Listening and/as imagination

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CHAPTER 6

LISTENING AND/AS IMAGINATION

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Introduction

The central theme of Frank Zappa's album *Joe's Garage* from 1979 is how authorities try to control music because it only leads people astray. And so the story unfolds with Joe, a teenager in a residential area who starts a band in an old garage, and his friends. Noise pollution and sexual debauchery involving (catholic) girls and cyborgs—encounters both directly linked to music making—bring them into contact with the police and other authorities. Joe is sent to a special prison where the government keeps all criminals involved in the music business. Upon release he enters a society that is completely controlled by secret state organizations, a society from which (most) music is banned. The only thing left for Joe to do is to dream imaginary guitar notes and vocal lines. The story ends with the urgent advice to pawn your imaginary guitar and get a good job. Of course, Zappa writes in the liner notes, although the story might seem "just a little bit preposterous," we can easily call to mind countries in the world where music is either severely restricted or completely illegal.

It will not come as a surprise that my main interest, here and now, in this funny story with a serious overtone lies in the part in which Joe's only contact with music takes place in his imagination. Not being able to listen to "real" music, he is condemned to listen to notes that resound in his mind. (Are they actually resounding? What does resounding mean in this context? Do imaginary notes [re]sound?) Joe is like the composer who creates works without access to a musical instrument or a computer and whose compositions will never be notated or performed; confined to her imagination, her works will always remain inaudible to everybody except herself.

The only place (Is it a place? Does imagination have a real place, a *topos*, clearly localizable?) where Joe can enjoy music in an unrestrained way is a place that cannot be accessed by anyone except himself: those areas of his brain where neurologists hypothesize

that imagination is located and activated. In other words, mental musical "images" (unlike English,[1] other Germanic languages do have a sonic equivalent of imagination: the German *Einbildung*, the Dutch *verbeelding*, or the Swedish *inbillning* can be transformed into *Einklankung*, *verklanking*, or *inklangning*) have two important components: they are inaudible to the ears; and they are strictly personal.

The aim of this chapter will be to focus on the role imagination plays when engaging with music. However, in contrast to the story about Joe and the fictive composer, I will not primarily focus on the creation of music within the mind of the maker; instead, my main interest lies in the connection between imagination and various "regimes of listening"—from "attentive listening" to all kinds of "distracted listening." The hypothesis I will investigate is that imagination is inextricably connected to listening, that imagination is a necessary quality when listening. Indeed, as David Toop (2016) writes in *Into the Maelstrom*, listening has to do with "gathering, sensing, sharing, enhancement, calibration, invention, and imaginative resonation" (171). As a creative act, listening is always already somehow attached to the imaginary. However, this *imagining-through-listening* is to a certain extent determined—and perhaps even restricted—by the sonic input and, sometimes, by the sound sources. The various entrances, various examples, or various case studies that follow should be regarded as arguments to support the hypothesis.

Noise, Music, and Imagination

To continue with another fictional story, here is a short monologue of the actress Brit Marling in her role as Rhoda Williams in the movie *Another Earth*:

> Have you heard the story of the Russian Cosmonaut, the first man ever to go into space? The first man to ever look at the planet he's from. And he's lost in that moment. And all of a sudden, this strange ticking... is coming out of the dashboard. Tik. Tik. Tik.
>
> He rips out the control panel, takes out his tools, trying to find this sound—trying to stop this sound. But he can't find it. He can't stop it. It keeps going. A few hours into this, it begins to feel like torture. A few days go by with this sound and he knows that this... small... sound... will break him. He'll lose his mind. But what's he going to do? He's up in space. Alone. In a space closet. He's got 25 days left to go, with this sound. So the cosmonaut decides that the only way to save his sanity is to fall in love with this sound. So he closes his eyes, and he goes into his imagination, and then he opens them. He doesn't hear ticking anymore. He hears music. And he spends the remainder of his time sailing through space in total bliss. In peace.
>
> (Cahill 2011)

The story reminds me—is association also a kind of imagination?—of John Cage's (1973) words "Wherever we are, what we hear is mostly noise. When we ignore it, it disturbs us. When we listen to it, we find it fascinating" (3). Cage, here, shifts the responsibility of

emancipating ambient sounds (pitches other than the eighty-eight, durations that are not metered, timbres that are unmusical or distasteful—in short, noise)—and of integrating them into the sacred realm of Music from the composer to the listener; the "we" in the quote is definitely not referring to musicians (composers or performers) but to humans in general. He urges listeners to consider noise as music, to conceive of "non-musical" or "extra-musical" sounds *as if* they were music in order to finally turn them into music. To make this happen, Cage appeals to the listeners' imaginations, to employ them just as the Russian cosmonaut did, willfully changing his aural attitude in order to transform the bothersome ticking into pleasurable music. Cage demands an open mind from the listener, a susceptible ear for all that sounds; better yet, for all that sounds and that is still excluded from music in the traditional sense. It is the mindset of the listener that helps to open the domain of Music to all possible sounds (which of course does not mean that all sounds are then by definition music). When Cage provocatively claims that Mozart and Beethoven's music always sounds the same, whereas the traffic on Sixth Avenue varies at every moment, he challenges listeners not only to open their ears but also to conceive, to imagine the street noises as a musical composition.

Cage invokes the listener some fourteen years before Aaron Copland gives his Charles Eliot Norton Lectures at Harvard University in 1951 and 1952 on music and imagination. Although far more conservative in his composing and thinking, Copland, too, starts his lecture series with addressing the listener, his claim being that, in order to make music meaningful, the listener cannot not use her imagination, as music is the most abstract of all the arts. In other words, not only is a listener's imagination required to turn extra-musical sounds into musical ones but also making music meaningful in general requires a creative and sensitive approach, as its symbolic character is too imprecise to convey its true meaning (Copland 1980, 13): "It is the imagination and the imagination alone that has the power of balancing the combined impressions made by themes, rhythms, tone colors, harmonies, textures, dynamics, developments, contrasts" (15). And following Cage to a certain extent, Copland argues that a listener's imagination should best be developed by exposure to nonfamiliar, new music.

Copland (1980) presents an interesting line of reasoning although, in his Preface, he quickly adds that his talks should not be considered as "closely reasoned arguments on a single subject" (vii). Following Copland's thoughts, music has some severe deficits, and a listener's imagination is therefore needed to fill the gaps. What are these deficits? Music is abstract; lacking clear meaning, it does not easily convey its own essence, and its development in time makes it hard to follow its structural organization—that is why a listener needs to deploy her imagination to the fullest (next to experiential knowledge and analytical understanding, Copland later adds). Music, incomplete in itself, depends on a specific human ability in order to achieve the powers that so many people attribute to it. And, conversely, imagination is needed to somehow complete particular auditory perceptions. From a different perspective, one could say that humankind's most private domain, the mind, comes to the aid of the sense organs that are incapable of making complete sense of certain aural stimuli, as those stimuli contain insufficient information for the human ear.

Compression and Imagination

A moderately similar line of argumentation, although dealing with a very different subject, can be found in the cultural historian Jonathan Sterne's (2006) *MP3—The Meaning of a Format*. Sterne's work on the technological and cultural developments of mp3s also discusses certain deficiencies being inherent in the object itself, deficiencies that require a solution on the listener's side.

The technique used to make an mp3 file smaller by removing unnecessary data is called compression. To reduce the size of data files, mp3 encoding draws on three specific psychoacoustic principles to get rid of sounds that most listeners supposedly do not hear anyway. The first is *auditory masking*, or the eradication of similar frequencies when one sound is much softer than the other; as people will only hear the louder sound, the quieter one can be removed. The second is called *temporal masking* and removes a quieter sound very close in time (less than about five milliseconds) to the louder one. The third principle is *spatialization*, based on the premise that it is almost impossible for people to locate very low or very high sounds. To save dataspace, the mp3 encoder saves sounds at either end of the frequency spectrum only once for both channels, rather than twice, and plays them back in mono. Additionally, to save even more space, some encoders also discard all the data from 16 to 20 kHz, as most adults do not hear anything above 16 kHz anyway.

Although it is quite obvious that these compression techniques decrease the overall quality of the sound files, Sterne offers a few reasons why most mp3 listeners seem not to be bothered by this. One is that mp3s are designed to be heard via headphones or lower quality (computer) speakers. Another reason is that they are often meant for casual, distracted listening, usually in environments that are already saturated with other sounds. A third reason, and perhaps the most important one in the current context, is that mp3s follow more or less the same technical principles as the telephone: only the upper partials of the signal are transmitted, and when certain higher frequencies are played together, they may effectively suggest or simulate a fundamental.

What is interesting is that mp3s, while only offering a fraction of the information, do often provide a listener the basis for the full experience of a recording. This is possible because the brain will simply fill in the information that is lacking (Sterne 2006, 835). Sometimes sounds or parts of the sounds are not external to the listener but are created through the process of perception.[2] Put differently, perceptual processes shape or codetermine the sounds listeners experience, especially when a stimulus is lacking in the immediate environment. Whereas Sterne is emphasizing the role of compression techniques in its relation to the listener's sensorium by stating that "masked media establish sympathy with the senses to move with them, around them, and between them," I would like to put more stress on the roles someone's body and mind play while listening to mp3s. If imagination can be described as "the ability to confront and deal with reality by using the creative power of the mind" (The Free Dictionary),[3] especially in the absence of a stimulus, it should not (only) be regarded as being linked to a peculiar

aspect of human aesthetics, but rather as the dynamic, creative, and embodied process by which humans (and actually all living organisms) negotiate and react to certain circumstances. Imagination is a constructive function and adaptive disposition of both body (ear) and mind (neurological processes); a necessary and connecting link between sensation and conception (Kaag 2009).

Musica Mobilis and Imagination

In the same year in which Zappa released *Joe's Garage* (1979) and presented the threatening scenario of a society in which making music and listening to music in public spaces was severely restricted, the consumer electronics producer, Sony, introduced the Walkman.[4] Unlike the radio, the car stereo, or the boombox, this device, as well as its successors the Discman, the minidisc, the iPod, and current smartphones, offered people the opportunity to listen to music without sonically occupying public and/or private spaces. Perhaps the authorities would have left Joe alone, perhaps he would not have been obliged to create music in his mind, had he possessed such a Walkman. Today, its successors have become all-too-normal in public spaces, in public transport, in the gym, and even at home, creating for their users what Michael Bull (2010) once described as an *auditory bubble*, aurally (but also, often, socially) separating them from their physical environment.

Of course, listening to music through these devices can be an attempt to overcome alienation and boredom; it can be a tool of solipsism and mood management; it can help pass the time; it can be a form of self-assertion against an indifferent world; or it can be a form of self-dissolution in a world that presses down on the subject (Sterne 2012, 236).

However, delimiting myself here to the use of portable audio players in urban spaces, they can also be understood as "a crucial digit in the organization of sense," an "extension of the perceptive potential" as the cultural historian Iain Chambers (1994) writes in *Migrancy, Culture, Identity*. These devices might open up

> the prospect of a passage in which we discover, as Deleuze reminds us in *Logique du sens* (1969), those other cities that exist inside the city. There we move along invisible grids where emotional energies and the imaginary flow, and where the continual slippage of sense maintains the promise of meaning. (50)

Although conveying an apparent refusal of social interaction, these appliances somehow do reaffirm participation in a shared environment, especially because they change the ways users can perceive their surroundings. These new ways shift toward instability, as a disconnection is established between the aural, visual, and physical inputs.[5] By carefully constructing playlists, selecting songs, using the shuffle function, and/or frequently adapting the volume, each user selects and rearranges the surrounding soundscape and shapes the rhythms of individual movement through the urban space. Simultaneously, this private soundscape itself is constantly decontextualized and recontextualized as it interacts with the visual and physical space through which the user moves. Through

spatio-phonic behavior, the user recomposes the static, geometrical structure of the city into a personal organization of space, conferring a different sense on the city (discovering other cities within the city, as Deleuze writes) as well as producing a different sense of space and time, thereby enabling new modes of experiencing the urban environment. To quote Chambers once more, this *musica mobilis*

> offers the possibility of a micro-narrative, a customized story and soundtrack, not merely a space but a place, a site of dwelling. The ingression of such a privatized habitat in public spaces is a disturbing act. Its uncanny quality lies in its deliberate confusion of earlier boundaries, in its provocative appearance of "out of place." (1994, 52)

I propose that this experience of being "out of place," this "confusion of earlier boundaries," this "uncanny quality" of *schizophonia* (see Schafer 1994) can be traced back to the dissociation between hearing on the one side and seeing and feeling on the other, leading to what the sociologist Jean-Paul Thibaud (2004) calls "a process of derealization of urban space" (330). Mobile listening can render the strange familiar and the familiar strange. By destabilizing and multiplying the relations between the aural, the visual, and the physical, it evokes new thoughts, associations, and fantasies; in short, derealization triggers the imagination. The music turns the urban environment into a theater stage, the passers-by into actors, and the mobile listener into an audience-of-one and a stage director at the same time, inventing, imagining, and experiencing various plots as well as orchestrating a temporary synthesis between several heterogeneous events. As the music psychologist Ruth Herbert (2011) remarks, "music emerges as an effective mediator between internal and external experience, affectively coloring and fusing together perceptual elements that could otherwise remain separated" (147). Following the psychologist Josephine Hilgard, Herbert calls this *imaginative involvement*, a "temporary absorption in satisfying experiences in which fantasy plays a large role" (69). *Musica mobilis* activates extramusical associations and thus contributes to an altered perception of one's surroundings. While this *imaginative involvement* may seem like a complete turning inward of the listener, away from the music "itself" as well as a closing off to the external world and its concerns, Herbert stresses that music is often actively drawn into relationships with other things, interacting with elements of both the external environment as well as with internal concerns (187). If listening to music, and specifically listening to music while moving, is indeed a successful intermediary, linking internal thoughts and associations to external events, it is my proposition that this linking cannot take place at all without the human faculty of imagination.

The Inaudible and Imagination

So far I have been dealing with audible sounds, mostly musical sounds, and have argued how imagination always seems to play a role in the experience of those sounds. However, in some circumstances sounds, musical or otherwise, can only be assumed, surmised,

presumed, hypothesized; the sounds are presented in one way or another but remain audibly absent, as is expressed, for example, in one of John Keats's most well-known poems, "Ode on a Grecian Urn" (see Quiller-Couch 1919):

> Heard melodies are sweet, but those unheard
> Are sweeter; therefore, ye soft pipes, play on;
> Not to the sensual ear, but, more endear'd
> Pipe to the spirit ditties of no tone

What Keats is worshipping here, music inaudible for the ear but experienced in one's mind, has its dark sides as well, as described by Oliver Sacks (2008) in Part One of *Musicophilia*, "Haunted by Music." Sacks collected many stories of people who "suddenly" started to hear music in their heads when specific, often dramatic, events changed their lives—triggers such as strokes, deafness, and certain types of medicine. Take deafness, for example. The filling-in effect of mental processing that enhances musical imagination in response to expectation, suggestion, and experience can be strengthened by deafness. Deafness, Sacks claims, might intensify musical imagery, for with the removal of normal auditory input, the auditory cortex may become hypersensitive (2008, 33). So it becomes possible to hear music in the mind that bears an impact comparable to music heard in the air of the external world. Imagining music can indeed activate the auditory cortex as strongly as listening to it "in reality." However, and this is where Sacks's book differs from Keats's poem, this phenomenon sounds nicer than it actually is, as this musical imagery is often involuntary, is neither commanded nor summoned, but is apparently spontaneous and mostly unsolicited. Although it is known that this unwanted music also has its positive effects—it may alleviate boredom, reduce fatigue, and draw attention to otherwise overlooked or repressed thoughts—it often becomes pathological. Sacks provides two particular examples. First, earworms,[6] the incessant, sometimes maddening, repetition of certain fragments of music or jingles (Sacks 2008, 44), the exact working of which is quite uncertain: "Is it some oddity of sound, of timbre or rhythm or melody? Is it repetition? Or is it the arousal of special emotional resonances or associations?" (47). Second, musical hallucinations that, unlike "normal" musical imagery, have the startling quality of actual perception, as if the music is really coming from outside the human body. Musical hallucinations activate the temporal lobes, the frontal lobes, the basal ganglia, and the cerebellum—all parts of the brain normally activated in the perception of "real" music, often occurring if the senses and the perceptual systems of the brain receive too little stimulation. Both cases, Sacks suggests, draw on musical experiences and memories; the significance of particular sorts of music for the individual surely plays a major role in what they hear during their hallucinations.

Let me take this role of memory and imagination in relation to the sounds one hears in one's mind into a more generically historical direction. Whereas Keats stresses the positive aspects of inaudible sounds created by the mind—they may be more beautiful than the ones existing in our "real" world—and Sacks emphasizes the negative effects—being invaded by these inaudible sounds might drive someone crazy—I would like to investigate yet another situation in which a certain absence of sounds activates the

imagination without specifically negative or positive consequences.[7] "A certain absence of sounds," as the situation I will write about is not silent at all; it is often full of sounds, (re)presenting the presence of humans: murmuring or soft talking, shuffling feet, rubbing clothes, leafing, sighing, and so forth. But all these sounds take place in the presence of what the sixteenth-century French Baroque painter Nicolas Poussin called "mute things": paintings. Thus, what interests me here are the sounds of/in/on (silent) paintings. Contrary to Richard Leppert's (1993) marvelous book *The Sight of Sound*, my focus will not primarily be on the deliberate depiction and visualization of music, musicians, instruments, or performances through paintings and drawings; my interest lies precisely in the sounds that are not intentionally depicted, sounds that are in fact not depicted at all but that are nevertheless present even though they cannot be heard. Leppert delineates how the painting of music, roughly between 1600 and 1900, can contribute to contemporary discourses on social order, class distinction, gender issues, power relations, tensions between public and private spaces, high versus low culture, and so on. His emphasis is on those works that try to bring music into life through a mute medium as they locate the significance of music within human events, discourses, specific places, and social circumstances. Of course, the music being depicted there can only be imagined by us, contemporary viewers; based on historical evidence we can attempt to create in our minds a "sonic picture" of what music might have sounded and how it might have sounded like back then, the sonic reality "behind" those paintings. However, as a kind of contrapuntal voice, I will try to go one step further by changing the "sight of sound" into the "sound of sight," for without any direct reference to sound or music, many paintings inadvertently (re)present the existence of a sonic world. Or, as Leppert (1993) writes, "for the characters inside the painting sound accrues meaning as a sonoric phenomenon, whereas from outside the painting, for the viewer, who can see but cannot hear the events represented, [sound] means as a sight" (4).

Let us take one of Johannes Vermeer's famous paintings, *De Melkmeid* from (approximately) 1658, precisely because there is no direct reference to sound depicted. The painting portrays a maid who is slowly pouring milk into a squat earthenware vessel commonly known as a Dutch oven. Dutch ovens were generally used for prolonged, slow cooking and were made of iron or, in the case of this painting, ceramic. Although not really visible, it is assumed that she trickles the milk over a mixture of bread and eggs to make a bread pudding. The kitchen is probably cold, given the foot warmer with its smoldering ember on the floor. The maid seems silent, modest, fully concentrated on her activity; actually the whole setting breathes calmness, stillness, contemplation, tranquility.

Of course, so much has already been written about Vermeer's paintings, the specific (blue and yellow) colors he used, the way he painted light and shadows, the composition of his paintings, and the subjects and topics he chose with his genre painting; depicting aspects of everyday life, portraying ordinary people engaged in common activities, and, here, a maid in a kitchen of—most likely—a Dutch upper-class family.

However, as Leppert (1993) aptly remarks, the world the painting represents is made silent (29). The painting, as painting, silences everything that it depicts. In fact, one could state that paintings are silent recordings of events that (almost) always had

an auditory component as well. Inspired by Leppert's *The Sight of Sound* and Toop's *Sinister Resonance* (see fn. 5), I went to the Rijksmuseum in Amsterdam to . . . *listen* to *De Melkmeid*, that is, to imagine the sound world within the painting. As Toop (2010) writes,

> A sound-world inhabits and emanates from certain paintings. Despite their actual silence, that sound-world accumulates as the scene, the space of the scene, the activity within the scene, and the world beyond the scene all gather force. (31)

I concentrate, I close my eyes, trying to teleport myself to seventeenth-century Delft. I am sitting in the kitchen, opposite the maid, quietly, hearing how she pours the milk over the soaked bread. Of course, had the oven been of iron instead of ceramic, it would have sounded completely different, with higher frequencies, louder perhaps, with fewer overtones. I also hear the crackling of the embers, very soft and soothing. And the maid? Silent as she may be within Vermeer's painting, she has just been humming a popular folk tune "Ik zag Caecilia komen" ("I saw Caecilia coming"), sonically expressing her concentration on the preparation of the pudding. She has even closed the window, not only to keep the warmth of the foot warmer inside but also to drown out some of the outside noises: the nearby blacksmith making horseshoes, hula-hooping children, barking dogs, a stomping horse, someone screaming and shouting at irregular intervals, the last stages of a rain shower, and so forth. These potential noises on the outside, sounds produced by animals, weather conditions, and mostly lower-class people, raise my awareness of the soothing stillness and tranquility of this Dutch, upper-class, seventeenth-century interior. But even when apparently silent, the kitchen space, like all spaces, is always already filled with sounds that, even if inaudible, can still be felt.

Of course, these are only personal reflections, for the most part possible because the painting is silent, lacking but also leaking sonic information, providing me with the liberty to imagine the milkmaid's sonic environment.[8] How can we listen to sounds long vanished? The original sounds are an inaccessible source, so the perception of sound in this painting can, to a large extent, only be speculative. The only thing I do is attempt to hear some echoes, some distant sounds of an unverifiable past.[9] And yet, sound is indisputable within the pictorial space; the sonic aspects are not literally silent, for the memory, historical knowledge, and imagination it activates in me do include sounds.[10] Imagination can do its work of filling in whatever is absent. So, in a way, this is rather a tribute to the human brain than to the sounds themselves: imagination, based on knowledge; knowledge fed with imagination.[11]

Arriving home from the Rijksmuseum, I reread Jacques Attali's (2003) remarks in *Noise* about Pieter Brueghel's *Carnival's Quarrel with Lent*: "Brueghel not only gives a vision of the world, he also makes it audible—perhaps for the first time in Western art" (21). The quarrel is full of sounds: music, laughs, complaints, murmurs, natural noises, noises of work and play. Most of them have virtually disappeared from our everyday life. Attali calls the painting an "archeology of resonances" and a "cartography of noises," and he insists that we must use it to listen, to listen to music and to all

noises in general (22–24). Listening to paintings—this cannot be accomplished without using our imagination.

The Audible and Imagination

As a counterpart to the previous section, listening to silent paintings, to the inaudible audible of a two-dimensional pictorial space, let us now concentrate on sounds that can actually be heard but whose sources and origins cannot be seen or otherwise detected.

Lying on the ground in complete darkness in a venue in Rotterdam, I once experienced Karlheinz Stockhausen's *Gesang der Jünglinge*. Surrounded by speakers, the audience was completely immersed in the sound world, not always able to locate the sounds nor capable of reflecting on the origin or identity of the sounds they heard.

Sound artists sometimes ask the audience to close their eyes so as to be able to fully concentrate on what they hear. In 2007, the Dutch sound artist Cilia Erens created the soundwalk "Terug naar Oda, een geluidsrelict (2007-680)" ("Back to Oda, a sound relic (2007-680)"). Oda was a blind Scottish princess, born near the end of the seventh century, who ended up living in a small village in the south of The Netherlands, now called Sint-Oedenrode after Oda. She had healing powers and was therefore canonized. Erens's sound artwork consists of recorded sounds from Scotland as Oda could have heard them (a gurgling stream, bleating sheep, crackling fire, breaking waves, flying oystercatchers) gradually transforming into the present-day soundscape of Sint-Oedenrode (a passing car, church bells, a motorbike). What made this soundwalk particularly special was the fact that the soundwalkers were blindfolded; like Oda, unable to see and relying on their ears by necessity.

"Terug naar Oda" is not the only soundwalk by Erens in which the participants are required to eliminate their reliance on sight. In 2010 she developed "SlowLloydSound," in which she led blindfolded students of architecture, landscape, and urban planning through the Lloyd Hotel and Cultural Embassy in Amsterdam in order to gain insights (sic) into how space expresses itself through sound and how sound works as a spatial concept. And, in "Moving Soundspaces," partially taking place on the Amsterdam Dam square, Erens investigated how blindfolded participants react to the sonic environment.

The concerts of the Spanish sound artist Francisco López are immersive sonic experiences taking place in the dark, with multichannel surround systems and blindfolds provided for the public. Created from a myriad of special sonic environments (both natural and artificial) collected from all over the world, his works do not simply present those original soundscapes but rather evoke virtual sound worlds where the listener experiences an environment in which the rules and the parameters are defined by sounds. As Seth Kim-Cohen (2009) remarks in *In the Blink of an Ear*, "López manipulates the recordings to arrive at sound works intended to be devoid of semiotic attachments to identifiable referents" (125). Nothing should distract the audience's attention from the pure matter of sound: no referentiality, no visual input, no textual explanations.

López himself writes in a short essay, "Against the Stage," "I do not defend sonic matter as an aesthetic or conceptual category, but as a gate to different worlds of perception, experience, and creation [...It is] a rich, transformative experience, with ungraspable specific content but imbued with the strongest presence and power of sound" (López 2004).

One of the main differences between Erens's soundwalks and López's compositions is of course this referentiality: whereas Erens does not try to cover and hide the sources, the referents, and the meaning of her recordings, López works in a more Schaefferian way by making an (almost) unrecognizable abstraction of concrete sounds collected from natural and artificial environments.[12] When considered within the context of imagination, López's pieces and the ensuing listening experiences might be more interesting than Erens's soundwalks: while listening to more or less well-known sounds surely leads to a mental visualization of the sound sources and matching environment, sounds devoid of any referentiality might activate one's imagination to an even wider expanse of associations, as the listener will perhaps try to connect those sounds to a sonic and visual world that is already known.[13]

In *On Psychopathology*, Sigmund Freud (1993) pens a few sentences on a child hearing some uncanny sounds from the parental bedroom. The parents have intercourse, but the child cannot see them, does not immediately recognize the sounds, and finds them difficult to identify. Freud writes that such noises are "an indispensable part of the fantasy of listening [*Belauschungsphantasien*]," triggering "primal fantasies," that is, unconscious fantasies stemming from having perceived one's parents having sex (Freud 1993, 154; Dolar 2006, 133; Toop 2010, 89). Within the context of this essay's topic, I think it is possible to read in Freud's short observation the concept that a child's imagination can be activated on the basis of sounds that are unfamiliar to her and that cannot be clarified and verified through visual information. In other words, while a clear origin, meaning, and context of sonic phenomena might hamper or diminish the motivation to use one's imagination, a more ambiguous provenance, abstraction, and semantic absence might lead to generative compensation in the listener's mind, through imagination, for example.

Of course this is a well-known effect used in almost every horror story or movie. In *The Blair Witch Project* (Myrick 1999), three film students set out to produce a documentary about the fabled Blair Witch. They explore some woods to research the legend, filming everything, but get lost and need to set up camp in the forest. In the nights that follow, they find themselves surrounded by eerie sounds while failing to find their sources: first they think they are coming from locals, later from deer, but the problem is that these sounds surround and encompass them. Later they seem to hear the sounds of laughing and screaming children. On the sixth morning in the forest, one student has disappeared. After trying in vain to find him, the other two think they hear him screaming for help in the darkness. Following his presumed cries, they arrive at a derelict, abandoned house. While searching for their friend, something unseen causes them to drop the cameras while still filming. There the footage ends.

One could state that the whole movie hinges on sounds—eerie, uncanny, scary, and hardly identifiable; it is not even clear whether the sounds are real or not. As one of the

friends remarks after being asked, "What do you think that was last night?," "Personally, I think it was someone fucking with your head." A trick of the mind, imagined sounds, or real sounds whose sources and referentiality are manipulated by the mind? Because it is dark, because the sounds' origins cannot be traced, the imagination takes over.

The audience is also left in ignorance: the movie ends without clarifying anything. The camera position—most often from a first-person perspective—and the blurry, granular, and shaky film images—as if the audience is observing through the lens of a cheap camera—make them experience the same uncertainties as the main characters: did we (the audience) hear what they (the characters) heard? Did we hear what we think we have heard? Could we detect where the sounds were coming from? As *The Blair Witch Project* does not visually divulge anything, the sounds—imagined or real—lead us to imagine what might have happened.

The soundscape composition during the closing credits only prolongs or reinforces this: as with the sound works of Francisco López, the sounds are devoid of clear referentialities: do we hear rattling chains, echoes of subterranean cellars, closing steel doors, moving concrete blocks, or is that "just" our imagination?

Conclusion—Sonic Imagination

In this chapter, I have reflected on the question of what role imagination plays in the experience of listening to music. Regarding the concept of imagination, my starting point has simply been the common understanding that imagination is the ability to use the creative powers of the mind in an engagement with reality and the perception of this reality. It has not been my aim to rethink this concept through sound, music, or listening. Frank Zappa's musical character Joe, producing imaginary guitar solos; Aaron Copland and John Cage's thoughts on how we experience music; Jonathan Sterne's explanations of how we perceive music rendered through mp3s; Iain Chambers and Ruth Herbert's investigations into portable audio devices; Oliver Sacks's, Richard Leppert's, and David Toop's incentives to think about the absent presence of sounds in paintings; and the works of Cilia Erens, Francisco López, and Daniel Myrick that somehow deal with the presence of sound in connection with the absence of the visual—this journey through music, sound art, psychology, art history, philosophy, neurology, technology, and cultural studies has provided me with arguments to substantiate the hypothesis that listening is always to some extent connected to imagination because listening not only encompasses the aural perception of a reality, the outside world, but also a creative interplay with that perception in the mind. I have coined this process as an *imagining-through-listening*. Just to be clear, it has not been my intention here to present a new theory on listening or on imagination; my contribution should only be read as a modest exploration of the idea that listening somehow cannot occur without imagination, that imagination is needed to fill in certain gaps. Therefore, let me end with a final example underpinning my hypothesis.

Some years ago I attended a concert of the band I loved so much in the 1970s: YES. Three of the most popular albums from the heyday of this British band were performed in their entireties.[14] Unfortunately, two main original band members, the singer Jon Anderson and keyboard player Rick Wakeman, were replaced due to personal reasons; however, the experience was still a trip down memory lane, not the least because I was there with some old high school friends.

So, how was I listening that evening? Of course that is difficult to recall, but I can be pretty sure regarding some aspects of my listening experience back then. We were all standing for some three hours, so after a while my arthritis directly influenced my concentration on the show. Second, my listening experiences were also affected by my other senses; the light show and the musicians interacting and playing their instruments made clear that (live) music is not only for listening, but also for looking, while the smells of beer and sweat contributed in another way to the overall experience. Then there were my extramusical memories, taking me back to the time I was a teenager, the sense of my high school, how we listened and exchanged records, the excitement when a new LP was released and finally available in the local music store—those memories, combined with certain nostalgic emotions, also played a role in what Ruth Herbert (2012) has labeled as "heteronomous" or "ecological" listening, a listening that is inevitably personal, relational, and situational, an activity in which thoughts, associations, fantasies, and memories interact with current moods and prior knowledge about the music as well as, for example, the environmental sounds and acquired patterns of response. However, most relevant to this context, is that besides my "extramusical" imagination, mostly formed by reminiscences, I was using my "sonic imagination." Besides listening to the actual music played on stage by the three remaining YES members and the two stand-ins, I simultaneously heard the original records, the songs and sounds as they were imprinted in my mind. One could say that I was hearing double; an oscillating, divided listening during which I was torn between the actual sounds and the imaginary ones that kept superimposing themselves like shadows of a memory (Szendy 2008, 36). My listening was a fascinating form of oscillation between a sonic reality and a sonic imagination, the one critically reflecting on the other, the latter not less real than the former, the latter not less attentive than the former, the latter not less respectful than the former.

To listen to oneself listening, to think about the oscillations of different *listenings* that inhabit our inner ear, means to include an audible, inaudible sonic imagination.

Notes

1. Psychoacoustics and neuroaudiology use the words "auditory imagery" or "aural imagery." Daniel Schmicking (this volume, chapter 4) suggests the word "audialization" as a substitute for auditory imagination. Presumably this concept was first used by Edward Casey in his book *Imagining: A Phenomenological Study* from 2000.
2. A more or less similar example is known as the *continuity illusion*. Pure tone "beeps" are produced repeatedly and unaltered at short, regular intervals. As the beeping continues, added noise pulses falling in the gaps between the beeps slowly grow in amplitude. At a

certain moment, the noise becomes loud enough to mask the gaps between the beeps, and the beeps are perceived as a continuous tone. It is the auditory cortex of the listener that generates the illusion of a continuous tone, making a different sonic experience possible.

3. *The Free Dictionary*, http://www.thefreedictionary.com/imagination.
4. I discovered the term *musica mobilis* first in Jean-Paul Thibaud's article "The Sonic Composition of the City" from 2004, but it had already been used by Shuhei Hosokawa in the early 1980s, when describing the "Walkman effect": "I define *musica mobilis* as music whose source voluntarily or involuntarily moves from one point to another, coordinated by the corporeal transportation of the source owner(s)" (Hosokawa 2012, 105). This definition for the greater part covers the way it is used by Thibaud and myself.
5. This disconnection between aural, visual, and physical experiences also often takes place in soundwalks in which headphones are used. The aural information does not correspond with the information picked up by the other senses, causing confusion.
6. Sacks uses the term "brainworms" and restricts himself to their purely neuropsychological effects. Conversely, Steve Goodman in *Sonic Warfare* stresses the sociopolitical sides of this "audio virology," mostly catalyzing the motivation to consume, as it intervenes in the affective sensorium's mnemonic system. Hence, Goodman maintains, earworms can be a sonic illustration of what Deleuze described as the shift from disciplinary societies to societies of control (Goodman 2010, 144–147). Whereas disciplinary societies execute power through a diffuse network of institutions that regulate customs, habits, and productive practices, control societies execute this on a more immanent plane, distributing norms and values throughout brains and bodies.
7. What follows is to a large extent inspired by David Toop's beautiful book *Sinister Resonance*. In other words, these passages would not have been possible had I not read his book first.
8. According to John Dewey, imagination also includes "the capacity to concretely perceive what is before us in the light of what could be" (Fesmire 2003, 65).
9. "I imagine these paintings not only as notation, but as records (in all senses of that word), ethnomusicological recordings that will play back, if only the phantom frequency can be tuned" (Toop 2010, 103).
10. As a kind of parallel, Peter Greenaway's film *Nightwatching*, of course after Rembrandt's most famous painting, begins with an exegesis of the sounds circulating within the painting (Toop 2010, 85).
11. The Dutch sound artist Angela de Weijer talks in similar terms about her work on infinite sound. The installation/performance "Earwitness" invites the audience to listen to objects that have absorbed sound. De Weijer claims that the objects themselves send out sounds on the verge of audibility. In reality this means that listeners perceive sounds in their minds on the basis of what they *see* and the precognition they have of the object (De Weijer 2014). De Weijer's work and description remind me of Gaston Bachelard's ideas about the reception of the "poetic image" in the subjective consciousness, a reception that demands great openness and a not-knowing that is not ignorance but a difficult transcendence of knowledge.
12. Pierre Schaeffer (1910–1995) used the term "musique concrète" for his compositions, meaning that the sources of the recorded sounds that he integrated in his works were (often) intentionally obscured or disconnected.
13. I am making here almost the reverse argument of Toop when he relates sounds to imagination. Toop writes that when we listen closely to "the constant burble of water we hear a murmuring of phantom voices—imagined choirs, conversations in language that eludes meaning, tantalizingly incomprehensible monologues and inner voices that seem to live with both the imagination and air" (2010, 94). Whereas Toop notices that our imagination begins working when listening to concrete sounds, the idea I propose here takes as its premise that it is the abstract sounds that trigger one's imagination. Perhaps the burbling water only makes us hear those voices when it is deprived of its meaning and referentiality first.
14. Therefore, the tour was called "The Three Album 45th Anniversary Tour."

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