and more clear to us. What at first glance appears to be a dystopian scenery of broken and long-gone technologies living a life of their own, also contains a potential utopian idea: that human beings still control, create, and design their technological means and instruments—or at least the technologies and instruments that once were.

The instrumental theater staged by Vinyl-Terror & -Horror not only presents a double scenario of utopia, dystopia, and uncanny instrumentality. In all the special effects, theatrical smoke, and nostalgic make-believe it also performs a subtle critique of how we use and are used by the instruments and technologies by which our sonic culture, past and present, is (per)formed. Through theatrical deconstruction of instrumental standards and an excessive, mechanically objectifying, repetitiveness they show the traces of future instrumental practice beyond the human scale: instrumental practice as machine-oriented ecological assemblage.

Instrumental Negotiations of Culture

The musical instrument is a central contributor in the rise of musical cultures, where it appears as a site-specific artifact affording certain sociocultural behaviors. Whether an instrument is developed within a folkloristic tradition of local craftsmanship, in a system of professional expertise, in a commercial design context or as a result of experimental attitudes, the standardizing and objectifying elements associated with each instrument bring along a set of conventions and expectations that further establish a specific pattern of possible practice. The embedded purposes and cultural connotations of the instrument offer a potential in terms of constructing and deconstructing, building and rebuilding, new expressions bringing in a high degree of complexity to the instrumental practice and musicianship. What might express national connotations and cultural traditions in one context can, with even a small adjustment and modification, appear as a form of critique in another.

During the annual 2018 noise festival, *Jogja Noise Bombing*, in central Java, the experimental music duo Anggarayesta from Bandung in East Java performed a set of ten minutes. The basic sound of the performance was electronic, mixing rhythmic patterns with layers of noise. The sounds were digitally generated by a computer and by a small
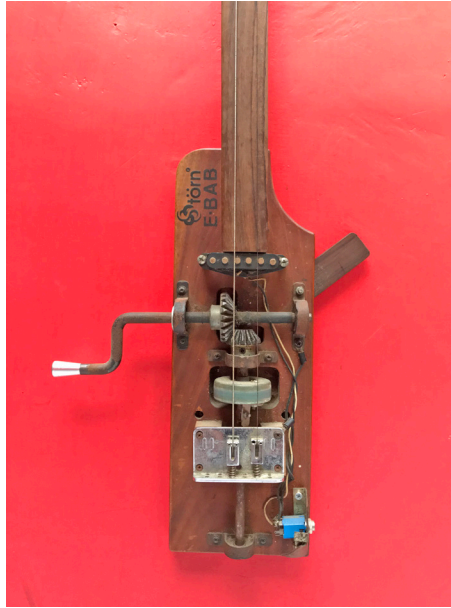
Figure 21.2 The "e-bab" by Evans Storn. Photo: Evans Storn.

synthesizer in a wooden box with the text "Keep the internet free from government control." After a while, the digital soundscape was joined by melodic phrases played on a so-called "e-bab." The e-bab added a significant analogue and meditative sound to the diffuse digital background. The computer present on stage could probably have produced the sound of the e-bab, but it would not have been the same, since the physical presence of and interaction with the instrument added a site-specific and historical context to the performance.

The e-bab is an upright semi-acoustic string instrument, designed, built and performed by the duo member Evans Storn. It is a combination of a traditional Sundanese rebab and a hurdy-gurdy with the addition of a regular guitar neck. A rebab is a two-stringed upright acoustic bow instrument, a spike fiddle, with the body built of wood (or out of a coconut shell) and covered with fine skin. It is used in traditional Sundanese gamelan music, where it has the function as a melodic leader of the gamelan ensemble (Sumarsam 1995, 248). The rebab can be traced back to the Middle East in the eighth century, from where it was later brought to Southeast Asia with Islamic trading. The hurdy-gurdy is also a string instrument, but instead of a regular violin bow the sound is produced by a hand crank-turned, rosined wheel rubbing against the strings. This instrument can be traced back to eleventh-century Europe and it has never been part of traditional Indonesian music ensembles.

Storn's e-bab has the shape of a rebab, but the sound is produced using a hand crank-turned wheel, like the one on a hurdy-gurdy, and the strings are pitched on a regular guitar neck. Also, it is electrified (hence the name e-bab for electronic rebab), making the sound directly controllable and modulable in and by a digital audio system.

According to the artist, the inspiration came from his love of listening to the traditional instruments. Especially the sound of a rebab with a Kendan (drum) had a hypnotizing

effect on him. But, as Storn wrote in an e-mail interview: "I am too lazy to learn to play the instrument properly. [. . .] Every week or at wedding parties here at West Java/Sundanese cultures, I always meet and hear the same pattern/loop of traditional music. It made me bored. :) And I don't want to be a traditional musician either" (e-mail interview with Storn by authors, August 14, 2018). Therefore, he built it in a different shape that would both challenge the sounding and the context of playing it. The instrument, built in 2008, once went viral on the Internet when posted on Instagram. So, even though younger people in Indonesia, according to Storn, have little interest in traditional Indonesian music, the e-bab did gain attention: "If we want to introduce something to [the] young generations [. . .] I think it should be done in a 'unique' way. Indirectly, with my viral video, they will know at least the name of 'Rebab.'" Despite this, Storn also stresses that the intention for the e-bab is not to educate, nor to provoke, even though it can be perceived as such:

> It happened with my friend's work. He is a traditional musician and always does some rituals based on the culture. He graduated from music school. Later, he got bored of doing the same pattern of music [. . .] and now have a group playing experimental music. But, he is still also doing traditional music for living with his mentor/seniors/gurus. Once, he used an effect for guitar for processing his instrument (a "Tarawangsa" instrument with one string). He said, that he got protest from his Senior. The senior said: "You should treat the traditional instrument as it is and you should do some ritual first, not put some effects etc." My friend is a good person, he won't break the rules. (e-mail interview with Storn by authors, August 14, 2018)

It was this incident that challenged Storn to build an instrument that went against the traditional rules. But, since he is not active in a traditional music community, he has not experienced similar protests against his instrument. It was, after all, designed for an experimental music context.

The design and use of the instrument is interesting on several levels. The combination of the two distant folklore traditions gives the instrument a global perspective in which historical traces of tradition and culture are combined with no hesitation. Bringing the e-bab to an Indonesian noise festival further adds another level to the complexity of the instrument. Introducing the e-bab in this context not only challenged the standardization of Sundanese traditions, but also the standards of the majority of the other instruments within the context of noise: electronic instruments representing Western modernity. Even though the e-bab appears as modernized (electrified and hacked), it stood out and did bring a lot of attention from both the live and virtual social media audiences. Its unique sound was not the only reason for this. It also brought in associations of over a thousand years of instrument building that was both acknowledged, but also transformed, rephrased, and decontextualized.

No rituals were performed before playing the instrument, as is customary in traditional instrumental practice, merging and adapting the instrumental performance to the conventions associated with Western concert institutions and the sonic material of the traditional instrument with the noisy electronics of a global post-digital culture. However, Evans Storn's manual performance on the instrument did, after all, also bring in a resistance

to this merging, pointing toward an analogue and manual appearance of sound and of traditional musicianship and craftsmanship. This he did by making the instrument's material manifestation appear on stage and by making the very physicality and bodily interaction of the instrumental assemblage a central part of the performance. In one historical and cultural context (medieval European folk music), the hand crank-turned wheel was a component in the instrumental mechanization of sound production into a machine-like automation. In another context (a globalized Indonesian noise festival), it performs a subtle, yet evidently audible and visible critique of the generic forms of production and standardized instrumental practices associated with a globalized and digitized field of live electronic sound art performance. In the highly modernistic noise context this homemade instrument became a representative of the analogue musical instrument as such in a way that was not explicitly critical toward modernity, nor to folklore traditions. Yet, it exposed the potentials and possibilities that are present in the global cultures of past and present. It was globalizing the local and localizing the global.

Discussion and Concluding Remarks

Through readings of three different examples of instrumental reworkings in contemporary sound art we have analyzed the potentials of instruments as a framework for political, historical, and institutional commentary and critique. Despite their differences, the three examples indicate some general aspects associated with the practice of instrumental reworkings in contemporary sound art.

First, they expose the importance of the specific cultural-historical background associated with an individual instrumental practice, pointing as they do toward three great narratives: European, sacral institutions; technological history of modernity; and global understandings and identifications of folk culture and subcultures. In the examples, these narratives are addressed more or less directly and performatively turned upside down in order to bring out a more or less explicit critique of the values, patterns of behavior, and aesthetic conventions they provide and support.

Second, in different ways all three examples engage in a direct disturbance or artistic reconfiguration of the patterns of standardization associated with particular instruments and instrumental practices. Meanwhile, however, they also, all three, stayed in close contact with it, using the very instrumental standards of particular instruments, such as the organ pipe, the turntable or the hurdy-gurdy, to build a new composite platform for instrumental practice or to create new, uncanny, and displaced effects. Precisely by using well-known, well-established instruments in their reworkings, they re-enable the possibilities for an objective repetition. This is not done in order to consolidate the instruments. Instead they appear fragmented, mysterious, estranged, and dramatized.

Following this, the practices of instrumental reworkings analyzed here might appear somewhat double-sided or perhaps even contradictory: on the one hand, they obviously criticize the conventions associated with the specific instruments, instrumental practices,

and their contexts through playful, idiosyncratic reworkings. But, on the other hand, the artistic reworkings never leave the basic conception and effects associated with instrumentality behind. In fact, we argue, by exposing the material and cultural conventions of particular instruments, the reworkings in fact also help to stage and intensify the very instrumentality of sonic performance: that performance itself is a form of instrumental practice when it critiques and reworks the very conventions and conditions by which it is made possible. To perform is—also—to repeat in accordance with a set of presupposed standards of behavior, expression, and bodily action. Every critique, however radical and anti-instrumental it may be, has its performative standards and instrumental conventions.

This apparent paradox, of course, is not a problem for artistic production, whether in the specific projects analyzed here or in general. It is the very condition for a critical art practice that it, as art, must relate and partly adapt to the assembled conditions—material, institutional, historical, cultural—by which it is made possible and meaningful, both as art and as sociocultural practice. In other words, instrumental critique as a form of artistic practice is not and cannot be an elimination of the instrumental per se, but an exploration and exposure by artistic means of that very instrumentality with all its associated conventions of standardization, repetition, and objectification. Instrumental critique, in other words, is itself a particular form of instrumentality.

From Turntable to Neural Net

Sound Art, Technoscience, Craft, and the Instrument

Chris Salter and Alexandre Saunier

In 1939 at the Cornish College of the Arts in Seattle, Washington, a then-unknown composer named John Cage premiered *Imaginary Landscape #1*, the first in a series of similarly titled compositions. Noted by composer Michael Nyman as "in effect, the very first live electronic piece" (1999, 45), the six-minute work was scored for an unusual mix of sound-making devices: muted piano, cymbals, gongs, and, most radically, two variable-speed turntables playing recordings of electronically generated test frequencies.

Cage was not the only composer to use the turntable as a new instrument for sound making. He was preceded by Paul Hindemith's *Trickaufnahmen* (1930) and Edgard Varèse's experiments with variable-speed turntables shortly thereafter. Of course, Cage's transformation of the turntable had its limits. He was far from the dexterous skills of later virtuosos like Frankie Knuckles or Derrick May—not only due to his basic physical manipulation of the instrument (it only had two speeds) but also in the choice of the sonic content itself—electronic test tones. In fact, Cage chose an instrument that was already associated with stable playback in order to explore the possibility of variation and expression that such a device might offer. But the turntable itself was neither a musical instrument nor a scientific one, so Cage had to both appropriate it and decontextualize its initial purpose within a musical work in order to "free" the device from its expected use.

Across the twentieth century Cage would continually transform existing objects, sounding things, and technologies into new instruments: radios, tape recorders, mixers, microphones, prepared pianos, household appliances, electric buzzers, amplified wires, and the like. In reconfiguring these objects, Cage also purposely transformed the instrument into something that the composer/musician/performer individually as well as collectively could shape. These moves seeded what today, in the currency of circuit-bending, live coding, and other collective sound and music-making subcultures, is seen as DIY (do-it-yourself), DIWO (do-it-with-others), and DIT (do-it-together) aesthetics.

Cage also introduced new concepts and practices in the production, creation, and manipulation of the (sound-producing) instrument. In other words, through these novel, electronically conditioned experiments, a new era of scientific-technological-aesthetic hybridity began to emerge. But Cage's compositions also demonstrate the contingent boundaries between object, performer, and listener. Instruments became increasingly open to indeterminate and noisy flows that surrounded them, captured by sensors (*Variations V*), changing information from the city at large (*Variations VII*), or the indeterminacy of social situations (*4'33"*, *Imaginary Landscape #3*). Indeed, as Cage and inventors of new instruments such as Cowell, Partch, Nancarrow, Xenakis, Waisvisz, Sonami, and others have made manifest, the very notion of the instrument was transformed across a wide range of spaces, concepts, techniques, and practices through the twentieth and twenty-first centuries. Instruments increasingly became diaphanous to the world beyond the human performer, incorporating feedback and processes of adaptation. But the process of designing and building instruments also morphed, moving from the expert into the hands of the artist/performer/inventor herself. By the end of the twentieth century, the boundaries between object and artist, instrument and environment, social and technical, the micro-scale of the device and the macro-scale of the sounding world had been forever reimagined.

This chapter examines the reinvention of the instrument across the twentieth and twenty-first centuries, not least due to technoscientific advances in electronics, computation, and fabrication. At the same time, given that the "social world is inscribed into technology in the processes of its making and use (Bijker, Hughes, and Pinch 1987; Latour 1986; MacKenzie and Wajcman 1999), including their design" (Salter, Burri, and Dumit 2016, 139), we also examine how these varying social-technical-aesthetic-cultural processes operate at different scales: from the individual sound artist who circuit-bends in their bedroom to larger institutional apparatuses where future music production is partially shaped by scientific research agendas.

We have structured the chapter around four categories. *Appropriation* focuses on how artists have historically appropriated instruments designed to test scientific principles for musical and artistic purposes. *Instructions and processes* examines how the advent of digital computation reimagined the instrument as a numerical representation. *Bending and tinkering* explores current practices in which the artistic result becomes the making process itself and in which maker and performer become one. Finally, *Learning* focuses on how techniques like machine learning enable artists to create new instruments that learn and adapt their behaviors and thus generate questions about the nature of musical craft and creativity in the ever-encroaching face of artificial intelligence.

Simultaneously, as the chapter examines the crossover between artistic and scientific concepts and practices, we intertwine three specific theoretical contexts: (1) Science Technology and Society's (or Science and Technology Studies) (STS's) exploration of how scientific instruments create knowledge and the difference between instruments used to measure versus instruments that produce phenomena for aesthetic effect; (2) work in the philosophy of technology on "general organology" (Stiegler), "concretization" and the "technical object" (Simondon), and socio-technical networks (Latour, Callon, etc.); and (3)

the sociology of craftsmanship and practice (C. Wright Mills, Sennett, Sudnow), particularly in regard to making cultures, DIY, and new modes of fabrication and invention.

Finally, each of the four themes includes discussions and interviews with living artists in the United States, Europe, Canada, and Indonesia, such as Nicolas Bernier, Laetitia Sonami, Irene "Ira" Agrivina, and Marije Baalman. The interviews tease out the aesthetic motivation and goals of a new generation of sound artists/instrument-builders/musicians, to understand the specific communities of practice they operate within and how technologies and practices jointly shape and co-evolve with each other. The real-life experiences of these practitioners thus serve as litmus tests to complement, extend, and even contradict the theoretical frameworks and historical work.

Figuring Out Hybrid Frameworks

Before discussing the four categories of this chapter—*Appropriation*, *Instructions and processes*, *Bending and tinkering*, and *Learning*—we need to theoretically frame the hybrid background of contemporary sound art practices by drawing from the philosophy of technology, STS, and the sociology of craftsmanship. The new instruments that became commonplace in the musical world after World War II do not descend from the long tradition of classical instrumentation and instrument making. Instead, they are hybrids that partially emerge from the realms of postwar technoscience; scientific practices in which technology is both the medium (milieu) and a driving force in their development (Hottois 1984). Some are machines taken out of scientific laboratories, introduced on concert stages, and later refined into fully expressive musical instruments. Others are consumer electronic devices appropriated by artists, sometimes with extensive modifications to their inner workings, sometimes with little to no modification at all. At the same time, the sonic possibilities that such instruments enable emerge through new socio-technical forms of craft, making, and performing. Their hybridity breaks down the traditional thinking and classification of musical instruments and calls for new theoretical frameworks that take into account the multidirectional connections between social groups, musical practices, and material arrangements.

Traditional organology, "the science of classifying musical instruments" (Bijsterveld and Peters 2010), consists in a systematic classification of instruments inspired by the rigor of scientific thinking. Developed at the beginning of the twentieth century, Curt Sachs and Erich Moritz Von Hornbostel's distinction between idiophones, membranophones, chordophones, and aerophones (Randel 2003) is still the main classification system used nowadays. Nevertheless, organology's focus on categorization and classification lacks the tools to address the hybridity of contemporary sound instruments and their embeddedness in a wider socio-technical milieu.

Recently, philosopher Bernard Stiegler, former director of the French computer music research center IRCAM, developed the concept of "general organology" to address the complex assemblage formed by the relations and co-evolutions that tie together three sets

of "organs": organic, technical, and social (2017). Like the French philosopher of technology Gilbert Simondon's description of the seamless flow among technical-psycho-biological-social beings (2016), general organology conceptualizes the links between the human (both psychic and somatic elements), the technical (technical artifacts or objects), and the social (constituted by and constituting organizations and institutions).

A core concept in general organology is that change and evolution originate out of the introduction of new technologies that destabilize the milieu in which they appear and bring the necessity to produce new understandings and meanings. The introduction of new technological instruments in sound-making practices is therefore not a neutral act. On the contrary, it reconfigures the whole mesh of technological-individual-social relations and leads to the development of new aesthetic and artistic practices.

Preferring a sociological approach to a philosophical one, the field of STS examines how sciences and technologies are embedded in social practices (Latour 1986; Bijker, Hughes and Pinch 1987). While much of its early work focused on human-centered issues of scientific knowledge production, STS later turned to the consideration of the role of nonhuman agencies (Callon 1986; Pickering 1995) and material knowledge, particularly in relation to scientific instruments (Baird 2004; Boon 2004). In recent years, STS scholars have ventured into the study of sound making and musical instruments (Pinch and Trocco 2002; Bijsterveld and Peters 2010; Pinch 2016). In particular, Pinch and Bijsterveld suggest that STS can contribute with "a focus on the materiality of sound, its embeddedness not only in history, society, and culture, but also in science and technology and its machines and ways of knowing and interacting" (2004, 636).

Instruments of science can be defined as "experimental apparatuses" or "machines of physics" that generate different forms of representations, images, or diagrams, and participate in the production of knowledge (Galison 1997). This understanding of instruments as "inscription devices" (Latour and Woolgar 1986) illustrates the "visual paradigm" that runs through most of STS (Pinch and Bijstervald 2004). In contrast, Baird (2004) argues for a form of material knowledge that escapes written formalization and proposes to distinguish between models that generate representations, instruments that produce phenomena, and measuring instruments that hybridize the two. The association Baird makes between the instrument and the production of a phenomenon is reminiscent of Andrew Pickering's performative model of science that he dubs "mangle" or "dance of agency," that is to say "a dialectic of resistance and accommodation" between the human experimenter and the material world (1995, 24).

With its recent interest in material forms of agency, STS provides an angle to discuss how the notion of performance is a problematic that runs in both scientific and artistic practices through the use of instruments. As noted by Galison (1997), instruments observe a relative independence from practices and theories that allows them to be transported from one domain to another. In this sense, they are "boundary objects" (Star and Griesemer 1989) that inhabit multiple worlds and are inherently heterogeneous and collaborative. Instruments therefore provide a ground for interdisciplinary collaborations and transfers such as those that led to the introduction of sirens in concert halls or the presence of composers at Bell Labs in the 1960s.

The third framework articulating this chapter is the sociological studies of craft that explores how material practices organize the social (Mills 1963; Becker 1978; Sennett 2008) as much as they participate in the definition of individual identities (Gelber 1997; Waksman 2004; Flood 2016). The notion of craft refers to a set of skills and techniques required to carry out a particular activity. It is "the skills of making things well" (Sennett 2008, 8) that are independent of one's occupation and relate to the perfectionism, refinement, and pride the craftsperson takes in their practice. In particular, those skills are tacit, embodied, and enculturated ones that are learned and shared through hands-on engagement (Collins 1987). As a form of creative work central to human development (Mills 1963) craft can be observed in the embodied mastery of musical execution that characterizes musical performers (Sudnow 1978), as much as in the technological experimentation of circuit-benders and avant-garde sound makers (Flood 2016).

Craft eventually relates to the building of one's identity. Since the emergence in the mid-nineteenth century of the notion of "fine art," the contemporary figure of the artist stands out in opposition to the artisan (Schatzberg 2012). The two activities, "art" and "craft," might be distinguished in relation to their work organizations, ideology, and aesthetic as well as their standards of utility, virtuosity, and beauty (Becker 1978). As noted by Mills (1963), craft appeals to those seeking to oppose the standardization and banalization of the industrialized world. More recently, Lauren Flood (2016) studied "DIY music technology" and the Do-It-Yourself ethos of its practitioners. She observes that those experimental sound scenes, such as circuit-bending, cultivate a distinct sense of self as "productive" cultural citizens; what she terms a state of "permanent prototyping" through which "sound, self, and instruments are continually remade."

Appropriation

As evident from the theoretical background above, the history and practices of sound-making instruments cannot easily be separated from their social-technical-material contexts. For example, instruments that have been used in music and sound creation and production have never been far from their use in the natural sciences, particularly in the emergence of the science of acoustics in the late nineteenth century. According to the historian of science Myles Jackson, musicians and composers quickly appropriated nonelectronic measuring instruments such as the tuning fork, the resonator, the metronome, and the siren, originally designed to test scientific principles, for musical purposes (2012).

The siren, for instance, straddled the lab, the concert hall and the street. Originally developed by the Scottish philosopher and physicist John Robison (who used it as a musical instrument around the turn of the eighteenth century), the device was improved on by the French physicist Charles Gagniard de la Tour in 1819, and consequently taken up by acousticians and physicists to measure wind speed, detect the lower range of human hearing, and, in more refined versions, investigate phase relationships between different interfering tones (Jackson 2012, 206). Despite its unbending, constant pitch, the instrument

was also incorporated into musical compositions already as early as 1917, from its use in the avant-garde composer Arseny Avraamov's epic *Symphony of Sirens* (1922) to Edgard Varèse's deployment of the device in *Amériques* (1918) and *Ionisation* (1929–1931). The siren thus became the ideal expression of the coming apocalypse of modernity. Its almost electronic-sounding timbre would presciently suggest the device's later association with air-raid shelters during World War II and civil defense bunkers in the Cold War world.

Another measuring instrument picked up by musicians was the tuning fork. Used originally to measure the vibration and propagation of sound waves through its properties as a resonator, the tuning fork in the hands of such figures as the French physicist Lissajous was also later employed to visualize such vibrations. Moreover, the instrument became a critical apparatus in helping nineteenth-century composers such as Berlioz and Rossini standardize the then chaotic pitch systems in use. While still widely utilized in the twentieth century (to test the presence of fractures in bones in the absence of X-ray machines for example) to measure and demonstrate acoustic principles, the instrument was also incorporated into musical performances and compositions by such artists as the American/Australian composer Warren Burt, the electronic composer Richard Chartier (who recorded the entire collection of tuning forks at the Smithsonian's National Museum of American History for his 2011 album *Transparency*) and the American extended-technique composer Zeena Parkins.

More recently, the tuning fork's most detailed exploration in contemporary performance practice emerges in the work of the Québec-born sound artist and researcher Nicolas Bernier. In his series of projects entitled *Frequencies*, Bernier stages the tuning fork as both a visual and acoustic instrument. In *Frequencies (a)* (2012), a series of tuning forks are mounted into acrylic structures positioned on a light table and staged within a minimalist visual and acoustic *mise-en-scène* almost bordering on the clinical. Activated by solenoid motors striking the forks at varying forces and intensities, each object's oscillations are captured by a contact microphone for further digital processing, thus affecting both the acoustic timbre of the forks as well as the lighting underneath them.

Like many artistic impulses, Bernier's initial interest in the tuning fork was pragmatic, stemming from his need to generate pitched tones to play in counterpoint within earlier mechanical, noise-based performances "without adding heavy equipment to my setups." But gradually the tuning fork moved from the practical to the symbolic, becoming an "object that could translate some fundamental elements: [. . .] the dichotomy between noise and pure sound, the link between music and sound research history, the decline and then re-appropriation of old technologies, and [the borders] between the analog and digital. [. . .] The tuning fork is reflecting these borders that I metaphorically have sought to eradicate in my artistic work."[1]

According to science studies scholar Ruth Benschop, while precision in instruments "assumes the transparency of the obvious," this was not always the case. Historians of science have focused on the ways in which precision gradually became a key characteristic of measurement in the mid- to late nineteenth century, not least due to a wide range of heterogeneous factors. "Industrialization, electrification, the exchange of scientific and technical information, transport and communication necessitated negotiation about

norms, measures, units, standards, notations, conventions" (Benschop 2000, 2). Indeed it was only with the development of so-called "metrology," a sub-branch of physics focused on the "creation and improvement of measuring methods, instruments, and physical units and standards" that precision became standardized across a wide range of instruments and procedures conducted with such instruments.

At first glance, with the focus on the acoustic "purity" of instruments like the tuning fork (or analog oscillator, another instrument utilized by Bernier in *Ensembles of Oscillators*, a recent work with students) it would seem that a kind of "aesthetics of precision" would mark the efforts of contemporary instrument-builders/sound artists. Yet, in Bernier's case, the precision usually accorded to the tuning fork seems to be undone—open to the noise of the environment (including the sounds produced by the instrument picked up by contact microphones), the analogue behavior of the instrument seems, in fact, far less precise than the digital oscillators that characterize contemporary software synthesis. "Precision is not as fixed a notion as tools get more precise over the course of history. What was precise yesterday might not be today. Today, the tuning fork doesn't seem that precise when compared to a digital signal in which there are absolutely no artifacts (if programmed to do so)."

The shift of context from industrial notions of measurement to digital forms emerges fully blown in Bernier's transformation of the tuning fork's sound and function.

> This imprecision within precision tools is what is of interest for me. The imprecision is what allows me to "play," to pull expressivity from these not-much-(but-still)-expressive tools. I am especially thinking of the performative aspect here. *Frequencies (a)* does not aim to give these tools some expression. On the other hand, as soon as there is a human body dialoguing with these tools, as soon as there are some "actions" whether they are spectacular or not, a form of expressivity will come out.

Here, the construction of a new assembly of tuning fork, solenoid, contact microphone, hardware, software, and the body of the musician demonstrates how the demarcation between instruments for measurement and instruments for artistic expression is destabilized. Moreover, historically the concept that such instruments became standardized, making them useful tools for measurement, also led to them being exploited for their potential richness of musical expression (Jackson 2012). Artists as well as scientists transformed devices into performative modulators, thus challenging the split advanced by historians of science such as Davis Baird between measurement and performance (2004). In other words, the artistic use of such instruments shifted their historically understood epistemological framework and context. Instruments were not seen as generating knowledge but instead, as something that aimed at producing aesthetic experience.

The advent of electronics in musical production transformed things even further. One of the earliest electronic music studios and key birthplaces for electronically produced studio-based sound was the famed Westdeutscher Rundfunk (WDR) in Cologne, founded by the Belgian-born German physicist Werner Meyer-Eppler together with the German composer Herbert Eimert in 1951. Given his scientific training in physics and research into phonetics and information theory, Meyer-Eppler immediately saw the potential to

appropriate testing and measuring instruments used in radio broadcasting such as oscillators, white-noise generators, ring modulators, analogue filter banks, or time regulators for the production of new electronic sound making. Thus, Meyer-Eppler opened up the possibilities for new kinds of sound production through the harnessing of scientific devices that musicians had little knowledge of or access to, partially providing the impetus for a new era of musical expression.

With the rapid development of what today is known as "computer-generated sound" or "computer music," the concept of the instrument became further transformed. Instruments that had been formerly understood as physical objects crafted by experts and learned by musicians over many years, soon became materially-semiotically-socially reformulated within the language of computing: as holes in punch cards, block diagrams, flow models, mathematical equations, and sets of instructions, or what today are known as algorithms. Indeed, if musical creation and production had historically depended on the material principles of scientific instruments, the next phase of its development would shift focus from the physical to the symbolic and informatic.

Instructions and Processes

That new instruments could be defined and constructed from sets of instructions within computer memory radically altered the relationship between technoscience, instrument making, and artistic practice. In his famous 1963 *Science* article, "The Digital Computer as Musical Instrument," Bell Labs engineer Max Mathews described a new vision of an "instrument unit"—a simple set of block diagrams consisting of oscillators and filters, or what Mathews and Joan Miller would term a UGen or "unit generator" (Mathews 1963). Mathews and Miller's description of the instrumental unit as "interconnected blocks of a specific program" thus set in motion a radical shift in thinking about what an instrument was or could be in computational terms. This was long before the Yamaha Corporation printed a series of small block diagrams adorned with the word "algorithms" on the surface of the DX-7 synthesizer, an instrument that reached the commercial masses some twenty-five years later.

Given that computer-based music developed alongside the sciences of computing, it was inevitable that scientific processes would bleed over into musical practices. But in the early twentieth century, algorithmic concepts of the musical instrument predated the digital computer. For example, reformulating instruments as automated technical processes (so-called "artomations"), the mid-twentieth-century composer and musical theorist Joseph Schillinger already argued for a model of the instrument as a kind of musical automaton—one that would use traditional elements of Western musical composition such as harmony, rhythm, and counterpoint for the "automated composition of music" (Collins 2018). Schillinger argued that existing acoustic instruments made of wooden and animal parts, such as horsehair for bows and the like, were inadequate for a music that should be infused with scientific methods and practices. The future of music instead would be in

electronic instruments that could generate all possible sounds with the simple "press of a button" (Brodsky 2003, 52).

These visions would be slow in coming. Early computer-music processes were chiefly defined by their material and conceptual constraints. The lack of memory (around 32K for the IBM 704 first used by Mathews) and the complexity and slowness of computation (real time was far off) suggested that the simplest building block of sound, the sine wave, would become not only the most computationally efficient way of generating audio but also the identifying auditory sign for early experimentation with computer processes.

Similarly, the lack of processing power and speed that constrained early computers thus determined a very restricted set of parameters that could be computed with sine waves: frequency, amplitude, and phase. Many of the basic synthesis processes of new computer "instruments" thus drew on models that utilized a certain understanding of sound as the decomposition of complex spectral qualities into simple building blocks of sinusoidals. Originally, such a concept was, by and large, not derived from musical principles. Rather, it was taken from the realm of physics: the eighteenth-century physicist Jean Baptiste Fourier's investigation into mathematically modeling the conduction of heat in solid substances as the summation of sinusoidal functions (Roads 1995, 545).

Given technical limitations, researchers in computer music sought to synthesize sounds using software-based instruments based on Fourier's principals. Although so-called additive synthesis was already made possible by early analogue instruments such as Thaddeus Cahill's Telharmonium dating back to 1906, Fourier's thinking heavily shaped early computer music in concept, execution, and aesthetics. In particular, Fourier's models were in heavy rotation at Bell Labs where computer research into speech synthesis and the general translation of voice (sound) into digital signals had already started in the early 1950s, socially and technically shaping experiments in computer music research there as well. In fact, it was in 1965 that Bell Labs mathematician and statistician John Tukey, together with the Princeton mathematician James Cooley, developed perhaps the pièce de résistance of Fourier's paradigm and one of the most important algorithms currently in use today: the FFT or Fast Fourier Transform. This simplified and lightning-fast mathematical procedure would eventually enable researchers in fields as widespread as speech synthesis, digital signal processing, and computer music composition to discover the individual frequency (or spectral) components of a complex signal.

To examine in more detail the power that the scientific atmosphere of Bell Labs had on composers, we need only look briefly at the intricate practices of two composers working there: James Tenney and Laurie Spiegel, both of whom helped redefine the instrument (as Max Mathews proposed) as a block of code. Tenney, a former student of computer music pioneer Lejaren Hiller at the University of Illinois, worked only for a short period at Bell Labs (from 1961–1964) as a technical staff member in the Visual and Acoustics Research Division but quickly developed techniques for composition with computers that established the roots of the field.[2]

As Douglas Kahn writes, Tenney's own theory of music, which argued for the speech-based origins (as opposed to simply tonal structures) of twentieth-century music, beautifully resonated with Bell Labs' research interests. A quick glance into his notes

published as "Computer Music Experiences: 1961–1964" reveals this entangled nature of scientific concepts and musical ambitions. For example, Tenney's 1961 *Analog #1: Noise Study* consisted of synthesized sounds that attempted to invoke the deafening traffic sounds that the composer heard in the Lincoln Tunnel on his daily drive to Bell Labs' site in suburban New Jersey. In order to realize the "aperiodic, 'asymmetrical' kind of rhythmic flow characteristic of the traffic noise," Tenney describes his design of an "instrument": a sinusoidal carrier wave amplitude modulated (AM) so that it produced noise that could then be "parameterized" numerically by controlling the amplitude, bandwidth, and the center frequency parameters of the sinusoidal (2015).

Throughout these notes sprinkled with UGen diagrams and drawings of time domain signals, Tenney describes other scientific ideas applied to the development of his new, computationally constructed instruments. Many of these instruments yielded no finished compositions but only "experiments and tests of various kinds." But Tenney's concept of instruments as consisting of numerically specified parameters set in motion a new approach to composition. Numerical, logic-driven specificity and the psychology of hearing the components of sound (psychoacoustics) began to supersede physical virtuosity between player and material instrument.

The scientific processes that circulated among musicians and technologists did not operate in isolation, however, as many studies of musical-technical geniuses wish us to believe. Institutional settings, such as WDR, Bell Labs, the Stanford Artificial Intelligence Laboratory, the Italian broadcaster RAI's electronic music studio, or, later, IRCAM, enabled up-and-coming composers to have access not only to new computational instruments but also to the know-how to operate them, together with newly emerging social hierarchies between artist and technician. While current generations of electronic instrument makers cannot imagine a time without laptops, Arduino, and GitHub, it takes remembering that, until the 1980s, the vast majority of computer-oriented hardware and software used by musicians was mainly in the domain of a few powerful academic and research sites.

As cultural anthropologist Georgina Born has pointed out, because such institutional sites possessed both the physical infrastructure and intellectual labor, a distinct "scientism of the avant-garde" began to exemplify technological attempts to produce instruments and sound based on strictly scientific principles: attempts in which concepts of machine measurability, mathematical precision and disembodied expression prevailed. As Born writes about IRCAM, "the notion of digital synthesis involving the total, rational, and predictable control of materials—a positivist scientific model of repeatable experiments giving identical results—seems in this case to have been questionable" (1995, 183).

Many of these scientific concepts could not be imported into musical contexts without an intermediary (the artist/composer) who could serve as a translator to shift them into the aesthetic realm. For example, the American composer Laurie Spiegel benefited from Bell Labs' environment by utilizing another set of scientific procedures: that of information theory. This was an arcane set of statistically based theories and methods developed by Claude Shannon designed to quantify the study of information, and, as an artist, Spiegel saw important musician possibilities using Shannon's work. Spiegel sought

to design variables focused on the interactive, real-time control of entropy (a key notion in Shannon's theory that implies that the more disordered a system becomes, the more information it contains) to "decrease the probability that each next pitch of an unchanging cycle will be randomly replaced by some other value." Using such a mathematical model, she thus argued that the statistical concept of entropy could be used to "sculpt overall musical form, to manipulate tensions and expectations and thereby the listener's emotions" (Spiegel 1998).

What might be said is that computing affected a wholly different paradigm change in the perception of instruments and instrumentality in music production and expression: it reformulated the instrument not only into a procedure to generate sound but also as a process. Within the current mode of extreme digitization across all forms of sound-based practice, synthesis and composition enabled through digitized instructions is almost a cultural given. Furthermore, the sense that expressive possibilities are reduced due to computational needs for formalization has dramatically shifted.

One key area where this transformation of instruction to process has been made manifest more recently is the practice of live coding, or what Ward et al. describe as "the activity of writing (parts of) a program while it runs" (2004, 243). The manner in which such "on the fly" programming becomes an artistic experience for audiences as well as musicians, however, is highly varied and contextual: code is visualized for the listener by being projected, or "accompanied by an impressive display of manual dexterity and the glorification of the typing interface" (2004, 248).

Musician and Super Collider developer Marije Baalman, a founder member of the iii (Instrument Inventors) collective in The Hague, suggests that live coding "blurs the distinctions between composing, instrument building, and performing (and composition/ instrument/performance) even further, as the computational system or code is no longer fixed once it is designed, but is adapted during the performance" (2017, 239). Baalman argues that in taking decisions on what to code in a performance situation, "you are always thinking about how the changes that you make will work out musically. You have to think within the same time as that of the process unfolding itself." In contrast, coding outside the performance, in the studio for instance, enables one to "take a step back and try out one solution, listen to whether it works, and then try another solution—you are working outside of the time in which the music unfolds."[3]

While live coding practices still depend on the creation of computational systems and procedures, Baalman affirms that "whereas before one would create the systems and procedures and then play with them as they are, in live coding these systems and procedures are understood as something that is malleable and changeable during performance." This changeability to something like code that an outside observer might see as fixed is essential to the craft of such an improvisational approach. For Baalman, craft thus involves reconfiguring the relationship between the programmer and the machine across multiple registers: physical (the act of inputting the code, navigating around the code editor), cognitive (knowing the classes, functions, and operations of the computer language one is using as well as error recovery), and compositional (knowing how to build a musical structure from within the language and within the frame of performance time). "In short,

the craft is creating these systems and procedures, doing this in a direct and immediate dialog with the machine."

Even though computer programming appears to be a fundamentally abstract, nonmusical act, Baalman sees that musicianship and programming virtuosity go hand in hand. One needs to be an improvising musician but also because "a lot of what you do in a live coding performance is also on a compositional level, you also have to know about composition. And you can also focus on sound design itself. You can switch between these levels, or choose the one you are most comfortable with." But live coding as practice also extends musicianship not just in the present but in the future as well: "on most (acoustical) instruments you only influence the now of the sound: the sound the instrument is currently playing. In live coding, you define what sound will be playing and when, you make plans for the future of the performance. And at any time while this future comes into being, you can change that future again, by changing the code."

Bending and Tinkering

From the unbending precision of science-born instruments and the abstraction of computer processes, a recent trend in music and sound art production prefers another direction: the quirky imprecision of analogue circuits and the engagement with materiality that accompanies their manipulation. While digital means of production such as software sequencers, digital audio workstations, and real-time audio synthesis environments still enjoy a great success, new analogue synthesizers also appear on the market daily. In parallel, the recent development of easy-to-use physical computing platforms, such as the Arduino, gives a new impulse to the creation of physical interfaces and custom-made controllers. Sound makers and music performers can now easily craft their own hybrids, digital and analogue, material and software, with the support of large online communities that share tips and know-how. The practice of contemporary musicians and artists extends further than the quest for mastery and virtuosity in instrumental performance; it now entangles instrument making with the manipulation of the materiality of sound.

At the intersection of material experimentation and technological enthusiasm, circuit-bending merges instrument making with art practice. As a form of hardware hacking, circuit-bending opens up consumer electronics and toys to generate unexpected sounds and build bizarre instruments. From Furby dolls to mp3 audio players or small toy pianos, these devices need not have any initial musical purpose: what matters is their reappropriation for musical performances. Benders are experimental craftspeople who mix together different forms of tinkering, hacking, Do-It-Yourself and Do-It-With-Others practices to repurpose electronic devices. With an open disregard for traditional theoretical considerations, they rely on a hands-on manipulation of electronic circuits to generate glitching sounds and to guide their process of exploration and decision. Eventually, benders challenge the intended use of the devices they hack. In doing so, they

empower themselves by gaining an embodied and material knowledge of their technological devices.

The roots of the practice can be traced to the late 1960s when Reed Ghazala, the self-named "father of circuit-bending," became fascinated by the hissing sounds emanating from a short-circuited radio. "If these sounds are being created by accident, what could be done on purpose? [. . .] what would happen to sound-making electronics purposefully shorted out in the same way?" (Ghazala 1998). Bending is a chance encounter that reconfigures the electronic material and readjusts one's musical intentions. For Ghazala, it is a means to implement new musical thinking and distance himself from the "thought system" that music is traditionally built upon. In this sense, it is an anti-theory portal into a world of alien music to be explored (Ghazala 2005). His most iconic bend, the *Speak & Spell Incantor*, is an educational toy augmented with various buttons and dials that trigger voices and change their speeds thus creating demonic incantations. To do so, he uses a hands-on approach in which fingers and metallic wires are probes to discover bendable components by touching the circuitry and listening to what happens, at the risk of blowing up the device.

A main characteristic of bending is the incorporation of problematic noise artifacts into the very fabric of the instrument. As was the case with Ghazala's hissing radio, what at first appears to be an undesirable effect eventually turns out to be a most desired feature. We have here an example of what STS scholar Thomas Hughes names a "reverse salient": a factor of a technical system that initially prevents its deployability but ultimately fosters its growth (Bijker, Hughes, and Pinch 1987). Similarly, electronic feedback, the "reverse salient" of electric guitar, has been appropriated by artists such as Jimi Hendrix to the point of making it a core characteristic of their artistic identity (McSwain 2002). This incorporation of resistance into instruments and performances can be seen as constitutive of most contemporary sound and musical practices.

Whether described as an anti-theory practice (Ghazala 2005) or a form of hacking (Collins 2006), circuit-bending challenges the traditional conception of instrument making. Rather than building stable and reliable instruments, benders are concerned with the expression of the sonic potential contained in electronic circuits. As they create hybrid devices that let material agencies be manipulated, they incorporate in their live performances a dimension of unpredictability incompatible with classical conceptions of musical execution—not to mention scientific accuracy. The challenge to technological determinism that circuit-bending fosters is doubled by an artistic one. As much as the frontier between artistic creation and instrument making shifts and blurs, the role of the performer must be reconsidered in relation to the space left open for material agency.

As a hands-on material practice, bending provides a good illustration of the "dialectic of resistance and accommodation" that defines Pickering's dance of agencies. It is a constant performance with the electronic material that forces practitioners to redefine their approach in relation to the sounds they make emerge. Interestingly, circuit-bending is a materially resisting practice that stands opposite to the promise of effortless freedom that comes with computer music. The material limits inherent to electronic circuitry find

echoes in Brian Eno's criticism of the design philosophy of computer software "that equates 'more options' with 'greater freedom.'" Instead, it "creates tools that can't ever be used intuitively." On the contrary, Eno calls for technologies that have "limits" and "a personality": "you can't have a relationship with a device whose limits are unknown to you because without limits it keeps becoming something else" (Eno 1999).

Similarly, former STEIM scientific adviser and composer Joel Ryan reminds us of the essential importance of physical effort in musical creation and performance. It is thus the role of well-designed instruments to put "physical handles on phantom models" (Ryan 1991). That is to say, while computers might model any sound possible, only physical engagement with the sonic matter of music can bring back intuitiveness and stimulate the imagination. STEIM has been a long-time center of research into analogue and digital interfaces and instruments. For example, Michel Waisvisz's iconic *Cracklebox* features a standard operational amplifier wrongly wired and augmented with touch pads. This simple design physically incorporates performers into the electronic circuitry, allowing them to intimately interfere with the electrical potentials that generate sound. In this regard, circuit-bending's struggle with electronic agencies brings back the dimension of physical effort and the material resistance that abstract programming processes lack.

Years after Ghazala's first experiments, circuit-bending is now a common art practice for Irene "Ira" Agrivina and the Indonesian "citizen laboratory" House of Natural Fiber (HONF) Foundation she cofounded in 1999. She defines bending as "a craft: you produce the hardware, the instruments and the sound."[4] But despite the usual understanding of craft as a form of mastery of practice, she stresses the ambiguity that the quest for unexpected sounds entails. "You can build from scratch, produce lo-fi to abstract sounds, you have a full control to what you want to achieve and at the same time you have no prediction to what kind of sound you will get from your instruments."

Contrary to David Sudnow, whose pianistic skill is an embodied control of instrumental execution, the craft of bending is one of continual adaptation and collaboration with the electronic material. As in Pickering's "dance of agency," the practice of circuit-bending is a constant "dialectic of resistance and accommodation" between the practitioners and their instruments. Both in the workshop and on stage, this constant dialogue forces benders to develop an ability to align and realign their artistic intention to the material agencies of their instruments. By the same token, the very notion of virtuosity is also challenged. In contrast to its traditional understanding as a form of mastery in musical execution, circuit-bending's virtuosity is one of flexibility and ability when facing the unexpected.

In parallel to its artistic dimension, circuit-bending leads to the development of technical skills that empower its practitioners. In the Indonesian context of HONF, bending is part of a set of wider social practices and cultures of hacking that Agrivina describes as "a choice to live. If you do not agree to an existing system, or model, then you do something different, innovate something, do something better." HONF, a "citizen laboratory," was formed out of the late 1990s Asian financial crisis that particularly hit

Indonesia—a context that gives to tinkering and hacking a political dimension that extends further than a playful practice of hardware exploration and modification. For Agrivina, a main aspect of bending is its social value because it brings "knowledge about how to advance technology [and] raises an awareness about the use of technology, and not only consuming it." HONF frames the practice as both artistic and social and makes technological exploration, instrument making and musical experimentation tools of social empowerment.

The personal empowerment benders cultivate gets realized in different ways. It goes through the informal and hands-on understanding of the device, the realization that one has the power to challenge technological determinism, and, eventually, the pleasure of producing unexpected sounds. For Lauren Flood, benders are productive cultural citizens in a "state of permanent prototyping." In other words, the practice is a constant flux where sounds, instruments, and self-interactively redefine one another (Flood 2016). A central point of this form of empowerment is its socially shared aspect, what Agrivina calls "openness: [. . .] you can do it yourself, do it with others, you can adapt and develop it according to your need, you can share it, you have a freedom of your own." Making, performances, and workshops are occasions for accessing the inner workings of technological devices. Each in their own ways, they allow for the circulation of knowledge and the realization of one's agency over technological development.

The knowledge developed by bending is ambiguous and contradicts the formalized theories usually associated with engineering (Pinch 2016). Nicolas Collins's seventeenth rule of hacking, "if it sounds good and doesn't smoke, don't worry if you don't understand it" (2006, 225), exemplifies how the ability to make and produce an instrument is different from understanding theoretically how it works. Circuit-bending is a clear instantiation of the tacit and material knowledge that is shared through practice and is impossible to formalize. As underlined by Ghazala (2005), it does not necessitate any form of theory or a priori knowledge. In this light, Collins's proposal for engaging hands-on with the technology is a call for an experimental practice open to all.

Nevertheless, circuit-bending does not escape its own ambiguities. The dimension of experimentation and chance praised by its practitioners can be questioned by the circulation and reproduction of iconic bends such as Ghazala's *Speak & Spell*. The struggle with material agency and the pursuit of the unexpected at the core of bending directly challenge traditional ways of sound and music making as much as instrumental practices. It forces practitioners to trade notions of mastery and control for ones of adaptability that do not suit every instrument maker or performer. The recent arrival on the market of cheap and easy-to-use physical computing devices makes possible the hybridization of hardware hacking with digital means of sound making. Online forums and programming repositories now host an abundance of hybridized analogue-digital instruments that bring together the sonic aesthetic of circuit-bending and the symbolic processes of computers. After years of experimenting with the material agency of electronic circuitry, the contemporary focus of instrument making seems to shift toward exploring the forms of agency residing in digital processes and computer code.

Learning

According to music technologist Tristan Jehan, computationally generated approaches in music making have historically taken three directions: "*stochastic* methods, which use sequences of jointly distributed random variables to control specific decisions (Aleatoric movement); *rule-based* systems, which use a strict grammar and set of rules (Serialism movement); and *artificial intelligence* approaches, which differ from rule-based approaches mostly by their capacity to define their own rules: in essence, to 'learn'" (2005, 28).

While familiar to many within the technological research and industry spectrum, what is labeled "machine learning" (ML) in AI is still a mysterious black box for most artists. The classic definition is expressed by computer scientist Tom Mitchell: "A computer program is said to learn from experience E with respect to some class of tasks T and performance measure P, if performance at tasks in T, as measured by P, IMPROVES with experience E" (1997, 3). The key word here is *experience*—the machine learns by way of vast amounts of already existing data to get better at essentially matching in output what it receives in input.

ML models within music research have focused on two distinct application areas: music information retrieval and music generation. First, ML has long been used in the research area of music information retrieval, which has more recently fed an ever-exploding market for machine "curated" music—from music recommender systems like Pandora and Spotify to score following and genre classification engines. The second application is in the area of *generating* music—literally, using the ability of a computer to listen for or analyze features or patterns in existing musical data (from low-level audio features such as frequency distribution to higher-level ones such as harmonic relationships) and then generate new output based on those features.

Some of the historical roots for ML in music are anchored in a larger social-technical shift that took place in the mid-1980s in computing and cognitive sciences in which *connectionist* or "parallel distributed processing" (PDP) models began to be seen as viable alternatives to the long-standing problem of intelligence and learning in AI. Partially enabled by faster computing using graphics processing units (GPUs), newer research into the brain demonstrated that cognition was a more distributed and parallel process than originally thought.

Since the late 1980s, so-called "neural networks" have been seen as a core research topic in computer-driven music. The principle behind a neural network is to build a numerical representation of the input, calculation, and firing of mathematical "neurons" that can understand specific musical-structural characteristics, feed the network different examples that highlight those structural characteristics, let the network "learn" from those examples, and then output or "generate" something that is as close to the input as possible. Simply put, this is learning by example. The network learns by imitating what it has been trained to understand and then, through a process of continual trial-and-error, self-corrects itself until it gets its output "right." Unlike earlier rule-driven procedures, the emphasis is on adjusting the "weights" between "neurons," that is to say the strength of their connection as

a simulation of the synapses between actual neurons, without *programming* all the explicit instructions and behaviors as earlier algorithmic-driven composition did.

In one of the earliest papers on the training of neural networks to produce musical patterns, researcher J.P. Lewis used the term "artificial creativity" in order to suggest "machine generation of ostensibly novel patterns by appeal to randomness" (1988, 229). Provocatively, the question of whether genuine "novelty" might emerge in machine systems that produce potentially new sequences of patterns has haunted the field of research (and of practice) in the computationally based arts from their very early beginnings. In fact, the model that Lewis proposed, "Creation by Refinement," involves less the production of new music and more an imitation of the training model by utilizing a mathematical optimization (through error minimization) technique called gradient descent.

But perhaps the little noticed statement "without programming" is more important in the impact that ML has, and is currently having, on music production. In fact, the automation of musical invention that began with algorithmic composition might even be said to dramatically shift with the application of machine intelligence to musical systems. One of the central crafts of computer music, the programming of explicit instructions to produce musical outputs from the computer (a core principle of early Serialist composition), shifts to "employing mathematical models to classify and make predictions based on data or experience rather than on logical rules" (Senécal 2016, iii).

As Rebecca Fiebrink, one of the few women computer scientists researching in the domain of ML for musical/artistic expression states, ML enables new kinds of "processes, allowing the instrument creation process to become a more exploratory, playful, embodied, expressive partnership between human and machine. And these qualities of the design process in turn influence the final form of the instrument that is created—as well as the instrument creator herself" (2017, 138). Fiebrink calls this the "human machine partnership" (over traditional human-computer interaction)—an acknowledgment that the relationship between musician and machine is not one of dominance and submission (control) but one of mutual collaboration. This comment also suggests a different model of craft that might emerge between the performer and an instrument—a "partnership" in which the layer of mediation between the two has some form of recognition, learning, imitation, and generation existing somewhere *in between* the human performer, the machine, and the wider world. This open nature of the machine to inputs and impulses from the environment is what Gilbert Simondon calls the machine's "margin of indeterminacy" or "the margin that allows the machine to be sensitive to outside information" (2016, 17).

One way that ML techniques reconfigure the relationship between musician and instrument is by shifting focus from the writing of computational procedures driven by rules and heuristics to the generation of actions. In fact, as Fiebrink argues, the introduction of ML into the musical instrument process shifts a well-worn paradigm: that of interface/ sensor → mapping → output/expression. Such "mapping" processes are tediously produced, mainly involving the writing of code to connect or "map" input data from the musician. But Fiebrink argues that "smart" or intelligent mappings formed by learning models must be shaped from the performer directly as there may be no existing training set that can be

generalizable to all performers (unlike, for example, a fixed set of medical data reporting on a large sample of patients). Instead, style, aesthetic interest, specific gestural properties, and other qualitative factors are all important to feed the training set. In this sense, the training model becomes a unique "identifier" to a particular performer. "When supervised learning is used to build new musical instrument mappings, the training examples act as the conduit through which a composer communicates her intention to the computer" (Fiebrink 2017, 143).

Fiebrink's own software, named Wekinator, has been designed to facilitate such personalized training sets and mappings for musicians. In contrast to most ML tools, the design of the software seems oriented around not only scientific issues but also artistic ones, such as core performance-oriented processes (improvisation on the fly, interest in quick modification of the training set if it yields no useful or interesting musical results) in order to make the tool an integral part of a musician's instrumental apparatus. Simultaneously, learning models can also change the nature not only of interacting with a self-built instrument but also the process of learning to train, modify, map, and play the device.

Musician and sound artist Laetitia Sonami, well known for her gestural-based performances in the 1990s/2000s using a sensor-based musical controller called the "Lady's Glove," more recently designed a custom-made harp-like instrument called the Spring Spyre specifically for use with the Wekinator. Consisting of three electronic pickups attached to long thin steel springs mounted into a metal ring "found in the electronics junk store," Sonami activates the Spyre by touching the springs and controls it through a hacked Peavey fader box. The audio that is produced is then fed into the Wekinator where the neural network influences the behavior of different spectral components of the sound.

According to Sonami, however, the audio signal produced by the Spyre is "very poor."

When first testing it, one of the interesting things is that many people said that the signal was too poor (too low fidelity) to learn anything. Rebecca Fiebrink (whom Sonami was directly collaborating with) was the first to say—"no, we can get something out of this signal." Rebecca spent an hour just playing with it and listening—not looking at the data—but just speaking to the thing like it was a dead animal—"I think there is some life in there." But because she was creating the system, she knew what she wanted and because she is an artist herself, this allowed for some blurriness . . . Rebecca knew that she just needed to look at a signal that could change—that needed to have variation. She was more open to unorthodox data. When I told her I wanted the system to never learn correctly, she thought that was perfect."[5]

Distinguishing between the Glove, an instrument that Sonami invented and played for twenty-five years and the new ML-fueled Spyre, Sonami describes a jump into the unknown. The Glove, an instrument that involved a more linear process with a "tight logical relationship between cause and effect—imitating a mechanical system with digital mapping" encompassed something that was slow, personal and close to the body.

With the Spyre, however, there is a big hole between the input and the result. I don't know what is happening. The learning system is very fast. I feed it with something I want and then

it doesn't work and then you have to retrain and retrain. You can basically change seven parameters with one input. This would be hard to really hardwire such a system. In other words, because the learning model functions more like a black box of unknown possibilities, Sonami has to finesse the results. "To get something good, it really takes a lot of work."

But Sonami also sees the potential for new musical possibilities using ML—the opening up of new paradigms.

Right now I am sitting in my studio and—I can see the sky. I think of the parameters for synthesis are the sky right now, the way the air is moving, the color of my floor, . . . If I could just give that to the machine and say, "learn something from that"—that would be interesting . . . it would go beyond my very limited perception. Unfortunately as an artist you look at these applications that have a lot of ethical issues—but you look at this and you are just salivating and say, "God, I could use this, I could really do something with it." Trying to bend the learning into adapting to new behaviors—how to create new behaviors. Machine learning could help create new behaviors in musical systems.

Conclusion

Ironically, it seems the first ML-based hardware musical instrument does not come from Korg, Yamaha, or Nord Modular but (perhaps not surprisingly) from Google. Launched as an open source research project in March 2018 out of Google's Magenta machine learning—art research group, Google's N-Synth (Neural Synth) utilizes a particular deep-learning model called WaveNets to generate what is called "neural synthesis." Despite these advances, however, the largest repercussions of learning models for music and artistic production at large are only beginning to be felt.

In glancing back at the complex relationship between scientific research, musical craft and expression, it seems that currently there is a profound historical shift taking place—one that moves away from notions of musical control of the technologically conditioned (or appropriated) instrument on the part of the performer and toward an openness that treats the human-machine agency relationship as one of partnership—even if that agency is not so clearly cut between the actions of the performer and the behavior of systems outside our understanding. One may indeed revel in this profound "alien agency" of the unknown (Salter 2015). In the evolution of musical instruments from those early manipulations of the turntable in a studio in Seattle in 1939 to the transformation of instruments through new possibilities with AI, perhaps we may then finally arrive at Cage's dictum that "the composer must give up the desire to control sound, clear his mind of music, and set about discovering means to let sounds be themselves rather than vehicles for man-made theories or expressions of human sentiments" (1961, 14).

23

The Instrument as Medium

Phonographic Work

Rolf Großmann

"Hello! My name is Rhianna and welcome to my little space dedicated to binaural sounds, whispers and relaxation:)" writes ASMRMagic on her channel info on YouTube. Shiny varnished fingernails touch a mysterious technical object, which forms the center of the video and can be identified after a short irritation as a stereo audio recorder labeled with big letters of a well-known manufacturer of audio devices (Figure 23.1).[1] Its silver microphone capsules are gently touched with the nails, stroked with fingertips, while strange, unusual as well as familiar noises evolve in the recipient's headphones, such as those produced when the head, scalp, ears, and bones are directly touched. But, of course, it's nothing but an amplified microphone we hear, right? Is Rhianna playing an instrument?

Instruments as tools, media, and agents of sound design are deeply connected with performative strategies. They are partly intentionally constructed, partly derived from other sound-generating objects and contexts, misappropriated, modified, expanded, optimized. Primarily they serve the creation or modification of sound, no matter if they are physical objects or complex technical configurations. But the categories of intentional shaping sounds depend on the background of composing and hearing, each constituted in its own universe of cultural practice, including the understanding of what a musical instrument is. From a media point of view, an instrument is a medium in two respects: on the one hand it serves as a sounding device to mediate between an individual performance and the listeners, on the other hand it is itself part of a (more or less technical) media configuration. Both aspects are closely interwoven and entail a number of consequences, which will be discussed here with regard to the relationship between instrument and media change.

To understand the emergence of new sound instruments in our context, it is helpful to overcome the limitations of thought that arise from the history of European art music. The Western European cultural tradition of the instrumental production of sounds is almost opposite to the concept of sound art. It follows the tradition of abstraction from concrete sound in favor of melodic and later harmonic structure. Here an instrument is necessary to
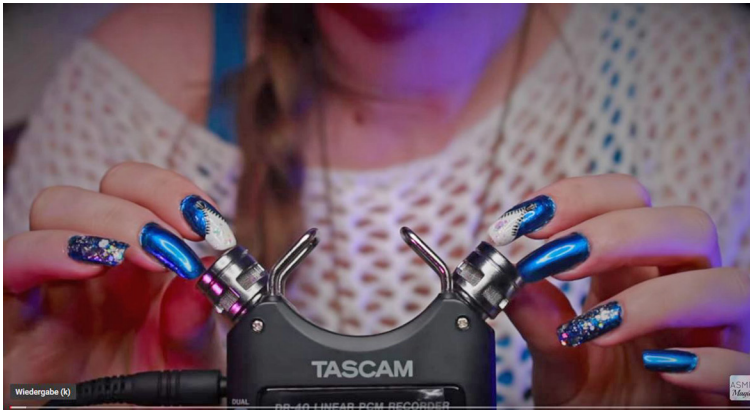
Figure 23.1 ASMR Tascam Mic Tapping.

make the signs of time and pitch of the written score (re-)sound. More precisely, the sound of an instrument is an accidental property of the tone, which is defined by its frequency, its pitch. Not until the twentieth century, with its emancipation of noise, did the paradigm of pitch leave the "universe of tone," which contrasts with the "universe of sound." The development of technical media of sonic writing, most of all the *phono-graph*, which for the first time made it possible to record acoustic events in their own sound, had a decisive influence on this change.

Media Perspectives: From Sound to *Tone Art* to *Sound Art*

With melodic sign language Guido von Arezzos (eleventh century), who connected the finger limbs ("digitalis") with tone syllables and these with defined tone steps, the countability of discrete tone pitches, the extension of rudimentary musical writing, and the construction of scales, a new era of musical learning and composition began. This marked a first and decisive milestone toward the musical literacy of Western European art music. The price for its elaborated compositional practice on the basis of an abstract system of signs—the score—was, pointedly formulated, the reduction of sound to pitch. The focus of shaping and composing (and listening to) this "art" music of the church, the courts, and, later, the wealthy bourgeoisie shifted through the literacy of musical notation from sound perspective to tonal structure and its artful creation. The prototype for this practice of rationalization and reduction is the "motivic-thematic work"[2] that originated from Joseph Haydn's string quartets. This term stands for a compositional technique that forms themes and musical structures from the core of small motivic elements through variation and continuation.

This powerful principle of development and variation has influenced composition— as a calculatory principle—up to the middle of the twentieth century, from the serial

technique of Arnold Schönberg to the application of stochastic methods by Jannis Xenakis. Even when Schönberg wanted to lend greater prominence to the parameter of sound with the idea of a "Klangfarbenmelodie" (timbre melody), an abstract model of defined steps and their systematic organization and variation remained the guideline for composition: the "Klangfarbenmelodie" was transformed into a "Klangfarbenreihe" (a series of timbres) in the serial music of the 1950s. Sound and, later, noise were certainly new areas of musical composition to be conquered at that time, but traditional notation and classical instruments were hardly the appropriate means for a differentiated shaping of the entire sound spectrum, including real sounds. Also at the beginning of the twentieth century, the efforts to aestheticize the sounds of a new industrial environment led to onomatopoeic orchestral works (i.e. Alexander Mosolov, *Iron Foundry*, 1926/1927) or—in the case of the Italian futurists—to newly designed noise instruments (Luigi Russolo's *Intonarumori*).

Phonographic devices such as phonographs and gramophones,—as technical media— in contrast, write and reproduce not "music" but acoustic vibrations, before any meaning and beyond cultural barriers.[3] "There were no notes" was what a female visitor said after attending a Musique Concrète event with Pierre Henry.[4] Phonography represented a radical new beginning in musical creation, for which I use the term "phonographic work" ("phonographische Arbeit," both as a verb and as a noun),[5] as opposed to "motivic-thematic work" mentioned above. This type of creative sound work can be experienced in the pioneer experiments of Musique Concrète or the exploration of the record player as an instrument by John Cage. The French engineer Jacques Poullin constructed instruments to manipulate phonographic reproduction on the basis of the tape recorder (the *Phonogène* and the *Morphophone*[6]), Cage modified the record player's pickups (*Cartridge Music*, 1960), and Nam June Paik literally used the magnetic recording head as a mobile scanning device for prerecorded tapes (*Random Access*, 1963). All this has long been history, but shows the fundamental change in the materiality of "writing" music and sound. At the same time, acoustic vibrations, resonances, and concepts beyond an established understanding of music can become sound art.

For Musique Concrète pioneer Pierre Schaeffer, who was concerned with the "transduction" (or the "relaying," see below) of real sounds into the world of music, an examination of the role of phonographic instruments in the process of musical creation followed almost as a matter of course. In the experimental situation of exploring new "concrète" sound objects, it was clear that the instruments for their creation would play a special role.

> That is to say, one takes external sounds, and harnesses them to ensure their transduction. The instruments adapted to this effect are: the microphone, or, more widely, the membrane that is sensitive to acoustic vibrations and reconstitutes them, through conversion, into another shape—mechanical for the first gramophones, electric thereafter; and the recording and playback machine. Each of these steps has contributed to modify our perception of sounds, and where the need arises, to transform the sounds themselves. For that, one must first become a "phonographist artist."

[. . .]

> The first act of "relaying" by the concrète musician is related to the machine . . . the artist converts these machines of reproduction into instruments of reproduction. It is here that we interpose the idea of reinvention: throughout the twentieth century the artist has shown how he can transform the machine into a basis for creation. When the gramophone changed its status from being an apparatus for reproduction to an instrument of production, an artist has, by thought or deed, reinvented the apparatus.[7]

What Marc Battier states here about the early approach of Musique Concrète to media technology applies not only to instrumental playing but also to installations, sound sculptures, and multimedia works as well as changing listening to a new sound art. In order to become a "phonographist artist" in the sense suggested above, a deep understanding of phonographic transmission and storage is required. At the same time design and listening processes within media configurations are to be explored beyond questions of technical operations. The artistic insight into the implicit knowledge of media configurations is the basis for a "phonographic work" that reinvents electronic audio media as instruments for the creation and shaping of sound. Especially in the field of sound art, this includes all stations of technical media use and its cultural appropriation, from recording, transmission, amplification, and reproduction to storage. For all these areas, a new spectrum of "classical" sound artworks of the twentieth century already exists (to which we shall return later).

Coming back to the initial question: The universe of tones in the succession of Guido von Arrezo's writing of discrete pitches was challenged by a universe of sounds with a new expanded practice of shaping acoustic waves. Since the middle of the twentieth century a widespread appropriation of phonographic technology and electronic sound generation as creative tools has taken place, both—as described by the example of Musique Concrète—in the experimental field as well as in pop music production. In his famous essay "The Studio as Compositional Tool" (1983), Brian Eno describes the difference between the traditional way of composing and the new approach of composing by means of the electronic studio:

> You're working directly with sound, and there's no transmission loss between you and the sound—you handle it. It puts the composer in the identical position of the painter—he's working directly with a material, working directly onto a substance, and he always retains the options to chop and change, to paint a bit out, add a piece, etc.[8]

While here a pop music version of experimental phonographic work—somewhat similar to Schaeffer's view—is given, hip-hop and techno go much further in the appropriation of recording technology and electronic manipulation. On a path that leads from Jamaican toasting and live mixing via the New York Bronx to mainstream pop music, phonographic work also claims the field of archives as creative territory. This way already recorded sounds of all kinds, from pop productions to historical soundscapes, become part of a new practice of "organizing sound." Phonographic work thus attains a historical and cultural-social dimension,[9] which allows a direct aesthetic reappropriation and reflection of culturally formed and sonically captured artifacts.

Media Configurations as Sound Instruments

Keeping this background in mind it is much easier to understand the role of the media in "classical" sound artworks. Only a few prototypical configurations will be presented, also I do not want to neglect an instrumental dispositive that has received little attention until now: The simplest but also most courageous instrumentalization of media technology is its use as an everyday, "found," object of sound generation. In such a composition or installation, the media device is nothing more than an object whose sound is some kind of media acoustic event. This very clear and simple media instrument dispositive remains a special case to this day, in which only the sound of the media apparatus is required, while the determination of the sounds themselves is dispensed with. A pioneer for this use is again John Cage, who incorporates media apparatuses into his concept of indeterminacy. Like the sounds of "a truck passing by,"[10] the sounds of everyday media exist as optional spaces of hearing. In *Imaginary Landscapes No. 4* (1951) the handling of the station selector, the volume control, and the tone control are precisely determined by a score. But a predictable sound result is not possible and not desired in this way. As an installation *33 1/3* (1969) with 12 turntables and 250 records installed in an exhibition works in a similar way: Any combination of putting on records by the visitors is possible and welcome. Such installations create a texture of media sound that, in a McLuhanian sense,[11] brings the medium, and not its content, to the ears. Something similar happens in new pop music, for example in the micro-sampling practice of Marc Leclair (aka Akufen), who places radio samples of fractions of a second above a house background.[12] These "reference-less" snippets give the impression of a radio texture as a specific characteristic sound.

Well-known works of sound art often combine the new awareness for listening with interventions in real, urban, or rural environments. The electronic and later digital media are ideal instruments for the manipulation and spatial shifting of sounds of any origin. In this context "classical" media dispositives emerge and are combined, such as amplification, recording, loops, multichannel spaces and the generation of static continuous sounds as sine waves or drones.

An outstanding example is Max Neuhaus, who covers the spectrum from a jazz drummer to the concept art of listening (as pioneer of the "sound walk"[13]) and, later, electronic sound interventions in urban spaces. The new ways of deep listening at sound-walks lead to sound interventions with specially designed and constructed sound generators such as those at Times Square (NYC 1977) or—less well-known—at the *Suspended Sound Line* (1999) sound bridge in Bern's (Switzerland) Lorraine quarter. Such installations are an instrument of the drone in the urban or rural environment, for sound irritation and expansion, similar to the resonance tubes of Sam Auinger and Bruce Odland (*Blue Moon*, NYC 2004) or the "Rhine sounds" (*Rheinklänge*, Bonn 2013) of Christina Kubisch.

Alvin Luciers *Sitting in a Room* (first performed 1969) is also a famous example of a transparent and straightforward structured media situation with an initial input by a performer and subsequent independent sound generation by the "media agents" microphone and tape recorder. A performer speaks a sentence into a microphone, a tape

recorder records the signal. The recording is played back into the room, the result is recorded, played back again, recorded, etc. until only some kind of drone remains. This set-up is particularly significant for the discussion of the instrumentalization of media, since here a specific ambivalence of reproduction and the self-constructed sound of the medium occur. What do we hear in this installation? The pure sound of space or the sonic artifacts of the technical recording medium? Of course neither the one nor the other, but an independent artifact, which is formed by the concrete situation and by the specific configuration.

Media Dispositives

The sound performances and installations mentioned above contain several instrumental media dispositives. For example there is *amplification*: Even if it seems as if only a "real" sound is made louder here, amplification generates its own reality. Like a camera, the microphone focuses on a section of the physical world and transforms it according to its technical properties. This turns it into an externalized sensorium that directs perception and even makes inaudible phenomena audible. Since signal intensity and the overtone spectrum are important elements of auditory spatial perception, amplification always also includes the creation and transformation of space. As physical closeness, spatial factors also determine subjective experience and social relationships. Accordingly, one of the historically most important functions of amplification is the creation of (illusory) intimacy. Crooning from the 1920s onward produced the first great pop stars of the radio era through the previously unknown immediacy and nearness of singing to the listeners. The crooner's singing transforms the appellative-theatrical gesture, previously necessary for volume balance with larger ensembles, into whispering that suggests intimate physical closeness.[14] The principle is quite similar to the ASMR video mentioned at the very beginning of this chapter, which is also based on the amplification dispositive. For our question, it is not important whether there is actually a perceptual phenomenon such as ASMR, the decisive factor is the auditory construction of proximity, combined with a visually arranged staging of the situation in the video.

The sensorium of amplification can also be used for self-awareness and for focusing on own subjective action. Jessica Thompson's *walking machine* (2003) amplifies the sound of one's own steps by means of a mobile set-up, enabling the user to experience the urban space in the rhythm of their individual walking. The principle here is simply a change in the balance between inside and outside, between personal subjective action and environment.

And there is *recording*: Recording makes acoustic events spatially and temporally available and thus also repeatable. Recording devices are always also time machines, as they have to track the curve of the amplitude of sound waves in time and restore it during playback. Already from these properties the design options of the recording dispositive emerge. Pitch and timing changes as well as reverse effects result from changes in playback

speed and direction, loops just are multiple ceaseless repetitions. Unlike amplification and transmission, which have a strong spatial component, time conservation gives recording a documentary and archival aspect. Both dispositives, recording and amplification, mostly occur closely connected, but with different weighting. The Luciers performance mentioned above essentially uses recording for repetition. It provides the "memory" for the previous version and forms, together with the precisely balanced amplification and reinjection of the spatial sound, the dynamic progress of the sounding result. On the other hand, archives are always associated with references that can become a part of a personal biography. Sound archives of all kinds, music, personal recordings, etc. allow playing with their sound quality as well as with references. Kirsten Reese, for example, uses archive material and combines it with visuals and amplified traditional instruments. In her performance *Messages* (2008/2016), the "media instruments" integrate memories and past situations into a directly perceptible aesthetic experience.[15]

Special questions concerning its documentary quality arise in the broad spectrum of field recording, which, at first glance, seems to provide a pure reproduction of the real soundscape. Here, too, both dispositives are interwoven and produce a mix of their specific properties as a result. An interesting example for that can be found in the field recording practice of the Harvard sensory ethnography lab (SEL), which follows the approach of artistic research.[16] Ernst Karel's work on the sonic atmosphere of scientific research laboratories (*Heard Laboratories*, 2010) focuses on the sound of technical equipment and working situations. Although the recordings were merely cut and not processed with effects, the listener experiences a deep immersion in which the violence of the mechanical processes becomes perceptible. The amplification creates a hyperreal aural space that is both documentary and aesthetic-artistic in character, the recording gives it the character of an ethnographic document. The same applies to the moving image for the film *Leviathan* (2012), which was also made in the context of the SEL. The sensory role played by Karel's moving microphone in the laboratories is taken over by GoPro-cameras, which observe the industrial fishing of a trawler at the level of the fish. The resulting nightmarish experience of an immersion in a hitherto unknown brutal world of killing arises from the new perspective of a media technology sensorium.

And of course the analogue storage media also have a specific *materiality*, which form their own sub-dispositive especially for their performative handling. Countless examples of the sculptural and performative use of the materiality of analogue storage media can be found in the entire field of sound art. As a pioneer Nam June Paik presented various interactive objects in his exhibition and solo show *Exposition of Music—Electronic Television* (Galerie Parnass, Wuppertal, 1963), including the *Schallplatten Schaschlik* ("record shashlik") and the already mentioned *Random Access*, in which the material of the record and tape can be experienced playfully and aesthetically. Christian Marclay, who is a "phonographist artist" in the best sense of the term cited above, and who calls himself a "record player," addresses in works such as *Record without a Cover* (1985) and *Footsteps* (1989) the sound of damaged records and thus shows the inherent sound of the medium's materiality.

In addition to the storage media themselves, such as records and tapes, the loudspeaker, the interface to the acoustically audible sound, also has its own specific characteristics, which can be used for specially designed instruments (e.g. Cathy van Eck, *Square Head*, 2013), loudspeaker orchestras (e.g. François Bayles *acousmonium*, 1974), or sculptural arrangements.[17] This even applies to digital media whose storage media do not generate their own sounds, but are dependent on such interfaces to the world of acoustic sounds.

Digital Media

The algorithmic generation and transformation of audio data, the networking, and the expansion of the sensorium are leading the way to a digital practice of sound art. Media devices are not unfamiliar anymore. From the first portable record players, transistor radios, ghetto blasters, and Walkmans, to iPods, personal identity and mobility have been closely linked. Portable media devices embody lifestyle and personal acoustic reality. The smartphone as a permanently networked sensorium is the final stage of hybridization for the present, while visionaries are already raving about brain-to-MIDI interfaces combined with deep-learning algorithms. But the situation is not completely new. With the exception of the paragraphs on materiality, my contribution deliberately did not distinguish between analogue and digital configurations. Although digital media actually open up a new spectrum of options, their dispositive foundations have already been laid in the analogue phase. The microphone as a technical sensorium remains relevant, but is extended by a range of other sensors. The mapping of digital code to digital sound devices enables the sonification of sensor data of all kinds, such as movement, geographical location, temperature, etc. But the already addressed relation between the "real" and technical media remains problematic: Dispositives of amplification are transformed into dispositives of data mapping.

Also the electronic instruments of the analogue phase are changing, they are becoming specially programmed computers under long-established and familiar hardware surfaces. At the same time, hardware becomes flexible and programmable into personal instruments (*Nord Modular* Clavia Digital Musical Instruments, Sweden). Since the mid-1990s a further trend has been the integration of software instruments (VST-plugins[18]) into digital audio workstations (DAWs). Experimental programming environments such as *MAX* and *Pure Data* are meanwhile embedded in common audio software, so that even algorithmic processes can be implemented by every user.[19] This makes the processing of sensor technology including mapping, sound generation, and algorithmic transformation available on everyday computer hardware.

Yet, as the process continues, the writing of generative code itself becomes performative practice. Phonographic work becomes programming. The increasing fusion of rational knowledge, performative corporeality, and compositional strategy can be seen in live coding. The Dutch artist Marije Baalman, who performs with sensors and live programming, describes her artistic work as follows:

During the live coding within the performance, I am aware of the framework I built and in which I make changes. I recall the limits of easily modified code and what possibilities it offers to the me as the mover. Thus, there is a tight connection between my embodied knowledge of moving and listening, and my engineering knowledge of how the technology enabling the performance works.[20]

Popular Culture: The Omnipresence of *Sound Art*

The emergence of phonographic media as creative instruments has—especially in the field of pop production—shifted the balance between "tone art" and "sound art." When ordinary pop festivals call themselves "Soundart,"[21] this takes place against the background of fundamental changes in the making of musical artifacts: Instead of melodic-harmonic development, the aesthetic differentiation of complex structures now takes place in the area of rhythm and sound. The new materiality and media integration of sound fundamentally question the traditional autonomy of musical creation. From the point of view of an elaborated theory of melodic and harmonic structures of Western European art music, the melodic lines and harmonic progressions of the various genres of popular music are very simple and hardly original. A large part of pop music can be composed from a few cadenzas that are repeated over and over again. Also the rhythm in the sense of notated structure is not very innovative, with 4/4 beats and simple, partly syncopated divisions of 4 and 8, most pop music productions seem to be far behind the state of the musical material of the "classical" music. But if someone tries to play a charts hit on the basis of a piano score, they will very quickly notice that the complexity of this music is to be found in another musical dimension. It is not only the inability of the instrument to produce the appropriate sounds that manifests itself here. As a result of media convergence, globalization and postcolonial hybridization, popular music questions the adequacy of the traditional notation as such, which is deeply connected with Western art music.

In contrast, the capabilities of phonographic work with micro-rhythmics, sound editing, sound generation and sound processing are highly complex, elaborate, and innovative. The media-technological instruments allow and promote design strategies that differ from the play of conventional instruments as performers of a score. The ability to integrate any existing sound (including "real" sounds and noises) into "ordinary" musical experiences, to introduce new interpretations using sampling and remixing of archives of already existing music, and to synchronize and integrate other media environments, distinguishes such devices fundamentally from traditional musical instruments. Media integration also has an effect on theoretical discourses. Kodwo Eshun describes the rhythmic quality of breakbeat sampling in terms of animation film techniques: as "motion capturing."[22] In addition—especially in the digital domain—there is a new level of rationalization of design processes that take place beyond conscious perceptibility, but generate differential qualities in the listening experience (e.g. in the micro-rhythmic organization in the grids of digital

audio workstations). Pop music has long been exploring, in its own way and with broad success, the fields formerly reserved for the experimental avant-garde.

A striking example is the "autotune" effect, which, while using the technical mechanisms of serious computer music, was initially seen only as a boring correction method to simulate a flawless vocal intonation. But in an alienated use of its artificial character, the autotune effect in pop music plays an important role in the aesthetic exploration of man-machine hybridization and techno-cultural reality. It thus continues the line of "posthuman voices" that Alexander Weheliye identifies with the "cell phone effect" and the "vocoder" in R&B.[23] Autotune shows the phonographic dialectic of pitch and sound in a way that can hardly be overheard: It seems to be a tool for the re-tonalization of music, but instead of generating pure pitches, it is valued and used for its specific sound.

Sound art, with all its sonic conquests of the twentieth century, thus becomes the mainstream concept of a changed cultural practice of shaping and listening. Phonographic work (in a much wider sense than, for example, the title "art of record production" suggests[24]) integrates the new design procedures beyond notation, the emancipation of dissonance and sound as well as the transformation and recontextualization of media archives. It bridges the gap to the performative instrumentalization of media technology in interactive installations, to sensor technology, algorithms, and sonification.

24

How to Build an Instrument?

Three Artistic Positions—Articles and Interviews

Membrane

Materialities and Intensities of Sound

Carla J. Maier in Conversation

with Marianthi Papalexandri-Alexandri

Marianthi Papalexandri-Alexandri's work, which is situated at the intersection of sound art, composition, and performance, questions and transforms the role of the instrument as a sound generator. As a result, she has altered existing instruments, transformed the function of the instrument as a sound generator in different spatial and performative contexts, and designed and realized new instruments most of which are mechanized sound devices. Papalexandri's interventions challenge the inherited modes of behavior and communication amongst standard, or rather, more well-defined instruments.

Her departure from the more traditional forms has also led her to the creation of sound objects and sculptures that are able to produce sounds autonomously, independent of a performer. Papalexandri thus approaches sound primarily *through* materials by deconstructing musical instruments and treating them as visual objects, sculptures, installations, and sound generators that inhabit their own agency.

Her compositions explore notions of musical "excellence" or "mastery"—for example, over a particular musical instrument or genre—by playfully devolving agency back to materials themselves and to the contexts that perform them. Through this process, her work questions notions of sound perception and generates new forms of sonic knowledge.

In the context of this interview, which emanated from a series of conversations in the virtual space between Copenhagen/Denmark, Ithaca/The United States, and Wald/Switzerland, in August 2018, we decided to take as a starting point for our conversation one material element—the membrane—to talk about Papalexandri's explorations of the materialities and intensities of sound in relation to her artistic practice of building instruments.

> Carla J. Maier (CM): A special focus in this interview will be on your *Untitled* series, so could you start with a short description of this body of works?

Marianthi Papalexandri-Alexandri (MP): Over the last eleven years, I have developed both independently and together with Swiss kinetic artist Pe Lang a variety of new electroacoustic instruments. These devices form a significant part of my language as a composer. The *Untitled* series is part of a body of works I have created since 2010 (see Figure 24.i.1). The works in the *Untitled* series center on a unique frictional mechanism that allows me to acoustically activate musical instruments, everyday objects, and architectural spaces into resonant bodies. Some adaptations of these new technologies are presented as mechanical sound sculptures and motor-driven sound installations. Some of them have been presented as an instrument in the context of a solo live performance.

    The works that form the *Untitled* series form part of a process of interweaving music, art, and manufacturing, and this artistic practice has changed my finite idea about what an instrument can be, and what a performer can be.

CM: I would like to relate your work to the notion of sonic materialism that Christoph Cox brought forward in an article (and which he has expanded in his 2018 book *Sonic Flux*), in which he makes a significant distinction between music and sound, which is, in his understanding, a distinction between *time* and *duration*. He describes sound "as an anonymous, non-human and impersonal flux, a flow or becoming [. . .] with different rhythms and speeds" (Cox 2011, 85). Cox holds that "music plays part of this flow. But it is only part of a more general sonic becoming" (Cox 2011, 85). I think that your work, and the *Untitled* series in particular, offers an important avenue into a new analytical mode that such a turn to the materiality of sound evokes. With regard to your work, and I am again using Cox's words here:

the analysis of sound and music [does] not concern itself with the examination of *forms* (the organization of pre-given, pre-individuated entities: pitches, scales, meters, works, etc.) but with the investigation of fluid matter distinguished by different speeds, forces and intensities [. . .] contemporary sound art invite[s] us to think sound in these materialist terms—sound as continuous and heterogeneous fluid material that makes audible the immanence of being and time. (Cox 2011, 85)

    Does this idea resonate with your artistic practice?
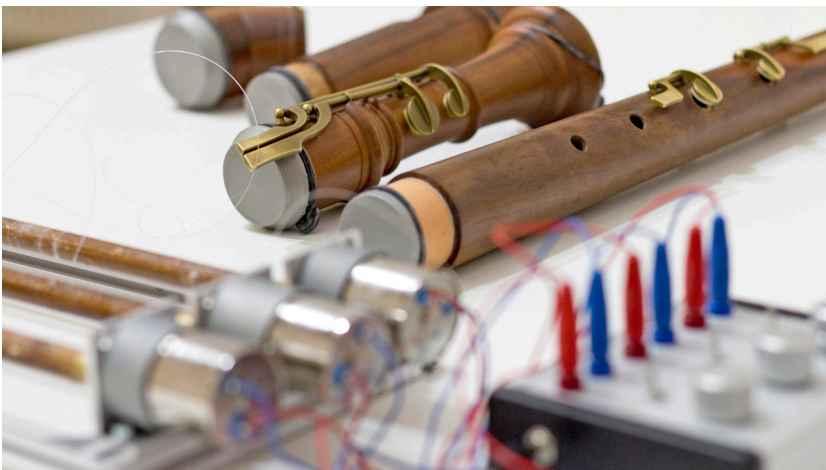
Figure 24.i.1 Close-up of *Untitled IV*. Photo: Pe Lang.

MP: I can totally relate to the idea that sound is a dynamic relationship of different forces, and I do actually perceive my work as manipulating and modulating and shaping these forces through the mechanical and organic instruments I am building. And I don't conceive of myself as a composer in a traditional sense, controlling the forms that the sound should be organized by. Rather, it is a completely dynamic relationship between sound, instrument, and performance, a constant process of gaining control and losing control. There are some moments in my performance in which I go against the flow, and these are the moments in which I actually "compose." When I discern a certain sonic quality or sonic figure (for instance if I start hearing the sounds of raindrops), I start working toward this image, emphasizing this idea. And then, something else happens, and the flow takes over again, I'm no longer controlling the sound. While some new forces become tangible, the instrument reveals itself in a new and unforeseen way.

CM: In your work, I observed an excessive use of membranes. With a focus on this specific material, what is the basic, or the initial idea behind the *Untitled* series?

MP: Indeed I have been using various materials—such as skin, rubber, wood, paper—that can act as a membrane. I approach sound primarily through the materials and I aim to produce or discover new sounds with the help of materials. You see, I've been always very much attracted to the basic phenomenon of how we produce sound, and that's through friction and vibration. So back in 2006, I took a drum head and made a friction drum out of it. I realized that I was fascinated by this very simple idea of taking a drum head, making a hole in the middle of the drum skin, applying a cotton thread through the hole—and then just by pulling, and applying friction to the string, I was able to acoustically activate a body, in this case, a friction drum. But also, the string that goes through the membrane could easily be extended. So, automatically, I've had the possibility to transmit sound into the space, and from one side to the other side of a room. And that length could be determined by me, or it could be determined by the actual size and dimension of a given object, or space.

   In my work, I pay attention to materials in general, actually. It is something that I've always been fascinated by: materials and the behavior of materials. For instance, again taking the friction drum as an example, depending on the temperature in the room, the behavior of the drum skin will change: it will tighten up, or become more loose. I realized that this also has an effect on the actual sound and in particular on pitch. So, through experiments, I decided to go further, and experiment with different fabrics and other materials, and I eventually ended up using an elastic membrane made from rubber. That material allowed me to stretch the material itself, and thus also to stretch the musical parameters, like timbre, pitch, and even dynamics and rhythm. This was for me the starting point of a body of works that I later called the *Untitled* series.

CM: Could you expand a bit on the specific materials you have used as a membrane, especially its different sonic properties and their effect on your artistic practice, in selected works of the *Untitled* series?

MP: Actually, the idea of using a membrane made of rubber to prepare and alternate the sound of a flute in my work *Untitled I* led to the creation of a unique instrument, which became *Untitled II*. To describe this in a little more detail:

In 2009, I composed *Untitled I* for flutist Erik Drescher. In this work, I use prepared acoustic instruments: a bass flute, an alto flute head and an soprano flute head prepared

with membranes stretched over one of the open ends of the flute parts. For *Untitled II*, I built membranophones—made out of a rubber membrane put over the whole of an acrylic tube, to which mechanized sound devices were attached. These kinetic devices, which were motor-driven rotating rods—were created in collaboration with my partner Pe Lang, a kinetic artist. In *Untitled I*, the membrane functions as a preparation of a given, but deconstructed instrument, and at the same time, together with all the other components that I just described, the flute parts become independent musical instruments. These material components and devices were later extended and formed the basic approach to a series of works that included *Untitled II* (2010).

In particular, *Untitled II* consists of fourteen membranophones of various sizes with one end open and the other closed with an elastic silicone membrane. A nylon line is fastened through a hole at the center of the membrane; the end of the nylon line is loosely secured to an acrylic motor-driven rod. I applied rosin (which is usually used for the bows of string instruments) to produce friction. The sound is produced by the nylon line causing the membrane to vibrate through friction. I chose the elastic silicone membrane for its sonic properties and qualities, as the vibrations from the friction devices sets the membrane into motion. The frictional device is made in a way that it provides a constant fluctuation in tension. The sound of *Untitled II* can be influenced in multiple ways: by manipulating the tension of the nylon lines, changing the speed of the motor, turning the motors on and off, and by depressing the membrane with the fingers while it is vibrating in order to vary the pitch. Trying to describe the sound of *Untitled II* is not easy. Actually, the tubes of
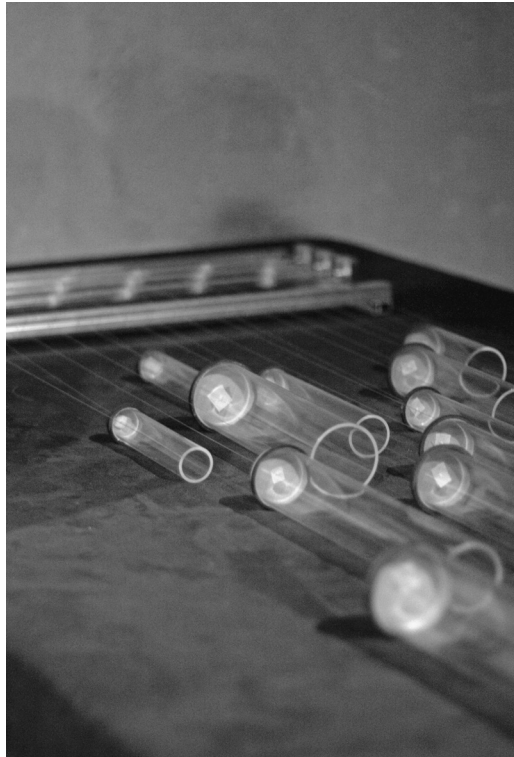
Figure 24.i.2 Close-up of acrylic tubes in *Untitled II*. Photo: Pe Lang.
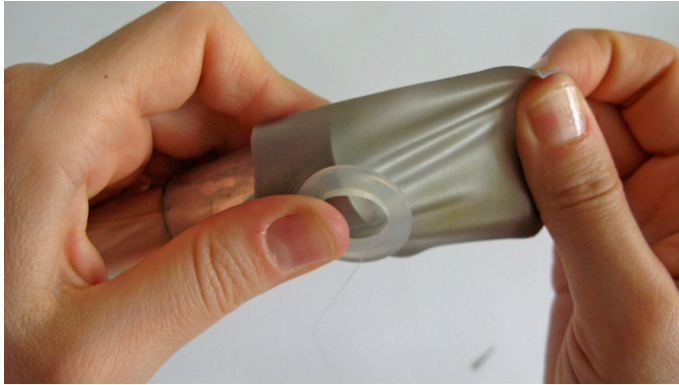
Figure 24.i.3 Preparing the flute part with a silicone membrane for *Untitled I*. Photo: Pe Lang.

different lengths "breathe" differently, and therefore the "snoring" sound that is created through the friction that is transported via the membrane to the flutes sound differently. In general, I have described the sound of *Untitled II* as a sometimes slower, sometimes faster "grunting" sound, like the croaking of frogs, or a lion roar. What I found interesting to find out was that the traditional friction drum (a membranophone instrument that has a drum head and a cord or horsehair passing through it) is called lior and refers to *lion's roar*—thus it gets its name from the sound it produces. I have presented *Untitled II* both as an instrument in the context of a solo live performance, as well as a sound sculpture in the context of a gallery or exhibition space.

In *Untitled IV* (2012), I extended the principle behind the mechanical device constructions used in *Untitled II* by using recorders, which are prepared with membranes—again made of an elastic silicone membrane.

Subsequently, in *Untitled V* (2013) I shifted my approach once more and thought about how the membrane of a loudspeaker could actually be used as part of a friction drum, so to speak. So in *Untitled V*, the nylon thread is fastened directly to the paper membrane of the loudspeaker by piercing a hole in the middle. Again, I loosely secured the end of the nylon thread to a motor-driven rosined wheel to produce friction. The sound that emanates from this is produced by the action of the rim of the rotating wheel rubbing the thread as the wheel is turned. The two surfaces alternating between sticking to each other and sliding over each other, with a corresponding change in the force of friction. The slow turn of the wheel creates changes in the tension of the thread, resulting as sounds (crackling impulse) in the membrane of the speaker. The resulting sounds varied immensely from the earlier works as the sounds are short and not continuous—a series of short quiet sounds caused by something falling onto or hitting a surface, more of a cracking popping sound it has a short duration, it's but soft and delicate—like water drops falling. So in this work one tends not to hear the sound of the friction, which would be the "snoring" sound, but it sounds more like water drops.

In *Extensions* (2012), which is another work which emerged out of the *Untitled* series, I used the friction device, but instead of activating membraphones, flutes, and recorders, the rosined motors activate a set of wooden panels (that work as membranes) that covered a
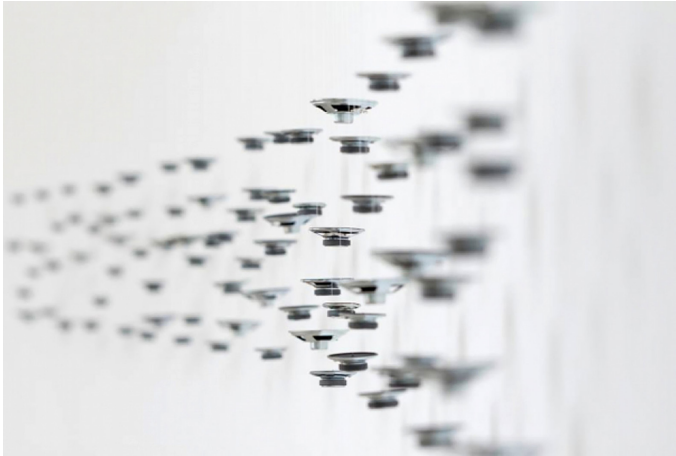
Figure 24.i.4 Installation view of *Untitled V*. Photo: Pe Lang.

series of windows along the walls. The panels blended with the walls, so it wasn't apparent what was making the sound—it seemed simply as if the walls and the space themselves were vibrating and sounding.

As you can see from these descriptions, I explore how particular mechanisms can awake sleeping possibilities in sound. I choose my materials carefully. Often they have an organic character and behavior so they won't sound artificial or purely mechanical. This is a conscious decision. I'm also fascinated by the idea of using the same materials and objects under different conditions, and the ways in which the context can influence these materials. Through this simple but rather sophisticated method I am able to "stretch" the basic principle of how sound is produced and how we explore resonances and sounds.

CM: Listening to you, there seem to be two aspects that are interlinked in your artistic practice, and that is the attention to material, and the aspect of modulation. Could you expand a bit on that?

MP: Yes, indeed. As I mentioned earlier, I choose my materials extremely carefully: Is the material stretchable, and flexible, or is it rather stiff, and non-flexible. I think of materials—rubber, plexiglass, nylon, wood, paper—based on their sonic, as well as visual properties. The ways in which I use the materials and combine them always offer new ways of creating and modulating sound. My instruments are never "finished" instruments, and I am revisiting its sonic possibilities each time I create a new sonic device. When I take a piece of membrane, stretch it around a flute part or tube, and then take a rubber ring to secure this; and when I then pierce a small hole into the membrane in order to apply the nylon line and attach it to the frictional device, each time it will have a different sonic effect. I'm not interested in calculating what I need to do to get exactly the same outcome, the same sound, repeatedly. What I *do* repeat is the process of the making, but the result will never be the same. The aim for me is that through the process of building the instrument, to explore these new possibilities, and new ideas. Not being able to reproduce the same sound does not mean a limitation to me in any way. It is exactly the openness and unforeseen quality of the artistic process and the

Figure 24.i.5 Installation of Extensions. Video still. Video: Youki Hirakawa.

resulting sounds that is crucial. Each time when I create a particular combination of a specific material with a resonant body, it propels me into a new sonic world, so to speak, which for me is absolutely wonderful.

CM: How is this process actually continued when the instrument is performed live? When being present at some of your performances, I always felt that everything—materials, objects, bodies, space—form one big sounding assemblage. Can you relate to this?

MP: This process of sonic exploration is indeed continued when I perform with the instrument. I can see the nylon line vibrating, white powder marks of the rosin, the rosined rob spinning. The membrane is oscillating, being attached to the see-through acrylic tubes. The overall concept is here that the performer or performers, as well as the viewers and listeners are all engaged in a process of examination of an *audible phenomenon in becoming*, so to say. The transparency of the instrument adds to this experience: all the components of the instrument lay open and are visible.

CM: To me the membrane seems to be one of the very delicate parts of the instrument/ installation, because it has to be newly applied each time the work is presented, and because the material will be "worn out" after a while, etc. What does this mean for your artistic practice to deal with such an "organic" material, and what are the sonic effects of it?

MP: I think what is so special about material getting worn-out, and the ageing of the materials is that you can trace this process of ageing and becoming worn-out, and all the changes in sound and look that this brings with it. For instance, when I leave my *Untitled II* for a while and then go back to it, I can see how the look of the membrane has changed and I can see how much pressure had been applied to it. Even now I can recognize how much time has passed since I have stretched the membrane over the tubes for the last time. It's just like when you look at a tree, you look at an organic material, you look at a person, and you can tell they have been ageing, you can tell for how long they have been here and how they are and how they have been used and how they have been treated. When I apply the membrane to the tube for the first time, and depending on how strongly it has been stretched, there's a specific sound. It is an unused sound. And only when I start playing the instrument, the sound is changing. And each time while playing the
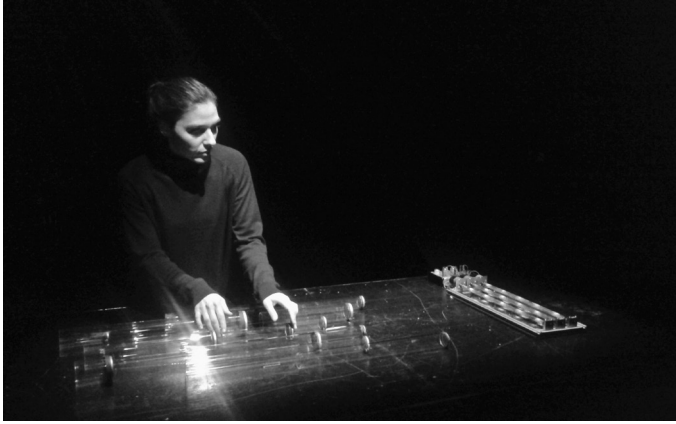
Figure 24.i.6 Papalexandri performing *Untitled II.* at ConVoce Festival, Lucern, Switzerland. Photo: Pe Lang.

instrument, the physical action of playing the instrument, and the ways in which pressure is put on the strings etc., the sound is being shaped.

The elastic membrane is under constant stress as it has been stretched around the end of a tube over time and therefore is changing. As it is getting looser and older, the sound changes as well. The size of the tube, the length of the string connecting the membrane and frictional device, the amount of material, all these factors determine and shape the final sound, for example, shorter strings have a *higher* frequency and therefore *higher pitch*. The more you stretch the membrane the higher the pitch. In this way, the membrane becomes a kind of analogue modulator.

CM: For me, your work evokes some new ideas about the relationship of music and sound. Although you have been talking about building instruments, the sound of the instrument, and performing with the instruments, it does not seem to make sense to speak about your work in *musical* terms, at least not in any straightforward way. Thinking about this, I would like to come back to *Untitled IV* and ask you, what the fascinating aspect was for you to take apart the wooden flutes and then prepare and rearrange them to become a new instrument?

MP: I have always been fascinated to watch musicians, how they play their instruments, but also how they carry their instruments, and how they open the cases and prepare their instruments to be played. So, I don't actually take them apart, but the musicians themselves do. When I was commissioned to make a piece for the *Quartet New Generation* (QNG), which was a quartet of *blockflöten*, I had the chance to expose myself to a variety of woodwinds from the baroque area to the modern area, and it was amazing to see how materials have changed and how we go from the round shape in the baroque to the more square ones in the modern time. So as I mentioned earlier, I decided to apply the same mechanism as in *Untitled II* and replace the plexiglass tubes with the recorders. In this way, each recorder becomes a resonant body. And through this frictional mechanical system that I applied, I offer the chance to the musician to play on each part individually, transforming it into a unique instrument. And I think it was a surprise for all of us who participated in this to see how out of four different instruments we had created nineteen

Figure 24.i.7 Performance set-up for *Untitled IV*. Museum of Musical Instruments, Berlin.
Photo: Pe Lang.

musical instruments (woodwind membraphones), which can run autonomously as
sound objects with the help of the motor-driven mechanism that was attached.

Taking the instrument apart became part of a revisiting of the instruments the
musicians were so familiar with. By paying attention to each individual part of the flute
in a completely new way also meant to unlearn the instrument, and to explore the sonic
and performative possibilities this offered in a whole new way.

This process offers the possibility to intensively observe, look, listen, and rethink each
flute part and component as if it was an individual and unique instrument. For example,
to observe the mechanics of the instrument, the areas where the parts are usually jointed,
the metal caps (or key tones) that cover the holes of the woodwinds, the mouthpiece and
even the parts of which it consists, like the reed, etc. It completely changes the way in
which you listen.

CM: It is fascinating how the flute parts suddenly worked as resonant bodies that were no
longer restricted to their traditional harmonic scales, to predetermined musical form.
How did your own individual listening practice or performing practice change, adapt,
transform, or benefit by this new instrument?

MP: My individual listening practice has changed dramatically. There is a kind of call-and-
response relationship between myself and the instrument. The instrument is in a constant
state of flux. I need to listen to this constantly. The instrument is going by touch and going
by feeling. Each time it is different because the slightest move makes such a change in the
sound. Sometimes the instrument sounded like frogs snoring, like being on an old boat,
the sound of cracking and moving, or like walking on a very old wooden floor. It calls on
a connection to intuition. I have to feel the vibration when I place the tip of my fingers on
the membrane, and when I feel the nylon line moving I start touching, stretching it slowly,
just by feeling it. And I kind of stretch my ear so much so that I can hear all these micro-
changes in the sound, these micro-vibrations, and respond to them, also with very tiny
movements, which will have a great impact on the sound. On the level of materials, it is
the amount of colophonium, or the age of the membrane, which determines the sound,

Figure 24.i.8 Quartet New Generation performing *Untitled IV*. Photo: Pe Lang.

and on the level of performing the instrument, it is about how much pressure is applied to the membrane, or the strings, or how I increase the tension between motor-driven device and the tube or flute part. There's no chance that you can repeat it, each performance, each moment is different. And this is almost like working with a living organism. The material changes are transformed into sound with the help of a resonant body. Thus, concerning my performance practice, this has also opened up new avenues for me. For instance, sometimes I focus on visual aspects, that is, the ways in which the nylon line is moving, and I can see for instance how much pressure is applied, and how this corresponds with the actual sound behavior. The way in which the visual dimension also becomes connected to a sonic behavior. I love the idea that you create an instrument, and then you let the instruments to tell you how you should behave. When I took this class in mechanics at Cornell University, the instructor said to me whenever you use a machine you have to pay close attention to how the machine sounds. If something does not sound as it should, this means that something is not right. You achieve your understanding and knowledge of the machine and how to operate it through listening, and through observing its behavior.

CM: Another very interesting quality of your work, as I perceive it, is how it oscillates between two poles: the mechanics, exact measurements, minimalism, functionality on the one hand, and something very subtle, organic, flexible, responsive on the other hand. Could you describe this in a bit more detail, both regarding the process of "building" the instrument/installation, and as part of the performance/operation of the instrument/composition?

MP: I adore this sort of contrast between something that is fixed, like the mechanism, and something that is completely open and flexible, even breakable. In *Untitled*, you have the motor, which works very precisely and which can be controlled, and then you have the nylon line which is attached to the motor, and to which colophonium is applied. You can control the amount of colophonium, but through the friction that is created while the motor is running, you cannot control how the colophonium will be rubbed off and how this creates different sounds according to the amount of friction created and the speed at which the motor rotates. In the *Untitled* series, the instruments are made of parts that are fixed and parts that are flexible. And the crucial point of these works is the effect of the

marriage between the different materials, mechanics, and the resulting physical and sonic behavior. In my work, the motors kind of build a structure which is very clear, they have a clear functionality, and within this structure, there are certain parameters that influence the system and that create their own system, so to speak, they have a personality. This again is related to the aspect that the sonic as well as the visual aspects of the materials guide me. When building an instrument, I am looking for materials that, when I put them together, form an interesting organism. And then I let them run, for example, and observe how they behave. And I'm interested in the question how I can create something out of a very small number of materials or, or to start from one very tiny element. How can a piece, an installation, a performance and a sound sculpture arise from this economy? Music here is stripped to its bare essentials: something moves, vibrates, and this creates sound.

24.ii

Pickups and Strings

On Experimental Preparation and Magnetic Amplification

Yuri Landman

A fundamental sound source in music is the string. In this chapter, I discuss some basic acoustic principles of strings and how I explore them in my craft as a sound artist. I focus especially on the possibilities of guitar pickups.

In 2001, I dismantled my Ibanez guitar for the pickups and made my first third bridge table zither. It sounded excellent, but had flaws with its tuning. After four years of instrument building, I was confident enough in my abilities that I approached the band Liars and built the Moodswinger for them in 2006. This is what kicked off of my career as sound artist specializing in experimental instrument building, preparation techniques, string resonance, microtonality, and electric amplification. In this chapter, I will try to walk back through the different steps of instrument building, hacking, string preparation, listening experiences, sound concepts, and sound production that brought me to the Moodswinger—and to my sound practices of today.

The Guqin and the Lyre

Archaeologists assume that flutes (made from bones or wood) and percussion instruments (made from wood or stone) are the oldest instruments invented by humankind. But there are stories that contradict this, and claim that the third group, string instruments, are the oldest, with different cultures using different kinds of natural fiber as strings.

The guqin is an ancient Chinese instrument. Legends claim that it has a history of about 5,000 years, though the only examples to have been found in tombs are from about 2,500 years ago (Figure 24.ii.1). The guqin uses silk for the strings. The Lyres of Ur are the world's oldest surviving stringed instruments, dated 2550–2450 BCE (Figure 24.ii.2). On lyres, the strings were made from animal gut. Gut strings have the disadvantage of irregularity

Figure 24.ii.1 The guqin, a traditional ancient instrument from China.
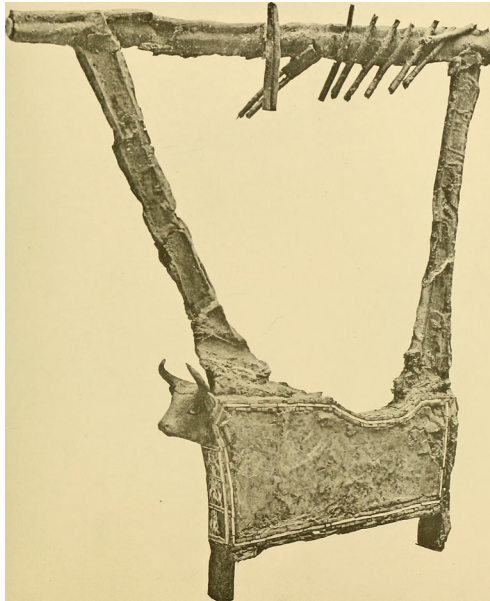
Figure 24.ii.2 Silver lyre from the Great Death Pit, Ur excavations (1900).

and pitch instability due to changes in humidity. Copper was, then, already in use for several reasons, though its use for instrumental strings only appeared later. The benefit of copper is that it can handle more energy from the player's attack and is therefore more suitable for string percussion instruments such as the hammered dulcimer. Steel was invented after copper and can handle even more attack. By comparison, nylon is a relatively new string material owing to its recent discovery, dating from around 1930. The benefit of nylon is that has a good tuning stability and suffers less from problems with humidity than most natural fibers. Nylon is very elastic and sounds softer than metal strings. It is also cheap to produce when compared to silk and gut strings.

Besides the choice of material, strings can also be "plain" or "wound" in construction. The strings described so far are would be called plain, whereas wound stings have a plain core that other material is then wound around. This allows heavier strings to vibrate at lower frequencies without losing flexibility. Before wound strings were common, so-called catlines were used as bass strings on instruments. Catlines are several gut strings wound together and soaked in heavy metal solutions to increase the string mass, lowering the rate

of vibration and thus the pitch. Pretty much all string instruments work with these materials as the string source, though it is, of course, also possible to use other materials.

Near-Death Strings

When I was young, I developed a strong preference for loud rock music. This started with quite straightforward rock like AC/DC, Led Zeppelin, and Van Halen. I loved the timbre of the amplified strings: their rhythmic attack, the way each note was drenched in rich overtones, all fueled by the distortion of the amp and assorted fuzz pedals.

In my early youth, I had the flu almost every year. During this illness I suffered from fever dreams with hallucinations. A few years ago, I read about near-death experiences {NDE). Professor Emeritus Kenneth Ring is a researcher on this topic and subdivides the NDE on a five-stage spectrum: *1. Peace, 2. Out-of-body experience, 3. Entering darkness, 4. Seeing the light, 5. Entering the light.* I didn't experience all stages, though I had distorted visual perspectives. Far away and nearby, big and small were no longer clear to me. This is often pictured in movies when a person freaks out. I experienced stage *3. Entering the dark void*. Dimensions became more unclear to an extreme degree. I felt I was the same size as the Earth and walked between small planets that were connected by ropes. It was a scary environment and it was made all the more so by a battle with an entity coming from the light. Last year, I saw a drawing by Steve Ditko of the character Dr. Strange that bore a remarkable similarity to what I had seen. The only difference was my experience had felt as if it were in the style of H.R. Giger. It had been much darker, grayer, and dirtier. Pure evil. Along with the spectacular visual elements, I heard a strange pulsing drone. I assume the pulse was my heartbeat. It was not a clear tone but rather a spectrum of sounds with low frequencies as well as very high, eerie tones.

The Cure and Sonic Youth

At the age of ten, my brother brought home the album *Pornography* by The Cure. This band sounded so unearthly and scary to me, especially on this album. It was not at all like the previously mentioned heavy rock acts. This was on another level. The guitars and drums had this amazing timbre. There were gloomy overtones that sung along with the music. It was just like I had heard in the dreams. I was not surprised to hear that the band was using a lot of drugs during that period and that there were severe internal tensions between the members. Negativity at its best.

In 1991, Nirvana had their breakthrough with "Smells Like Teen Spirit." I was twenty at the time and immediately got sucked in by the countercultural noise rock scene the band came out of: Mudhoney, Dinosaur Jr, Fugazi, Sonic Youth. The last band on this list changed my perception of what music could sound like from the very first moment I heard them. Sonic Youth were a band that applied the rough-and-ready approach of punk, but with a

completely free composition style, and a sound . . . Theirs was a sound that was even exceeding the scary tunes from The Cure during their dark, druggy period. This was pure Armageddon noise! But hidden in the timbre of this noise there was very distinctive a shimmering beauty that had a calming, meditative vibe. I saw in photos and read in articles that Sonic Youth played on heavily modified guitars with drumsticks and screwdrivers stuck under the strings. It was a strong punk rock statement. It looks ultracool on stage when you drum on your guitar with sticks.

But there was more behind this practice than just a theatrical performance. I remembered my childhood guitar and the Japanese chopsticks I put under the strings to get those nice sounds, somewhat reminiscent of the sound of The Cure, but also of Asian music. Alec Foege writes in the Sonic Youth biography, *Confusion Is Next*, that Glenn Branca and Lee Ranaldo both used steel wire as strings (Foege 1994, 66). I assume it was plain steel wire, not steel wire rope as is used for brake cables for bikes as that material is difficult to work with, especially for the tuning pegs, so I would not recommend it. Steel wire is very sturdy, so I wonder what the benefits are of this choice of material?

There is a small-scale electric bass guitar with rubber strings, and Pierre Bastien, the French composer and instrument-builder, often plays with rubber bands in his performances. I occasionally use the cotton variant, elastic, commonly used for underwear, which has the benefit of not breaking as easily and which doesn't dry out as the postman rubber bands do quickly. I've never seen people using other natural fibers, such as cotton or wool, or synthetic fibers such as viscose, but it is possible, of course, if you want to experiment. My expectation is, unlike the elastic examples that have unusual acoustic properties, elastic yarns, plies, or ropes will not lead to mind-blowing results (but feel free to try out your own ideas and disprove my assumptions).

Third Bridges Are Sex

Prior to Sonic Youth during my secondary school, I was taught about overtones during my physics classes. I quickly realized that the string preparation techniques of Sonic Youth had a connection to this phenomenon. Determined to do something with music and dreaming of being a rock star, I bought a guitar and, from day one, I ignored the commonly accepted way of learning the guitar and started to investigate overtone theory using what I call *third bridges* clamped under the strings. I wanted to capture the sound of my fever dreams and make music with it. I wanted to give people audio nightmares! After a few experiments, I found the sounds of Sonic Youth's album *Confusion Is Sex* (1983). The chiming bell-like tones on that album are made just by electric guitars and screwdrivers with no effect pedals whatsoever. All I was hearing were vibrating strings.

So, what happens, precisely, when strings vibrate? You probably remember a jumping rope from your childhood. The rope goes up and down and this could be called the fundamental vibration or, in musical language, the fundamental or first harmonic. Perhaps you also remember attaching the rope to a fence or tree or whatever? When you then

swung the rope twice as fast you got a pattern with the middle nodal position that looked like this: ∞. When this pattern appears on musical strings it is called the first overtone or second harmonic standing wave. An easy way to manipulate the string so that it enhances one of the harmonics would be to lightly touch the string at the nodal position of a specific harmonic. Guitarists call this *playing a flageolet*. You could consider the nodal positions as gates that filter the overtones. Harmonic positions play a crucial role in preparation techniques. The harmonic series follows the Farey sequence. The open string is the first harmonic. The second harmonic appears at half of the string's length, the third harmonic at one-third and two-thirds the length. The fourth harmonic at one-quarter the length and three-quarters the length, and so on.

String lengths are inversely proportional to frequencies. So—under the condition that the string is made of the same material, has the same thickness and tension—a string that is half the length has a frequency that is twice as high. In music, one considers proper frequency ratios consonant: So if a sound has a frequency of 100 hertz (Hz), it will blend well with other logical values, such as 200 Hz (string length 1/2), 150 Hz (3/4), or 166.667 Hz (1/3). Even 125 (4/5) or 120 (5/6) are still pretty consonant. Even more complex values also work, though the more complex the ratio becomes the less consonant the interval becomes. Musical scales based on these simple ratios are called "just intonation" and they form the base of most traditional musical scales all over the world. The fact that length and musical properties are connected can be applied aesthetically in geometric configurations that lead to elegant sounds. This is one of the reasons why so many sound art and sound therapy concepts often involve geometric structures as the building blocks for their aesthetics.

For ten years, I worked on prepared guitars. During recording sessions this worked well, but when I had to reproduce a particular sound, it proved difficult to precisely recreate the particular modification I had previously used. The system was too unstable and chaotic. It was even more of a nightmare when live, since preparations always move a bit during performance, and, even worse, can fall out on stage. What's more, they can quickly cause an instrument to become severely detuned. On the following tracks, you can hear distinctive intros made using the third-bridge-playing technique: The Cure's "Siamese Twins," Nirvana's "You Know You're Right," Sonic Youth's "A Bull in the Heather," Slint's "Good Morning Captain."

The Moodswinger

The *third-bridge* preparation of the Moodswinger is what I am now best known for, in which you place an additional bridge (for example a pencil under the strings of a guitar) at the position of a simple ratio of the string's length. If you pluck the string on the non-amplified string side the amplified zone starts to resonate along in a highly elegant multiphonic. Many guitarists will already be familiar with this sound if they have experimented with the strings at the headstock behind the nut or the space behind the bridge tremolo of a Fender Jaguar or Jazzmaster.

Figure 24.ii.3 The Moodswinger, made for Aaron Hempfill of Liars, 2006.

The distinctive sounds produced by third-bridge preparations are called multiphonics. A string usually produces a loud fundamental frequency and quieter overtones. You can use distortion to balance out this cluster of tones, which makes the harmonics become more audible. With the third-bridge preparation, however, something odd occurs. It only works well on simple string length ratios. At these points, the resonance increases a lot, primarily in the harmonic that would usually appear at that point when you play a flageolet. Along with this harmonic, the plucked part of the string vibrates at its own frequency, and the part of the string on the other side of the bridge also vibrates softly at its own frequency. So, this multiphonic consists of three tones: the harmonic, the plucked part of the string, and the part of the string behind the third bridge. It sounds very Eastern for our Western ears, with (Chinese) bell- or chime-like tones, partly due to the envelop of the tone. It starts out with a bright overtone and, over time, both of the frequencies of the string parts swell in volume. In a bell, something similar happens. First the clang followed by a hum tone.

The third-bridge method has a strong connection to natural philosophy, theories of a harmony of the spheres, microtonality, even chaos theory. So, it became a prominent part in my scientific research, resulting in a still ongoing investigation. The diagrams from which I work continuously explicate these third bridges as part of harmonics theory, and they connect the concept of the third bridge with Harry Partch's Utonality and Otonality concepts.
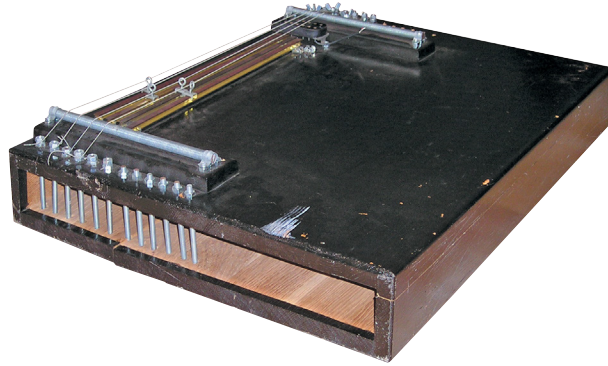
Figure 24.ii.4 My first zither with movable bridges, unfinished 2001.

The Nice Noise of String Preparations

In 1938 John Cage wrote a piece called *Bacchanale* for a dance choreographed by Syvilla Fort. The room where the dance was to be performed was too small for a musical ensemble, but Cage came up with a remarkable solution by modifying the grand piano that was in the room. He placed various objects on the strings changing the timbre of the instrument to a sound reminiscent of steel percussion instruments such as those used in gamelan. This preparation technique ended up being widely by many modern composers; in the 1960s it was adapted for guitar by Keith Rowe and further popularized by Fred Frith in the 1970s, and then Sonic Youth in the 1980s, among many others. I made the decision to make my own instruments shortly after I had developed sufficient skills with my hands to do so. What follows are the most well-known tricks for string preparation these days (Hopkin and Landman 2012):

a)   *Tuning*: There are many ways to tune sets of strings. You can go for traditional scales like major, minor, or pentatonic scales. Such scales have the benefit of sounding elegant with intervals we're already familiar with from most pop music we listen to. As mentioned in the previous section, it is always good to keep the frequency proportions in mind if you want an elegant sound. A ratio of 5:4 between two strings sound more serene than the open string and fourth fret major third, for instance. They differ slightly in consonance. The logarithmic 12TET fretboard is a mathematical compromise to allow guitarists to transpose on their instrument, but has some weak ratio frequencies that are not just, and thus sound less proper. In case you want to step out of the common Western musical tradition, you can choose between two other options: You could not tune at all and experience whatever the chance outcome of this "procedure" coincidence gives you (as in John Cage's concept of indeterminacy); or you could tune the strings in alternate scales (as in microtonal music).

    The number of possible alternate scales is infinite and is a bit too broad to describe in this short chapter. Many non-Western music cultures use different

scales, which could also be explored. In the 1940s, Harry Partch began composing scales based on the harmonic and subharmonic series. In practice, this is working with the fractions of strings as the medium. Much of his theory and musical scales are described in his book *Genesis of a Music* (Partch 1974). Another luminary of microtonality was Ivor Darreg. Darreg used the same logarithmic principle found in the Western 12TET scale, except he divided the octave not in twelve equal steps but into more or fewer steps. So, for instance, he worked with 10TET, 14TET, or 22TET, or whatever number of steps he found interesting. Through this method, he was able to make music with intervals that do not appear in the 12TET system.

A third way to get intriguing sounds through tuning is to create sets of unison strings. Or, in my opinion even more interesting, sets of strings tuned in octaves. This produces an effect that is both ethereal and choral. This method of tuning was used often by Glenn Branca and Sonic Youth, giving them their signature guitar sound.

b) *Amplification with a soundboard*: When you work in the field of sound art you often find an interesting sound that can be too quiet or subtle to be presented properly. There are several ways to increase such a sound's volume. A distinction needs to be made, however, between methods of acoustic and electric amplification. You can amplify a string vibration acoustically with a soundboard—as found in a piano, for instance. A soundboard can be made of all kinds of materials. In traditional musical instruments, hard wood is most often the material of choice because of its excellent resonance response. There are many kinds of tone wood and each has its own distinct timbre. The harder the material, the more the high frequencies will be amplified. So, if you want a bright sound, a metal plate will provide better results than cardboard. Plastics can also give good results. A funny material that is rather fragile but, sound-wise, can be very useful is Styrofoam, owing to its light weight. Independent from each other, Bart Hopkin and the unfortunate young, deceased, and obscure Flemish sound artist George Smits both worked with this medium to amplify their instruments/sound art pieces. Drum skins can also be used. Originally made from animal skin, today plastic skins exist as well. A drum mainly amplifies the tones found in the attack phase and quickly dampens the string vibration, changing the timbre into a more percussive "plocking" sound. Rigid materials, like wood or metal, have a tendency to resonate with their own physical vibrations. Their *self-resonance* can easily create feedback when used in combination with a microphone. Flexible materials, such as drums, are better at absorbing their own self-resonance.

c) *Acoustic amplification with sound boxes*: To amplify lower frequencies, a sound box is often used; as we find on an acoustic guitar or a violin—but a tin-can telephone is also an example of this. A sound box, most of the time, is a soundboard mounted in an open chamber. The open chamber enhances specific low frequencies in a similar way to a Helmholtz resonator. The bigger the chamber, the lower the sound will be. Like using a drum as a soundboard, sound boxes with drums also exist

(on a banjo for instance). Lesser known, and also quite uncommon, is the use of a horn on string instruments, for example, a Stroh violin. Many ancient and exotic instruments exist with all kinds of natural sound boxes made from gourds, coconut shells, turtle shells, or armadillo shells. In South African music cultures, the player's mouth is used as the sound box, in a similar way to how a Jew's harp is played. By changing the shape of mouth specific overtones can be emphasized. The young French artist Cassandra Felgueiras has built a ceramic violin with an open backside to be placed on her face. By opening her mouth, she can create a wah-wah effect similar to that of the berimbau and the string bow.

d) *Buzzing bridges*: The Indian sitar has a specific timbre created by a buzzing bridge that heavily amplifies the higher overtones of a string's vibration in a rapid percussive way.

e) *Electric amplification with microphones:* Acoustic amplification requires a substantial amount of energy coming from the string. If the string tension is low, if the string is thin, or if the attack is weak, electric amplification is often a better solution. Microphones have the disadvantage of picking up environment sound, which can easily lead to feedback. There exists a wide variety of mics, each with their specific qualities for different usages. It falls a bit outside of the scope of this chapter to dive deeper in this topic.

f) *Piezo contact microphones:* A well-known way to amplify sounds is by using a contact mic, also known as a piezo mic or piezo disk. This microphone is comprised of a crystal surface on a copper disk that changes vibrations into a microcurrent. It is very easy to apply these contact mics, you just mount one to the soundboard (or close to the bridge where the strings are attached to the body). Piezos are super cheap (I buy them from China for seven cents per piezo, European and US shops charge usually one to two euros). As piezos are so cheap, they are very popular among students and sound researchers. Piezos, however, also have large disadvantages and limitations. The crystal surface can break very easily, which means the piezo is dead when this happens. Besides the fragility, the sound is also quite bright or harsh. The higher frequencies are amplified more than the lower frequencies. You can mute the brightness acoustically by adding a thin layer of felt, cotton, or rubber between the piezo and the vibrating soundboard/bridge. Also electronic preamps and frequency filters can optimize the sound quality, but that is beyond the scope of my knowledge. Some experimental synthesizer builders, like Derek Holzer and Nicolas Collins, have these skills and expertise. Besides the bright sound, piezos tend to feedback quickly when you play though powerful amps. Semi-acoustic guitars have piezos. Because of the feedback and bright sound they do a poor job in combination with overdrive, distortion, and fuzz. That's why most heavy rock bands go for electric guitars with coil pickups instead, which are better suited for the job.

g) *Electromagnetic pickups*: For some reason, the magnetic pickup is not very popular among sound art researchers. In my opinion, the guitar pickup is a vastly underutilized amplification method. Somehow musicologists and people involved

with "high art" (classical music, modern music, contemporary music, new music, or whatever terms are used for it) appear to have a knowledge gap and most of the time have little knowledge about the post-World War II development of guitar technology. They know what overdrive is, but they do not know the specific differences between a lipstick pickup and a Strat pickup. Or the differences between a Boss DS1, an Ibanez TS9, or a Pro Co Rat pedal. Or a Fender Twin compared to a Vox AC50, etc. It's a complete parallel universe. I believe that this is partly the result of the perceived gap between "high art" and "low art." Pickups are part of low art pop music culture and are thus not part of the high art scene. Rock guitar players develop a vast intuitive understanding during their years of practice about the differing sounds of different guitar pickups used in combination with amps and effects pedals. This kind of knowledge is very subjective and you cannot just learn it from books. It is only through years of practice that you can develop an awareness of what you think sounds better and what does not. That makes it a hard topic for formal education.

Electromagnetic pickups only work if whatever is vibrating is made from magnetic material, such as iron, nickel, steel, or another magnet. So when we're talking about strings, the strings must be made of steel. The most well-known example is the electric guitar string, but piano wire, harpsichord wire (a thinner variant of piano wire), or other steel material such as steel wire, wire rope, chains, or wires prepared with whatever our imaginations can come up with can be used as alternative string options if one should want to try something as peculiar as possible. For instance, I have also amplified steel bells, circular saw blades, and fitness springs using electromagnetic pickups. Probably the biggest disadvantage is their relative lack of availability and the costs involved. I also buy pickups from China in bulk for a few dollars per pickup, but guitar manufacturers, shops, and builders have a strong tendency to be a bit mystical about certain pickups and increase the prices, sometimes to incredible amounts ($100 is not exceptional for "true vintage hand-wired pickups"). I'm quite cynical about this, especially when I heard that the song "I Bet You Look Good on the Dancefloor" by the Arctic Monkeys was produced using a $100 Squier Telecaster with a small transistor bedroom amp. People dance wildly when that track hits the speakers and I've never heard anybody complaining about the poor sound quality of this superhit song.

There are a few things to keep in mind, when it comes to the quality of pickups. Good quality pickups have magnets in the coil. Alnico 5 is a well-known alloy consisting of aluminum, nickel, and cobalt, and it is known to produce a good sound. Ceramic pickups are cheaper, and you can recognize these easily by the magnetic bar glued at the bottom side of the pickup. Squier and Epiphone guitars are well-known budget guitars that often come with these kinds of pickups. Ceramic pickups have a tendency to sound brighter and have microphonic properties (when you scream in the pickup you can hear your voice coming out of the amp) and thereby feedback more easily. Tip: Replace the pickups on the cheap guitar you first learned to play on and you'll see you have a decent sounding guitar for just a few bucks extra.

Another disadvantage is that electromagnetic pickups have a tendency to hiss a bit. They are basically antennas that pick up electromagnetic waves, which are always present in the

universe and even more so in modern society. Once, a massive hum occurred on all the instruments we were building during a workshop. I was in shock until I realized the space we were working in was below a train line. That was what caused the noise, not the specific pickups I had used.

On another occasion during a performance on a farm, I heard a "tic!" every few seconds. The owner of the farm told me no sound guy had ever had problems in that space before. It was really odd. I was the very first. Until I looked out of the window and saw horses and asked if he used an electric fence. He confirmed that he did and, after shutting off the electric fence, the tic was gone and we could perform. Single coils always suffer from this natural hiss. Therefore, smart engineers developed the humbucker pickup, which consists of two single coils wound in reverse from one another. This reduces a good amount of the hiss, but also an amount of the volume of the overtones. Timbre is defined by the compositions and presence of overtones. My job, as an inventor of musical instruments, is heavily focused on enhancing the overtones, so I'm reluctant to work with humbuckers and accept the hiss as a compromise.

Despite these disadvantages pickups also have great advantages. Amplification with electromagnets can—aside from making soft sounds more audible—also function as a good medium through which to create sound effects, which would not otherwise be possible. Between 2006 and 2008, I had a sort of media breakthrough by producing a series of string instruments for famous experimental rock bands (Liars, Sonic Youth, Half Japanese, followed by many others afterward). In a nutshell, all these instruments are based on local amplification. By placing extra bridges or repositioning the pickups in odd ways, I was able to amplify selective strings or parts of the string or harmonic resonances. One way I did this was through the third-bridge technique, as I described above. Another simple method I used was to rotate the pickups in the direction of the strings, so that all six poles of one pickup were underneath one or more, but not all six, strings. Another pickup next to the first picked up the signal of the neighboring strings. By connecting the first pickup to one output and the other pickup to a second output, I created a stereo guitar, with the sound from the bass strings coming out of one amp and the sound of the higher strings coming out of another. I fired my second guitarist as soon as I could, as you can imagine.

24.iii

Mechanics

From Physicality over Symbolism through Malfunction and Back Again

Morten Riis

The following chapter will introduce a novel perspective that helps us to understand why art plays such a pivotal role in understanding our often unproductive conceptualization of technology as something predetermined. This new perspective stems from my own artistic explorations into mechanical music machines, paired with the philosophy of Ludwig Wittgenstein. This provides us with a unique insight into the role of art not only as something that beautifies our lives but also as something that becomes a crucial partner, allowing us to comprehend and react to an often deterministic understanding of technology. The text proposes how practical artistic work is not atheoretical, but offers unique perspectives on how technological predeterminism, language, and simple mechanical principles are inextricably linked with each other.

The Artist

Throughout the last decade as an artist, I have been working with mechanical principles to generate sound and music. This has resulted in a multitude of concerts, sound installations and performances. Some of these include *Steam Machine Music* (Riis 2010), a mechanical musical instrument constructed from vintage Meccano parts, driven by a steam engine; *Opaque Sounding* (Riis 2014), vintage slide projectors reconfigured into electromechanical optical sound generators; and *Sensations of the Pure* (Riis 2017), a recreation of Herman von Helmholtz's electromechanical tuning-fork synthesizer, originally conceptualized in 1863 (Helmholtz 1895, 121). What all these pieces have in common is the use of simple mechanical principles in order to realize and maintain a core of functional and aesthetic principles, crucial for the existence and expressions of the pieces. Simple mechanical and physical principles are put into play. One example would be boiling water that becomes
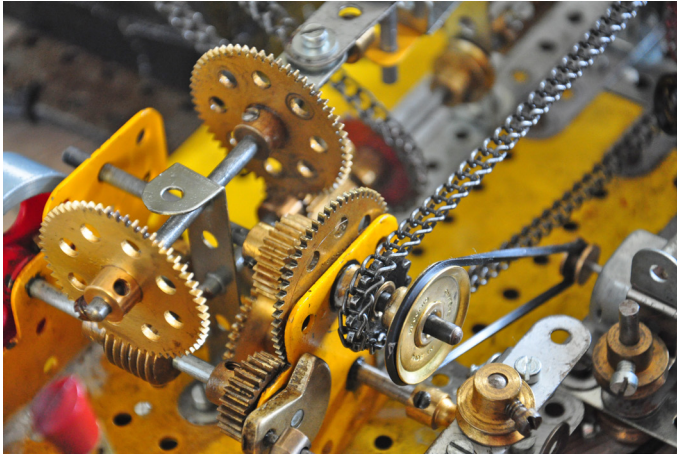
Figure 24.iii.1 Close-up of *Steam Machine Music*. Photo: Nina Ventzel Riis.

pressurized steam setting a piston in motion to drive a multitude of mechanical rhythm generators, music boxes, and to excite strings. Another would be a simple lever system that opens and closes resonating tubes that amplify the specific frequencies of tuning forks and geared pulley mechanisms that drive perforated paper strips through a slide projector, thus controlling the intensity of light that is being let out. There was also the rattling chains connected to cogwheels over long distances, resulting in issues of imperfect timing when two mechanical cogwheels interact. And the shaky rhythms that emanate from perforated paper strips that slide over the pins of a mechanical music box, all these—and many more— factors are at stake when working with basic mechanical principles in my artistic production.

These music machines, as I call them, can be seen historically as a continuation of the traditional Greek noun for mechanics, *mechane*, which originally meant "an instrument used to lift heavy objects" (Mitcham 1994, 165). Later, however, Aristotle introduced an understanding of mechanics as "bringing something into being" (Sawday 2007, 1), referring to the machine's manifestation as something artificial rather than natural. In my work, the use of mechanical principles very much resonates with this traditional understanding and thus such principles are used in order to gain a specific functionality. However, the use of these principles also renders it possible to bring something new into being. Something that both produces a sensual experience and additionally raises questions about what it means to work with and experience technology-driven art/music.

Physicality and Malfunction

On one hand, these music machines are physical objects that are brought into being by me, the artist, to do a specific task—to generate and produce music. They do so partly by automatic processes and partly by processes and actions that are guided and controlled by the performer. The machines are powered by steam, hand, and simple electronics, which are distributed by various pistons, chains, cogwheels, strings, levers, and pulleys.

These transmissions and distributions can be regarded as key aspects of the machinic entity that comprises these devices; a flowing that spreads throughout the mechanism, ultimately transformed into sound in the appropriate mechanical parts. But the automatic and autonomous abilities of these music machines are very questionable and unstable. Something that manifests itself in their constant need for maintenance and service, making the role of the repairman an integral part of the machinery (Riis 2013); a notion that could be described as having communication value and pointing toward an all-inclusive abstract understanding of the term "machine" (Deleuze and Guattari 2000). The problems I encounter when dealing with these specific machines present themselves as having both practical/technical perspectives and, more importantly, a philosophical dimension—a dimension that does not stem from reading theoretical works but, rather is generated by the actual technological object. It is not theory that I read into the machines, but something that comes from a close encounter with the physical machine, exposed through my artistic process of dismantling and reusing existing technologies in the attempt to, on one hand, create an aesthetic expression and, on the other, outline the philosophical questions that this artistic practice exposes. According to Martin Heidegger, "practical behavior is not a-theoretical," a statement that could be understood as a way of framing the relationship between observing and acting, on which Heidegger ultimately suggests that "action must employ theoretical cognition if it is not to remain blind" (Heidegger 1996, 65).

A Post-Digital Comment?

But in a modern digital age, why the sudden interest in recreating and reusing old mechanical principles for conducting tasks that, with a blink of an eye, could have been realized by open source microcontrollers (Arduino 2018), or embedded audio controllers (Raspberry Pi n.d.; Hackaday 2016)? Could this insistence on the recreation or rediscovery of past technologies be seen as part of the post-digital turn (Cascone 2000)?—understood as a critique of contemporary social networking culture, unfolding a "form of social networking that is not controlled or data-mined by those companies [Google, Apple, Amazon and Facebook]" (Cramer 2013, 237). Is my use of mechanical principles part of a critical practice that relates to a contemporary paradigm of controlled consumption through an enquiry into the poetics of lost technologies? In recent years, products such as *Portastudio for iPad* (Tascam n.d.), *Tape* (Focusrite n.d.), and *Virtual Tape Machines* (Slate Digital n.d.) have all promised the shrink-wrapped sound and feel of classic tape machines within the convenience of one's favorite digital workstation. However, the fascination of the obsolete can also stem from something other than the purely perceptual, and digitally reproducible, aesthetics of the analogue. Unlike *Portastudio for iPad* and similar products, the material engagement with old technologies themselves originates in a different poetics and a different ethics. This is a distinction between the digital and the analogue that can also be read as a distinction between the shrink-wrapped and Do-It-Yourself, as Florian Cramer notes (Cramer 2014). The fascination of mechanics, vinyl records, floppy disks,

and other historical and lost materials and platforms is, in this sense, a reaction to the ways cultural use is packaged within hardware and software interfaces, and an exploration of alternatives (Riis, Andersen, and Pold 2014). The post-digital could thus be used to describe a contemporary disenchantment with our digital information systems, and suggests an approach that no longer blindly follows technical innovation and improvement (Cramer 2014). Instead, the post-digital focuses on the fact that new media (software or not) is always heavily embedded in, and dependent on, our physical world and its resources—a world that needs our attention, and our skills of maintenance and repairing, in order to function.

Of course, these broader critical perspectives could be claimed to be part of my artistic reasoning for building the abovementioned mechanical pieces. But I believe that something else more rudimentary is at stake. Something that, in its core, fuels my artistic urges to be surrounded by and immersed in cogwheels, pulleys, strings, rubber bands, screws, and bolts. Something that takes its starting point in the fascination of what happens when two cogwheels meet, interact, translate, and move energy from one part of the machine to another. In this crucial meeting between two seemingly reliable pieces of metal, we find a multitude of different agendas and perspectives that ultimately fascinate me and, to this day, continuously inspire my artistic work. In order to better grasp this multitude of divergent meanings and perspectives, I turn to the writings of philosopher Ludwig Wittgenstein, who proposes different ways of conceptualizing these rudimentary actions that take place in the simplest gear box.

The Machine as Symbolizing Its Action

In a traditional understanding, machines represent in their purest symbolic form a deterministic system that transmits energy and motion through various states of the mechanism. The fundamental basis of the machine is that it performs one specific task, one specific movement—something that could be framed as a functionality built into the machine's structure; this is an illusory notion, according to Wittgenstein, despite its dominance. For example, in studying the mechanism of a complex gear train, it will become evident that turning one cogwheel will result in another cogwheel moving in a similar manner. Thus, the structure of the machine predetermines the conditions between the various cogwheels' mutual functionality. This symbolization of the machine's actions is framed by Wittgenstein: "The machine as symbolizing its action: the action of a machine—I might say at first—seems to be there in it from the start. What does that mean?—If we know the machine, everything else, that is its movements, seems to be already completely determined" (Wittgenstein 1976, 77).

Wittgenstein argues that the way that the cogwheels move in correlation with each other seems to be somehow built into the machine from the beginning. Let us now presume that we turn a cogwheel to verify that our presumptions are correct. Several possible events can, according to Wittgenstein, occur: One, the other cogwheel moves as expected. Two, somewhat surprisingly the other cogwheels do not move in the anticipated way. Three, the
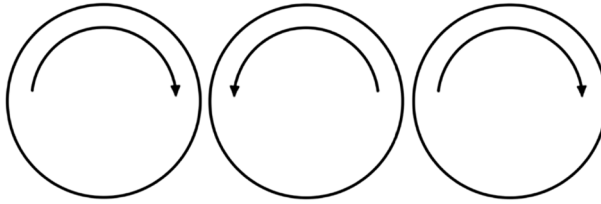
Figure 24.iii.2 Revolving wheels. Drawing: Malte Riis.

whole machine jams, and one of the cogwheels falls off its axle. The first instance fulfills our expectations, but the second will prompt an investigation of possible errors, while the third will launch a critique of the machine itself and its missing functionality. It is this third example, however, that I find most interesting, since it forces us away from a symbolic deterministic understanding of mechanical functionality, and points toward the chaotic complexity of the materiality of things. And, in this materiality, and the beautiful irregularity that it ushers, I'm truly at home in my artistic endeavors.

In our initial assumption that the operation of a cogwheel would put another one in motion, did we then forget that cogwheels sometimes jam or fall off their axle? No, but the possibility was ignored when we tried to figure out how the cogwheels should work. This means that we treat the machine in a certain way: We see the cogwheels as symbols in a mathematical formula that will calculate the movement of the machine, in the same way that diagrams are used to calculate how one wheel drives another wheel.

In a diagram like the one above, conditions such as the loss of energy, deformation, and friction are not depicted, though they could of course have been included. By seeing the machine as if it were a diagram, consequently considering its components as symbols in a calculation, one commits to a certain view or notion of the machine. Wittgenstein calls it "the machine as symbol":

> The machine's action seems to be in it from the start: we are inclined to compare the future movements of the machine in their definiteness to objects which are already lying in a drawer and which we then take out. (Wittgenstein 1976, 78)

The Predetermined Machine

So, the possible movements of the machine are somehow already present in the representation of the machine as a symbol—a symbol that is an expression of an ideal condition, where the components of the machine can only move in a predetermined manner. And if we consider the components of the machine as symbolic representations, their movements are no more relevant than the movement of the piece of paper they are drawn on—this is the extent of the gap between the operational machine and its symbolic representation. The "machine as symbol" subscribes to a notion of a deterministic system. When we observe the machine as a physical object, however, we see that the machine can move in ways that are unpredictable.

It may sound absurd to claim that a mechanism must—not just will—move in a certain way if other parts of the same mechanism move accordingly. But we use machines and drawings of machines to symbolize the laws of kinetics. A pair of cogwheels, as outlined previously in Figure 24.iii.2, is for example often used to demonstrate the principle that one of the cogwheels must turn clockwise while the other must turn counterclockwise. By using the machine to symbolize actions we adopt a kind of determinist attitude to its movements and, at the same time, ignore the possibility of failure in the mechanism. These conditions are, for Wittgenstein, philosophical:

> When does one have the thought: the possible movements of a machine are already there in it in some mysterious way?—Well, when one is doing philosophy. And what leads us into thinking that? The kind of way in which we talk about machines. We say, for example, that a machine has (possesses) such-and-such possibilities of movement; we speak of the ideally rigid machine which can only move in such-and-such a way. (Wittgenstein 1976, 78)

Wittgenstein insists that our comprehension of the predetermined movements of the machine as symbol is governed by language. It is defined by the discourse surrounding the machine. More specifically, this can be seen in the use of certain words such as have and must, as in the following construction: If this part of the machine moves in this way, that part must move in that way. These linguistic constructions maintain the illusion of the predetermined actions contained in the machine, thus forcing us toward a symbolic concept of it.

The Artistic Solution

Because our language determines the way we understand and comprehend the world, it is often very difficult to change our perspective. That is why we need art to change the way we understand the world. Because if we construct artistic devices and machines that use simple mechanical principles, then we get the great opportunity to regard the interaction of cogwheels not merely as symbols that fulfill a specific task but instead they become an aesthetic expression that talks to us in a completely different language. A sensual language that reminds us of the fragility within ourselves, the objects we surround ourselves with, and the world.

Notes

Chapter 1

1. See rainforestlistening.com for a further presentation of the artwork.
2. Timothy Morton's ontological standpoint is *object-oriented*, in line with Graham Harman and others. But in line with part of philosophical aesthetics, he still understands the aesthetic relationship primarily as a relationship between subject and object.
3. In Latour's critique of modernity in *We Have Never Been Modern*, his main point was that the division between the neutral, scientific, matter-of-fact world and the social, cultural world of meaning that is so basic to our society never happened! And in its simple construction, Mihara's piece puts this claim on the spot.

Chapter 2

1. See Lewis (2002) and Braxton (1985, 366). "Both aleatory and indeterminism are words which have been coined . . . to bypass the word improvisation and as such the influence of non-white sensibility."
2. See Piekut (2013, 135), "as Cage may have wished to see an integration of humanity with nature, he continually fell prey in his thinking to a modernist ontology that separated social affairs from natural ones, and that recapitulated an uncritical understanding of nature"; and also Nakai (2014), "How to imitate nature in her manner of operation: between what John Cage did and what he said he did."
3. Hear at https://archive.org/search.php?query=subject%3A%22Adventures+in+Good+Music%22.
4. The sociality to which I am constantly referring however here is not one of a "postmodernist," detached social analysis (Sterling 2003, 222) but a (re-)connective one enabled by contemplation and consideration of the real and visceral sounds of sociality in the context of our environment and on hand of how we are informed by our other senses.
5. "Lifestyle change" can in most instances have merely a symbolic value in politics; in this case, however, it is a fallacy that "all of us are responsible for climate change." As of 2010 already the world's richest 500 million people (roughly 7 percent of the population) were responsible for 50 percent of the world's carbon dioxide emissions (Assadourian 2010, 6). The way that the world's richest corporations therefore deal with resources and waste carelessly is the main factor in the damage done to the environment.
6. See also the permaculture principle of "energy cycling" (Holmgren 2002, 116).
7. See http://www.teebweb.org/areas-of-work/advancing-natural-capital-accounting/.

8. I would suspect that most forms of electronic and highly amplified music, mega amounts of digital storage and production requirements with a lot of travel, or transporting truckloads of gear would come out rating poorly.

9. A similar conclusion was reached by the sound art collective Ultra-red:

    Activist art has come to signify a particular emphasis on appropriated aesthetic forms whose political content does the work of both cultural analysis and cultural action. The art collaboration Ultra-red propose a political-aesthetic project that reverses this model. If we understand organizing as the formal practices that build relationships out of which people compose an analysis and strategic actions, how might art contribute to and challenge those very processes? How might those processes already constitute aesthetic forms? (Ultra-red 2000)

10. As one example, it's been remarked on by the futurists, artist Daniel Spoerri, and others, you can also in fact even eat art (Eat Art). http://www.civico103.net/en/archive/15/daniel-spoerri-eat-art-in-transformation/#.XD1qJ_x7nOQ.

11. See http://www.livingscoretheater.de/gongburgh.html. Also see Woodruff (2014b).

12. See http://www.jeremywoodruff.org/UrbanplanTen.html.

13. This association, which works for the rights of asylum seekers and immigrants in Germany, takes its name from the case of the asylum seeker Oury Jalloh who burned to death while in the custody of German police in 2005.

Chapter 3

1. We can speak of disaster as indicative of a continuum: from the middle passage to the mining of coltan in Congo; from the indigenous genocide and exploitation of native land in the Americas to the floods in Mariana and Brumadinho in Brazil. The examples are plentiful and any list would be incomplete.

2. In Glissant's terms, a culture's imaginary is not its engagement with the world in a real versus symbolic dualism, but rather their very ontological formation (1997, xxii).

3. Listen to the audio (in Portuguese) here: https://www.youtube.com/watch?v=57a0uI1-oJ8 (accessed August 22, 2018).

4. "Mom, dad, I'm in the occupation / and just to let you know I'm fighting for education. In state and technical schools (ETECs) there's no school lunch / we're still waiting for an answer while Geraldo [Alckmin, state governor] keeps quiet. Just a reminder: it hasn't ended / but it must end / I want the end of the Military Police. They are big, trained, and bear arms / but I'm a secondary students and you can only come in with an order. My demand is for Geraldo to stop cutting resources / stop stealing the school lunch and invest on education."

5. "Oh, damn it! I'm so high / I'm seeing occupations / from the South to the North."

6. "In the school we rule / I dare the police to catch us / Because in here we laugh and occupy the schools," and "[They] are spectacular / struggling schools / If the government closes a school, we occupy it."

7. My use of the term "Western[ized]" demonstrates that a division between Global North and South cannot account for the ongoing genocide of black and brown populations in northern countries such as the US or Canada, as well as these countries' continued occupation of indigenous land. Similarly, Latin American so-called "developing countries"

(like Brazil), also settler states, have come to see themselves as "Western societies" without never quite belonging to "the West" as a political, cultural, or economic categorization.

Chapter 6

1. Deutscher Akademischer Austauschdienst (in English, the German Academic Exchange Service) is a funding organization that promotes the internationalization of German communities of knowledge, and supports German-related language studies and knowledge exchange globally.
2. Interview held on February 24, 2018, at Elke Moltrecht's home in Berlin. Translation from German: Juliana Hodkinson.
3. *Institut de Recherche et Coordination Acoustique/Musique* - or, in English, Institute for Research and Coordination in Acoustics/Music.
4. Ensemble KNM, previously known as Kammerensemble Neue Musik Berlin.
5. Literally translated: cosmopolitan or liberal Berlin.
6. Interview held on May 14, 2018, at DAAD office. Translation from German: Juliana Hodkinson.

Chapter 7 ii

1. For Egyptian names, when available, I use transliterations taken from personal websites or personal written communications with those concerned. In other cases I use the most frequent transliteration in English texts.
2. These and the following quotations are from the author's interview with Jacqueline George, Cairo, March 27, 2017.
3. For an introduction to Ahmad Basiony, watch https://www.youtube.com/watch?v=--oTQCys VTs
4. This and the following quotations are from the author's interview with Magdi Mostafa, Cairo, March 30, 2018.
5. For documentation of this and other of Magdi Mostafa's works, visit Mostafa (2019).
6. Ahmad Basiony's brother.
7. Ania Szremski, arts writer, School of the Art Institute of Chicago, Illinois, July 2010. Quoted from Magdi (2019).
8. An earlier version of this work was shown at Townhouse Gallery, Cairo, 2014; while writing this text a later was being prepared for Abu Dhabi Art, 2017.

Chapter 9

1. For a highly engaging work on this question see Kaja Silverman, *World Spectators* (2000).
2. Loretta Napoleoni makes an extremely important examination of the emergence of new sex trade following the collapse of the Soviet Union, highlighting the relation between global economy and the body as a commodity (Napoleoni 2008).

3. See Abbie Hoffman, *Steal This Book* (2002).
4. See report "Kiss Protest held at Turkey subway station" (*Al Jazeera*, May 25, 2013).
5. For more on the "mirror stage," see Jacques Lacan, "The mirror stage as formative of the function of the *I* as revealed in psychoanalytic experience" (2007, 75–81).
6. While I am relating Wittig to Cixous, I also understand that there existed a critical tension between the two, and their theoretical positions. While Cixous proposed a notion of "women's writing," Wittig challenged the idea that the very category of "woman" was already decided upon by a patriarchal logic.

Chapter 10

1. "In the middle of a riot, I was asked by a stranger 'What are we running from?' I answered 'I don't know.' and he burst [out] laughing. Of course, the siren sound and shootings are main elements. They are sculptured in my generation's sonic memory" (Kaddal, e-mail to author, September 13, 2018).
2. Commissioned as part of *Orgasmic Streaming Organic Gardening Electroculture*, a group exhibition, curated by Irene Revell and Karen Di Franco, "looking at practices that emerge between text and performance, the page and the body, combining a display and events programme of historical and contemporary works."

Chapter 11

1. For sights and sounds of *EcoRift* nature sojourns see http://www.ecolisten.org/location_index.php (accessed March 20, 2019).
2. Ihde (1990, 72).
3. The sound database can be found here: http://www.ecolisten.org/sonic_events.php (accessed March 20, 2019).
4. Ascott (2003, 327).
5. Ascott (2003, 327, 327).
6. Ascott (2003, 327, 329).
7. Artaud (1938) and Brodrick (1982).
8. Garth Paine quoted by Heino (2018).
9. Ascott (2003, 327, 333).
10. Ascott (2003, 327, 334).
11. McLuhan and Parker (1968, 240).
12. Minsky (1980, 44–52).
13. Steuer (1992, 75).
14. Sommerer and Mignonneau (1998, 158).
15. Krueger (1977, 431).
16. http://www.acousticecology.org/writings/echomuseecology.html (accessed March 20, 2019).
17. Paine (2015, 82–9).

Chapter 12

1. Macon Holt, Chapter 17 in this volume.
2. https://www.theheartradio.org/season2/mrclausandmrsclaus.

Chapter 13

1. A HACKER MANIFESTO by McKenzie Wark, Cambridge, Mass.: Harvard University Press, Copyright © 2004 by the President and Fellows of Harvard College.
2. I met Pauline Oliveros at a Deep Listening® retreat in 2008 and attended two more retreats, live performances, and Deep Listening Conferences in the years following. Additionally, I have been teaching for The Center for Deep Listening at Rensselaer since 2015. However, I have not been in direct contact with the other artists mentioned here, other than attending the live performance of "Riot Days" in Luxor (Arnhem, January 30, 2019), and as they primarily function within societies whose languages I do not speak, I do sense I am a disadvantage while researching their work. That being said, I have made attempts to include non-English sources in my research, extending beyond that which is included in the references, and hope that I have thus achieved an adequate depth of contextual understanding, broader than an English-only perspective might give.
3. The footage of the videographers who were filming live was so disrupted that it was edited with earlier material to create the YouTube version published by *Freedom Requires Wings*— "Pussy Riot—Punk Prayer 'Virgin Mary, Put Putin Away'"—on August 17, 2012. There are many translations of the lyrics. The translation on the YouTube video mentioned here, which makes up for its poetic deficit by offering a punchy directness, includes the lines "The head of the KGB, their chief saint / Leads protesters to prison under escort / [. . .] The Church's praise of rotten dictators / The cross-bearer procession of black limousines / [. . .] Patriarch Gundyaev [Kirill I] believes in Putin / Bitch, better believe in God instead / The belt of the Virgin can't replace mass-meetings / Mary, Mother of God, is with us in protest."
4. Pauline Oliveros worked with kinesiologist and choreographer Elaine Summers, psychologist Ronald Lane, T'ai Chi master Al Chung Liang Huang, karate master Dr. Lester Ingber, and research assistant Bruce Rittenbach. Rittenbach took a before- and after-EEG sample for each participant and set up a biofeedback training laboratory where participants could monitor and learn to influence their brain waves, as a supplement to the autogenic training sessions (Oliveros [1984] 2015, 160).
5. Iannis Xenakis's *Pithoprakta* (1955 to 1956), John Cage's *Aria* (1958), György Ligeti's electronic composition *Artikulation* (1958), *Treatise* by Cornelius Cardew (1963 to 1967), Tom Phillips's *Golden Flower Piece* for keyboard, Opus 5 (1966), Cathy Berberian's *Stripsody* (1966), Kathleen St. John's *Centipede* from the *Insecta* collection (1978), and La Donna Smith's *PARTBE* (1980) are some remarkable examples.
6. Annea Lockwood's *Piano Burning* (1968), one of her *Piano Transplants* series, and John Cage's *49 Waltzes for The Five Boroughs* (1977) are two examples.
7. These are the most commonly used, familiar names for Yekaterina Stanislavovna Samutsevich, Nadezhda Andreyevna Tolokonnikova, and Maria Vladimirovna Alyokhina, respectively.

8. In this demonstration lecture Oliveros described her process of freeing herself from traditional notation, offering the audience a shared experience of focal and global attention states and an examination of various drawings made during academic meetings that gradually transformed into her use of the mandala as an organizing principle on various levels—tonal content, interactive modeling, spatial organization—within her pieces, which also began to be formulated as text scores or acoustic algorithms, "recipes that allow musicians to create music without reading notes" (Oliveros 2013, v).

9. How Oliveros entitled her book of collected writings from 1963 to 1980, published in 1984 and republished in 2015 in a second edition.

10. According to Goodiepal, he had borrowed money from the Ukrainian mafia to fund his LP project and to cure himself of his fear of White Pride's threats by presenting himself with an even greater fear of the mafia (SYGNOK 2011, 11:33). In the documentary taster, the other members of SYGNOK are said to have retaliated to this unilateral decision by Goodiepal to sell the machine (SYGNOK 2011, 12:42) by instigating a counter-hack: A number of the 500 krone notes were removed from the LP covers and replaced by SYGNOK counterfeits, thus reimbursing them for their time and expenses to rewire the Eventide. This might also be considered an interesting commentary on value within the world of art commerce. At what point might the actual value of these limited edition, carefully crafted counterfeit bills actually exceed the value of 500 krone, the monetary value that they represent? Counterfeit, *contrefait*, *contrefaire* = *contra-* (in opposition) + *facere* (make). Goodiepal found this counter-hack extremely funny.

11. Many thanks to The Pauline Oliveros Trust and The Ministry of Maåt, Inc., for their permission to reproduce this letter in full here.

Chapter 14.i

1. Davies (1999).
2. Whanganui river to gain legal personhood, Radio New Zealand News, Te Ao Māori, March 16, 2017.
3. Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 (2017/7), New Zealand Parliament Government Bill, 129–2.
4. *A Sound Map of the Hudson River,* published in 1989 by Lovely Music, New York; *A Sound Map of the Danube,* published in 2008 by Lovely Music, New York; *A Sound Map of the Housatonic River,* published in 2012 by 3Leaves, Hungary.

Chapter 16

1. Theorizations have focused on numerous forms and features of sound art practice, notably installation and site-specific work. Multimodality has been emphasized in reference to a history of crossover practices between visual arts and music (Motte-Haber 1999, 13). Exploring interrelations of sound and space is oft cited as a primary feature

(e.g. Motte-Haber 1999; LaBelle 2006, ix; Born 2013), along with situated or situational aspects of reception (Sanio 1999; Ouzounian 2006; Groth and Samson 2017), and including sound as conceptual element (Kim-Cohen 2009).

2. In their own ways, these movements emphasized placing attention on phenomenal experiences of daily life and subverting assumptions about normalcy and conventionality, using staged events, scores, and performances, etc. (cf. discussions in LaBelle 2006; Kim-Cohen 2009, among others).

3. Garrelfs features these at http://www.reflections-on-process-in-sound.net/.

4. Cf. Kim-Cohen's theorization of text scores as intertextual, *non-cochlear* sonic art (Kim-Cohen 2009).

5. http://ablinger.mur.at/hoerstuecke.html (accessed June 29, 2018).

6. This elides wider current debates around *sonic thinking*: its meaning, productivity as a concept, and in what context(s). Cf. Sterne on thinking sonically 2012; Al Cameron and Eleni Ikon, this volume, Chapter 19.

7. Georgina Born's seminal study of music institute IRCAM (Born 1995) offers an exemplary investigation.

8. This includes projects and research groups such as *Recomposing the City* (Ouzounian and Lappin) http://recomposingthecity.org/.research; *Sounding Conflict* (Pedro Rebelo); *Distributed Listening* (Franziska Schroeder and Pedro Rebelo); interdepartmental collaborations, for example with Queen's Architecture: *StreetSociety* (Ruth Morrow) and *StreetSpace* (Agustina Martire); and ties to local organizations such as PLACE NI.

9. http://sonicbikes.net/sonic-bike/.

10. http://www.musicaelettronica.it/the-art-of-walking-an-interview-with-katrinem/.

11. Artist website. Score and video available: http://www.katrinem.de/schuhzugehoer-path-of-awareness_midtown-ny-2015/ (last accessed May 20, 2018).

12. Such as the recent sound and culture focused network, SoCCoS (Eckhardt and Costa 2016).

13. By tabula rasa, I mean top-down regeneration projects that leveled large areas, including residential neighborhoods deemed "problematic," to build completely new structures. While well-intentioned, many such projects failed to solve problems, even creating new ones, as with well-cited Pruitt Igoe (see e.g. Tom Finkelpear 2001).

Chapter 17

1. The theory-fictions of the CCRU tried to map the world from a perspective inside the disintegration of old certainties and chart new line of flight away from them. As above with sonic fiction, theory-fiction engaged with the effects of a world in technological flux at the end of human history and those of the theories that had tried to explain them. They saw this as a kind of knowledge that exceeds the limited notion of rationality upon which liberal democracy was founded (Cybernetic Culture Research Unit 2017). The group were foundational to the development of the school of thought known as accelerationism.

Chapter 18

1. A feminist science fiction writer, Ursula Le Guin, when giving the commencement address at Bryn Mawr College in 1986, spoke about meeting composer Pauline Oliveros. She described the encounter as follows: "Early this spring I met a musician, the composer Pauline Oliveros, a beautiful woman like a grey rock in a streambed; and to a group of us, women, who were beginning to quarrel over theories in abstract, objective language—and I with my splendid Eastern-women's-college training in the father tongue was in the thick of the fight and going for the kill—to us, Pauline, who is sparing with words, said after clearing her throat, 'Offer your experience as your truth.'" Ursula K. Le Guin, Bryn Mawr Commencement Address, 1986, accessed August 30, 2018, https://serendipstudio.org/sci_cult/leguin/.

2. According to a classics scholar Anne Carson, since antiquity those who do not conform to "men's way of speaking" have been displaced into "the city limits, [. . .] relegated to suburban areas, like the mountains, the beach or the rooftops of houses" (Carson 1995, 125).

3. Amacher studied privately with German avant-garde music composer Karlheinz Stockhausen, where she developed her interest in "spatial music" (Amacher 2017, 117).

4. Peter Manning notes: "her decision within a year of appointment to resign from this post and establish her own private studio specifically to develop Oramics is indicative of her determination and commitment to explore new horizons in the medium of electronic music" (Manning 2012, 137).

5. According to Peter Manning: "The obstacles that she encountered along the way were nonetheless significant, not least in terms of denying her any material recognition for her own creative and technical endeavours. This lack of support made the situation all the more challenging for her in terms of developing the resources she aspired to" (Manning 2012, 137).

6. Schafer's reading of the concept implies the following: "the soundscape is any acoustic field of study. We may speak of a musical composition as a soundscape, or a radio program as a soundscape or an acoustic environment as a soundscape. We can isolate an acoustic environment as a field of study just as we can study the characteristics of a given landscape" (Schafer 1993, 7).

7. To clarify, this is not a quote, but an expression that has been personally overheard time and time again by both women and men in the field.

Chapter 19

1. Where do we stand as white academics? As Jack Halberstam writes introducing *The Undercommons* (2013), "no one will really be able to embrace the mission of tearing 'this shit down' until they realize that the structures they oppose are not only bad for some of us, they are bad for all of us" (Moten and Harney 2013, 10).

Chapter 20

1. By using the word fiction, I do not wish to evoke concepts related specifically to language or literature, but rather the original meaning of fiction as that which invents or creates something. This use of fiction has a precedence in sound studies discourse as sonic fictions from Kodwo Eshun to Eleni Ikoniadou; and Deleuze and Guattari use fiction as a way to privilege the act of creation as opposed to mere narratives. Of note here is also Alexius Meinong's theory of absistence or subsistence, where certain objects are fictions insofar as they exist, yet they nonetheless lack being (Meinong 1960 [1904], 79).
2. Hyperstition is an amalgam of "hyper-" and "superstition," that describes the retroactive process by which fictions makes themselves real.
3. For more on Morten Riis's practice, see his contribution in this volume.
4. Entire art movements are built on precisely this switching of positions. Worth mentioning here is noise music, glitch art, black MIDI, Samuel Beckett's *Not I* (1973), and swathes of minimalist artworks from twentieth-century composers and visual artists.
5. Here it is worth mentioning Wolfgang Ernst's aptly titled *Sonic Time Machines*, in which he proposes the neologism "sonicity" (sonic technicity) as the place where time and technology meet. Sonicity is created separately from "acoustic sound and primarily refers to inaudible events in the vibrational (analog) and rhythmic (digital) fields" (Ernst 2016, 22). His focus is strictly on techno-sonic time mechanisms, and thus does not refer to the sono-temporal modulations of this article. As Ernst states, "sonic tempor(e) alities are everything but metaphoric" (Ernst 2016, 21). Sonicity therefore only works within a limited understanding of time as bound to machinic movement. Reading technological development through media instead of subjects is useful for Riis's project, but inadequate for the current question regarding the creation of sonic fictions through the manipulation of time.
6. CCRU is a neo-fictional entity that "does not, has not, and will never exist" (CCRU 2017, n.p.).

Chapter 22

1. Nicolas Bernier (performance artist) in e-mail conversation with Chris Salter, September 2018.
2. Although Tenney did contribute in a specific technological way to the research projects at Murray Hill—specifically in the areas of psychoacoustics and timbre research (Kahn 2012, 140–1)—he also argued that the development of computer music was "a sideline at Bell Labs"—"there just happened to be a guy who was involved in the speech synthesis project who was an amateur musician (Max Mathews) and he said, 'Hey, I can make music with this too.'" See Kahn 2012.
3. Marije Baalman (artist and scholar) in e-mail conversation with Chris Salter, October 2018.
4. Ira Agrivina in e-mail conversation with Alexandre Saunier, September 2018.
5. Laetitia Sonami (performance artist) in discussion with Chris Salter, October 2018.

Chapter 23

1. *ASMR Tascam Mic Tapping W/ Scratching (NO TALKING) Gentle Close Up Ear to Ear Sounds* by ASMRMagic, 1 h 01 min; ASMR = "Autonomous Sensory Meridian Response," August 21, 2019.
2. Which was coined by German-speaking musicology as "motivisch-thematische Arbeit" as a main paradigm of classical composition.
3. Salomé Voegelin uses the term "phonography" in the opposite sense, as (verbal) writing down of individually experienced sound in a given environment. Thus, the technical-mechanical recording of the acoustic waves by the phonograph is juxtaposed with a phonography of sound constructed in the process of hearing (Voegelin 2014, see note 3, 177).
4. *The Art of Sounds* (2007).
5. Großmann 2016a, 2016b, 395ff.
6. Both instruments are currently experiencing a comeback in the field of modular synthesizers. The US-based *Make Noise Co.* developed an analogue-digital *Phonogene* for its *System Concrète* and a *Morphagene* as a "next generation tape and microsound music module." http://makenoisemusic.com/modules/morphagene, March 30, 2019.
7. Battier 2007, 190, 195.
8. Eno 1983.
9. See Sterne 2003.
10. "Is a truck passing by music?" Cage 1961, 41.
11. "The medium is the message," McLuhan 1964, Chapter I.
12. Akufen, *My Way* (2002).
13. Max Neuhaus, *Listen* 1966.
14. One of the first crooners in the late 1920s got the nickname "Whispering" Jack Smith.
15. *Messages,* Performance für Archivklänge, Kassetten, verstärkte Flöte, verstärkte Objekte, Diaprojektor. (Performance for archive sounds, cassettes, amplified flute, amplified objects, slide projector) 2008/2016 UA April 9, 2016, Audiorama, Stockholm.
16. Sensory Ethnography Lab (SEL), Harvard University, https://sel.fas.harvard.edu/, March 30, 2019.
17. See van Eck 2017.
18. VST = Virtual Studio.
19. See Butler 2014.
20. Baalman 2017, 227.
21. Soundart Festival, July 20, 2019, Electro. Trap. Maintal (Frankfurt, Germany). https://soundart-festival.de/, March 30, 2019.
22. "Motion Capture is the device by which they synthesize and virtualize the human body." Eshun 1998, A176.
23. Weheliye 2002. It is no coincidence that autotune plays a special role in productions like Kanye West's album *808s & Heartbreak* (2008), in which identity and history are addressed in a specific sound of synthesizers, drum machines, and vocal processing.
24. See Frith and Zagorski-Thomas 2012. In fact, the focus of the publication and the now well-established conference series is far wider than the relatively narrow title.

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Tobias Ewé is a vibrational pataphysician and theorist. He is writing a PhD dissertation on in the Department of Art History, University of British Columbia, Vancouver, Canada. His research focuses on psychoacoustics in the sonic arts as the crossroads between vibrational inhumanism and speculative aesthetics. Ewé is a founding member of the Research in Art & Media collective and the Sound & Senses Research Group at the University of Copenhagen, Denmark. Publications include: Laboria Cuboniks (2018 [2015]), *Xenofeminisme: En politik for fremmedgørelse* (translated by Tobias Ewé) and "The Unheard" (in *Handbook of the Anthropology of Sound*, edited by Holger Schulze, 2020).

Dimitri della Faille is a professor of international development in the Department of Social Science at Université du Québec en Outaouais, Canada. In 2017, *Not Your World Music: Noise in South East Asia*, co-written with Cedrik Fermont, was awarded the prestigious "Golden Nica" prize by Prix Ars Electronica. Since 1997, he has performed and given workshops in sound art in over twenty-five countries. He was a longtime member of the artistic committee of the Association pour la création et la recherche électroacoustique du Québec, Canada.

Sabine Feisst is Evelyn Smith Professor of Musicology and senior sustainability scholar in the School of Music and Global Institute of Sustainability at Arizona State University, USA. She has published *Der Begriff "Improvisation" in der neuen Musik* (Studio, 1997), *Schoenberg's New World: The American Years* (Oxford University Press, 2011), which won

the Lowens Award for the most outstanding book on American music, and *Schoenberg's Correspondence with American Composers* (Oxford University Press, 2018). She is author of over eighty articles and US editor of *Contemporary Music Review*, and she is writing a monograph on desert-inspired music and editing the *Oxford Handbook of Ecomusicology*. With Garth Paine, she codirects Acoustic Ecology Lab, Arizona State University.

Cedrik Fermont is an independent composer, musician and researcher based in Berlin who studied electroacoustic music in Belgium. He has been conducting research on electronic, noise, electroacoustic music, and sound art in and from Asia and Africa for about fifteen years. Fermont runs the music label and platform Syrphe, partly dedicated to Asian and African electronic and experimental music. Since 1990 he has performed in sixty countries. Publications include *Not Your World Music: Noise in South East Asia* (co-written with Dimitri della Faille and awarded the "Golden Nica" by Prix Ars Electronica).

Elen Flügge is a writer, artist, and researcher investigating listening experiences. Based at the Sonic Arts Research Centre (SARC), Queen's University, Belfast, she is undertaking a PhD on urban sound space and hearing perspectives within the *Recomposing the City* research group. Completing an MA in sound studies at Berlin University of the Arts, Germany, she has published on personal sound space and urban sound art. She currently performs with Belfast ensembles, HIVE experimental choir, and old-time group Cripplin' Creaks. Her works have been shown, for example, at *CTM Festival*, Berlin, and *Ars Electronica*, Linz, Austria.

Julia Gerlach is the chair of the music section of the Akademie der Künste, Berlin, Germany, since 2019 and she also chaired the music section of the DAAD Artists-in-Berlin Program from 2012 to 2018. Her work is especially committed to the expansion of the concepts of music and sound art and to intercultural projects. She developed the festival *mikromusik* and the intercultural project *Re-inventing Smetak* within her work at the DAAD. She studied musicology at the Technische Universität Berlin, and has taught within the areas of musicology, cultural management, gender, and the avant-garde as a curator and producer within sound art and experimental music.

Rolf Großmann is a professor for digital media and audio design and director of the ((audio))—aesthetic strategies department at Leuphana University of Lüneburg, Germany. His research focuses on the aesthetics of contemporary music and techno-cultural perspectives on music and media art. Publications include "Sound as Musical Material" (*Sound as popular culture,* MIT Press 2016, 53–64) and "Sensory Engineering: Affects and the Mechanics of Musical Time" (*Timing of Affect: Epistemologies, Aesthetics, Politics*, Diaphanes Verlag, 2014, 191–205).

Sanne Krogh Groth is an associate professor in musicology at Lund University, Sweden. She is office director of the sound environment center, Lund University, editor-in-chief of the online journal *Seismograf*, and has served as curator at occasional events and exhibitions. Her

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Juliana Hodkinson is a composer, an associate professor in composition at the Grieg Academy, University of Bergen, Norway, and visiting lecturer in classical and electronic composition at the Royal Academy of Music, Aarhus, Denmark. She has published on topics within sound art, contemporary music, opera, and artistic research. She curated *Spor Festival* in Aarhus, Denmark, in 2013, and has held various posts within cultural funding bodies in Denmark and Germany. She is a regular guest lecturer at music and interdisciplinary festivals and institutions, and for her artistic work she has received commissions from the BBC, Konzerthaus Berlin, Chamber Made Opera, the Darmstädter Ferienkurse, Haus der Kulturen der Welt, and others.

Macon Holt is an independent researcher based in Copenhagen, Denmark. He received his PhD in cultural studies from Goldsmiths, University of London, in 2017, and he has taught at the Leeds College of Music, UK, and Lund University, Sweden. His writing has appeared in *Passive/Aggressive*, *The Ark Review*, *Full Stop*, *Atlas Magasin*, and *Blacklisted Copenhagen*. His first book, *Pop Music and Hip Ennui: A Sonic Fiction of Capitalist Realism*, was published by Bloomsbury Academic in 2019.

Eleni Ikoniadou is a senior tutor in visual communication at the Royal College of Art, London. Her research is situated at the intersection between digital media, critical theory, and sound art practice. Her writings and practice deal with both the known and unknown impacts of new technologies on culture, aesthetics, and politics, investigated through the staging of speculative encounters. She is a member of the art collective *AUDINT*, and editor of the *Media Philosophy* series (Rowman & Littlefield International). Publications include: *The Rhythmic Event, Art, Media, and the Sonic* (MIT Press, 2014).

Stina Hasse Jørgensen is a PhD student in the Department of Arts and Culture at the University of Copenhagen, Denmark. In her research, Jørgensen works with topics such as sound art, feminism, performativity, voice theory, and collective practices in design and contemporary art. She has written articles, reviews and interviews for magazines, anthologies and journals such as *Terræn, Digital Creativity*, *Transformations*, *Seismograf*, *kunsten.nu* and *Body, Space & Technology*.

Sandra Kazlauskaitė is a lecturer in sound theory at the University of Lincoln, UK. She was awarded a PhD at Goldsmiths, University of London, in 2019 for her doctoral thesis, "Expanded Aurality: Doing Sonic Feminism in the White Cube," which questioned how women-produced sound affects the production of the gallery space in perceptual and sociopolitical terms. As an artist and a curator, she has worked across the disciplines of sound performance and installation art, and publications include articles on feminist sonic practices and post-Soviet soundscapes.

Brandon LaBelle is a professor at The Art Academy, University of Bergen, Norway, as well as an artist and writer working with sound culture, voice, and questions of agency. He is an editor at Errant Bodies Press, Berlin, Germany, and an associated professor at the Autonimia Akadimia, Athens, Greece. He is the author of *Sonic Agency* (Goldsmiths, 2018), *Background Noise, Second Edition* (Bloomsbury, 2015), *Lexicon of the Mouth* (Bloomsbury, 2014), and *Acoustic Territories* (Bloomsbury, 2010).

Yuri Landman began his artistic work as a graphic novel artist—only to become an inventor of musical instruments, a musician, and sound researcher. His artistic and research focus lies in harmonics theory and utonal and otonal scales for string instruments, especially on how to prepare guitars for unique sound effects. He has crafted experimental musical instruments for, among others, Sonic Youth, Half Japanese, and Liars. Since 2009 he has given over 200 master classes at art academies, conservatories, music festivals, and music venues. Publications include: *Nice Noise* (with Bart Hopkin, 2012).

Cathy Lane is a professor of sound arts at University of the Arts, London, and director of Creative Research in Sound Arts Practice (CRiSAP). She is also a composer and sound artist using spoken word, field recordings, and archive material to focus on how sound relates to our past, our histories, our environment, and our collective and individual memories from a feminist perspective. Publications include *Playing with Words: The Spoken Word in Artistic Practice* (2008), *On Listening* (2013), and *In the Field* (with Angus Carlyle, 2013). Her CD *The Hebrides Suite* was released by Gruenrekorder in 2013.

Annea Lockwood, born in New Zealand and living in the USA, is a composer and sound artist whose works range from environmental installations to concert music. Recent works include *Becoming Air* (2018) for trumpet solo, co-composed with Nate Wooley, and *Wild Energy* (2014), in collaboration with Bob Bielecki—an installation focused on geophysical, atmospheric, and mammalian infra- and ultra-sound sources, commissioned by the Caramoor Festival of the Arts. She is a professor emeritus at Vassar College, New York. Her music has been issued by Lovely Music, Black Truffle, New World, and other labels and is published by Neuma.

Carla J. Maier is a Marie Curie research fellow in the Department of Arts and Cultural Studies at the University of Copenhagen, Denmark, working on her postdoctoral project "Travelling Sounds: A Sensory Ethnography of Sonic Artefacts in Postcolonial Europe." She has published articles and book chapters at the intersection of sound studies, cultural anthropology, and postcolonial studies, including "Sonic Modernities" (MIT, 2016), "The Tacit Grooves of Sound Art" (*Journal of Sonic Studies*, 2018), "The Sound of Skateboarding" (*Sound & the Senses*, 2016), and "Situative Signals in Sonic Conflicts" (Bloomsbury, 2016). She is author of *Transcultural Sound Practices: South Asian Dance Music as Cultural Transformation* (Bloomsbury, 2020).

Elke Moltrecht is a musicologist and curator. In 1992–2005 she chaired the music program at Podewil, Center for Contemporary Arts in Berlin, Germany, and 2006–2007 at Ballhaus Naunynstrasse, Berlin; and 2014–2019 she was executive director of the Academy of the

Arts of the World in Cologne. She cofounded Ensemble Extrakte in 2013. Moltrecht has curated festivals and series such as *faithful! Fidelity and Betrayal of Musical Interpretation*, *Visualizing music* at the Humboldt Lab Dahlem, *Hybrid Music*, *Kreuztanbul—Intercultural Happenings between Kreuzberg and Istanbul*, *The Beyrouth of Education*, and *40 Years of Speed and Space—Los Angeles—Berlin*.

Mendi and Keith Obadike have exhibited and performed at the New Museum, the Whitechapel Gallery, the Studio Museum in Harlem, the Museum of Contemporary Art Chicago, the Metropolitan Museum of Art, New York City, and the Museum of Modern Art, New York City. Keith Obadike received a BA in art from North Carolina Central University and an MFA in sound design from Yale University, New Haven. He is a professor at the College of Arts and Communication at William Paterson University, Wayne Township, New Jersey, and serves as a digital media editor at Obsidian. Mendi Obadike received a BA in English from Spelman College, Atlanta, Georgia, and a PhD in literature from Duke University, Durham, North Carolina. She is an associate professor in the Department of Humanities and Media Studies and the Department of Writing at the Pratt Institute, New York City, and serves as a poetry editor at *Fence* magazine.

Emeka Ogboh is a sound artist connecting places with the senses of hearing and taste. Through his audio installations and gastronomic works, Ogboh explores how private, public, and collective memories and histories are translated, transformed, and encoded into sound and food. These works contemplate how sound and food capture existential relationships, frame our understanding of the world, and provide a context in which to ask critical questions on immigration, globalization, and postcolonialism. His works have been presented, for example, at *documenta* 14 (2017), in Kassel, Germany, *Skulptur Projekte Münster* (2017) in Münster, Germany, the 56th edition of *La Biennale di Venezia*, Italy (2015), and the *Dakar Biennale* (2014).

Pedro J. S. Vieira de Oliveira is a researcher and sound artist working with and within decolonial thinking. He is a founding member of the Decolonising Design Group, and a former teaching and research associate in media and cultural studies at Heinrich-Heine University, Düsseldorf, Germany. His research focuses on the colonial articulations of sonic violence, with special attention to the policing of bodies in public and border spaces. His artistic work has been presented at *CTM Festival*, Berlin, *Transmediale*, Berlin, and *Deutschlandfunk Kultur*.

Garth Paine is a composer, performer, and scholar as well as professor of digital sound and interactive media at Arizona State University (ASU), USA, and codirects ASU's *Acoustic Ecology Lab* with Sabine Feisst. He received the Victorian (AU) Green Room Award for Outstanding Creativity for *Escape Velocity (Company in Space)* and was a finalist for Australia's Best New Musical Score for *Dance*, 2014. In 2018, he was researcher-artist in residence at IRCAM (Paris) and ZKM (Karlsruhe), developing *Future Perfect* for spatial audio, cell phones, and VR. He presented keynotes at NIME2016 (AU) and a keynote at the 2014 *Ecomusicologies* conference (USA) on listening to place.

Marianthi Papalexandri-Alexandri is a composer, sound artist, performer and an assistant professor of composition in the Department of Music at Cornell University, New York. Papalexandri's works have been shown at the Martin-Gropius-Bau, Berlin; MuDA museum of digital art, Zurich; Asmolean Museum, Oxford; Transmediale, Berlin; Kunstmuseum Basel; Espoo Museum of Modern Art, Finland; Donaueschingen Festival, Germany; Japan Media Art, Tokyo; Denise Rene Gallery, Paris; and Venice Biennale of Architecture. She has received the Ernst Von Siemens Foundation Commission, the Berlin Sound Art Grant, the IMPULS Award, the Dan David Prize for Contemporary Music, and residencies at the Akademie Schloss Solitude, Stuttgart, Villa Concordia, Bamberg, Germany, Humboldt-University of Berlin, Instrument Inventors Institution, Den Haag, and St John's College, University of Oxford, UK.

Morten Riis is a sound artist and an associate professor in electronic music composition at The Royal Academy of Music, Aarhus, Denmark. His research focuses on the area of mediation of sound and artistic research. He has released several albums, played concerts, and exhibited sound installations in most of the world. He is the cofounder and leader of *The Overheard* project (together with Marie Højlund), presenting large-scale sound installations in Denmark and abroad.

Chris Salter is an artist, university research chair in new media, technology, and the senses at Concordia University, Montreal, and codirector of the *Hexagram* network for Research-Creation in Media Arts, Design, Technology and Digital Culture in Montreal. Salter's performances, installations, research, and publications have been presented at numerous festivals, exhibitions, and conferences around the world. He chaired Re-Create, the 2015 Media Art Histories conference hosted by Hexagram in Montreal, and he is the author of *Entangled* (2010) and *Alien Agency* (2015), both from MIT Press.

Alexandre Saunier is a French interdisciplinary artist and researcher. His work brings together light art and digital craft to explore human perception and to forge sensory links with abstract processes. His background encompasses sound engineering, physical computing, and research in art and design. He is currently pursuing an interdisciplinary doctorate at Concordia University, Montreal, focused on the creation of instruments for light-based performance and installation.

Ulrik Schmidt is an associate professor in performance design and visual culture at Roskilde University, Denmark. He is working in the intersection between media philosophy, sound studies, and contemporary art and architecture. Schmidt's overall research interests are centered around exploring the material mechanisms and technologies that guide perception and the production of subjectivity in modern culture. Publications include *The Aesthetics of Minimalism* (2007), *The Ambient: Sensation, Mediatization, Environment* (2013), and *Media Aesthetics* (co-edited, forthcoming, 2020).

Holger Schulze is a professor in musicology at the University of Copenhagen, Denmark, and principal investigator at the Sound Studies Lab. His research focuses on the cultural history of the senses, sound in popular culture, and the anthropology of media. Publications include *Sound as Popular Culture* (editor, 2016), *The Sonic Persona* (2018), and *Sound Works* (2019).

Søren Møller Sørensen is an associate professor in the Department Art and Cultural Studies at the University of Copenhagen, Denmark. His research focuses on contemporary music and sound art, history of music aesthetics and theory, and music in the Middle East. His most recent publications are on German enlightenment discourses on tuning and temperament, and cultural aspects of diverse contemporary musical practices in Egypt, Syria, and Lebanon.

Sharon Stewart is an independent researcher, music educator, and sound artist based in Arnhem, the Netherlands. She is a core teacher for the Deep Listening® online program for The Center for Deep Listening at Rensselaer in Troy, New York (state), associate editor for the *Journal of Sonic Studies* since its inception in 2011, and member of the research team for the Theory in the Arts Professorship at ArtEZ, University of the Arts, Arnhem. Together with Michael McDermott she initiated *Mixes from the Field* in 2017, a collaboration integrating deep listening, field recording, social justice, sonic ecology, meditation, and music composition into a framework of workshops, lectures, and performances.

Anette Vandsø is an associate professor at the School of Communication and Culture at Aarhus University, Denmark. Her research focuses on audio culture, contemporary (sound) art, and our changing relation to nature. She is the director of the Nordic Network for Research in Sound Art, founded in 2013. Publications include "Art for a Climate Changed World" (2019), "Four Key Concepts for Studying Context-Based Compositions" (2018), and "Listening to the Dark Side of Nature" (2016). She was co-editor of the peer-reviewed catalog for ARoS, Aarhus Art Museum's vast exhibition *The Garden: The Beginning of Times the End of Times* (2017).

Jeremy Woodruff is a lecturer in composition and sound studies and Head of music theory at the Center for Advanced Studies in Music (MIAM), Istanbul Technical University, Turkey. His concert works have been premiered by Kammerensemble Neue Musik, Ensemble Decibel London, the Deutsches Kammerorchester Berlin, Hezarfen Ensemble, Klank.ist and others. His writings have been published by *Klangzeitort* (Berlin), *Interference: A Journal of Audio Culture*, *Journal of Sonic Studies*, *Seismograf*, *KunstMusik*, *Verlag für Moderne Kunst* (Nürnberg), Les Presses du Réel and by Errant Bodies Press. His sound art has been presented in various galleries, including the KW Berlin, AD Gallery Bremen, Kasa Gallery Istanbul and Art Bangaluru, Bangalore, India.

Samson Young is a composer and multidisciplinary artist. He graduated with a PhD in music composition from Princeton University, New Jersey, in 2013. Young has had

solo exhibitions at the Kunsthalle Düsseldorf, SMART Museum, Chicago; Talbot Rice Gallery University of Edinburgh; Centre for Contemporary Chinese Art in Manchester, M+ Pavilion in Hong Kong, and Hiroshima City Museum of Contemporary Art; he represented Hong Kong with a solo project at the Hong Kong Pavilion of the 57th Venice Biennale 2017. Group exhibitions include Solomon R. Guggenheim Museum, New York; Performa 19, New York; Biennale of Sydney; National Museum of Art, Osaka; National Museum of Modern and Contemporary Art, Seoul; documenta 14: documenta radio.

Laura Zattra is a research fellow of the AMP (Analysis of Musical Practices) and PSD (Perception and Sound Design) teams at IRCAM Paris and an adjunct professor at Bologna, Vicenza, and Rovigo Music Conservatories, Italy. She is a scholar of twentieth- and twenty-first-century music, with an emphasis on electroacoustic music, science and technology studies, avant-garde, collaborative music, and women studies. She is co-editor-in-chief of the journal *Music/Technology* (Firenze University Press). Publications include *Studiare la computer music* (2011), *Live-Electronic Music. Composition, Performance and Study* (co-editor, 2018), and *Presenza storica di Luigi Nono* (co-editor, 2011).

Index