

Editorial: Out of Phase

By Fernando Iazzetta, Lílian Campesato and Rui Chaves



Figure 1

Contra Quem? / Against Whom? by André Damião (2017) (GiF)

This special edition (6th issue) of *Interference: A Journal of Audio Cultures*, edited by Fernando Iazzetta, Lílian Campesato and Rui Chaves, comprises of a peer-reviewed¹ selection of papers that were previously presented at the *Sonologia 2016: Out of Phase* conference². This sound studies focused event took place in São Paulo, between the 22nd to the 25th of November (2016). The conference garnered a positive interest from a diverse set of researchers. In total, we had over 160 submissions in which we ended up selecting 40 presentations from 14 different countries that covered a wide array of areas and disciplines.

The ‘Out of Phase’ theme was extended as the title for this issue. This cheeky metaphor was a humble attempt at promoting the emergence of other points of view that focused on particular, localised forms of knowledge that entailed material, political and cultural specificities. ‘Out of Phase’ was also an attempt to deal with the issues of authority and representation in regards to the ‘sonic’. Who says what? Whom are you speaking to? And why? Have you decided to speak in the name of? Have you left someone or somewhat behind? What has been left unspoken? These questions are targeted at us, both readers and tentative producers of knowledge in an academic setting (although these issues certainly extend to other remits). To be more precise, the above inquiry is focused, or if you prefer ‘close miked’, at the body of work that has emerged in the past few years under the name of sound studies. The field has attracted an eclectic set of actors and disciplines, ranging from musicology to cultural studies, while connecting

threads with different practices.

Although prone to criticism, in lieu of its at times revisionist accounts of visuality and subjectivity, it has been part of a larger positive movement that has folded other senses into critical discussion. The questions laid down beforehand lend an ear to other 'voices'. This stance is fuelled by the emergence of feminist and postcolonial epistemologies that have criticised the process by which History, Literature, Sociology, Anthropology, Philosophy, Art or Music (to name a few) deal with women, non-white, disabled, non normative human existences or other geographies. It is beyond the scope of this editorial to purview an in-depth report on these new epistemologies. We hope that the articles presented here in this issue will enable the reader to eavesdrop on these types of theoretical and practical approaches.

Rodolfo Caesar's *Technographic listening: an experiment in feedback* tries to outline how technology (through his experience as a composer) brings upon a change in one's perception and critical awareness. Thokozani Mhlambi's *African Orientations to Listening: The Case of Loudspeaker Broadcasting to Zulu-speaking Audiences in the 1940s*, tracks the development of loudspeakers broadcasting systems in South Africa during the Second World War and how (although unintended) these systems ended promoting or demonstrating specific listening techniques to Bantu-speaking cultures. José Henrique Padovani's *The solfège of technical objects: notes on the potential contribution to sound studies and arts* tries to revitalise the idea of "solfège" in Pierre Schaeffer's work, by framing it within Gilbert Simondon's philosophical ideas (regarding the relationship between humans and technology) – with the intent of forwarding the need for a political and ethical stance in music technology research. Henrique Rocha's *The sound beyond hylomorphism: sonic philosophy towards aural specificity* argues for a change in how we philosophically engage with sound. His argument is rooted on the idea that the discussion that critically surrounds the 'sound itself' paradigm is predicated on a binarism between subject and matter. Thus, this model prevents a more specific or localised discussion of sound, one that avoids the pitfalls of discussing the sonic phenomena in generalizing terms.

Sindhu Thirumalasaimy's *Composition for temple speakers: some notes on devotional music and noise* describes the social, cultural and political milieu that frames her site-specific sound artwork – made for the Shiva-Sai Baba temple in the Sir Mirza Ismail Nagar neighbourhood in Bangalore. More precisely, she addresses the current secular/religious tensions that encompass everyday life in India. Katrin Köppert's *The Sound of ACT UP! AIDS Activism as Sound(e)scape and Sound-Escapade* tends to the neglected dimension of sound within the visual culture of HIV/AIDS activism. By starting from the work of ACT UP! and their initial political stance, the article shows how different artists have engaged with the notion of noise and/or silence when dealing with remembrance and mourning.

Valéria Bonafé's *The experience of sonority: the dangers of a journey into the unknown* describes the compositional process of *A menina que virou chuva*, in order to expand the idea of *sonority* (a musical theoretical framework) into a multi-sensorial, affective, imaginative and experiential concept. André Damião's *Some considerations towards a more critical practice in Mobile Music* presents an alternative praxis to what he sees as a form of corporate entrapment (that accompanied the rise of smartphones) in the research and artwork being developed in Mobile Music. Jason Van Eyk's *From Control to the Non-Cochlear – Evolving Strategies of Sound Art Curation* through an extensive historical

analysis, attempts to outline a possible methodology for curating sound art – one that explicitly entails a conceptual overture. Finally, Igor Reyner's *Fictional narratives of listening: crossovers between literature and sound studies* offers an account on how sound studies has incorporated literary narratives as a way to further specific theoretical purposes (i.e., in thinking about sound and listening).

The above sequence of articles was thought as way to reinforce the connections, conversations that exist between the different works. We believe that carefully re-thinking some procedures in academia can potentiate the delivery of new epistemic challenges. In this sense, and in order to convey a multi-vocal account of how this issue came to be, the editors of this issue decided to present the core discussion through a transcribed and edited dialogue that was conducted throughout a series of meetings. The resulting conversation focuses on offering a connecting thread between all the 10 papers that comprise this issue. We also offer a glimpse of 'sonologia' in Brazil and briefly discuss the notion of 'Out of Phase' and its influence on our editorial approach.

*The following dialogue was conducted throughout December 2017 in São Paulo, Brazil.
(FI is for Fernando Iazzetta, LC is for Lilian Campesato and RC for Rui Chaves)*

LC: Where do we start? I am sure our introductory text will have covered the basics regarding the backdrop for this 6th issue, namely the organisation of *Sonologia 2016: Out of Phase*. The 10 selected and peer-reviewed papers published in this issue, were previously presented at this event.

RC: I think that is important to state that *Sonologia 2016: Out of Phase* aligns itself with a series of previously organised events by NuSom³.

FI: Yes...we had already organised a series of conferences called *Seminários música, ciência e tecnologia (Seminar Music Science Technology)*⁴. Although they did not focus on 'sound studies' per se, they more or less promoted discussions, methodologies and research where sound was the main critical protagonist. This of course had a relationship with the work that we have been developing here in the past fifteen years (from 2000 onwards): a gathering of like-minded people that has had different designations throughout the years⁵. NuSom – Research Centre on Sonology was officially created in 2012.

RC: Fernando, can you talk a bit about what 'sonologia' means in Brazil? And maybe why we decided to use this terminology for our conference?

FI: Sonologia has a particular use in Brazil. I mean, the idea of sonology exists in different academic settings in Europe, but here it comes from a history – starting maybe in the '90s – of practitioners and researchers that were working with musical composition, performance and acoustics...but where seeing their work generically grouped and described as a technologically focused endeavour. Although there was certainly an historical and practical backdrop for this, in particular for those working with electroacoustic music, some of us started to feel that our research transcended technological issues. In 2006, I and other colleagues decided to rethink what we were doing and how we could strategically re-align ourselves within different institutional settings. Sonologia was chosen as terminology that could encompass different approaches and disciplines working with sound, from technically focused initiatives – such as room acoustics measurement (initially my case) – to electroacoustic music, cinema, anthropology, design, visual arts (...) This means that when events, such as the

previously mentioned seminars, started to happen, there were always a dialogue between the different affiliated researchers in the field of sonologia. And this is seen as a positive thing, this connection between disparate approaches and disciplines.

RC: I think that this backdrop clearly influenced how we organised the event and ended using the terminology sonologia: the need to bring a different set of ears to one's research and artwork. In the end, the idea of 'Out of Phase' was not only a metaphor, but also a political and ethical stance on how to create a place where interdisciplinarity is geared towards promoting critical insights into canonical discussions in and around sound: body; gender; ecology and nature; technology; history; power...

LC: Yep. This idea of dialogue is also important for the field of sonologia. Although there is that diversity that Fernando mentioned, I still think that there was a need to expand the type of discussion that was being done locally. Thus, the event was an important opportunity to create networks between local researchers with other like-minded people outside a Euro-American axis or point of view...to bring in contact other 'voices' in terms of methodologies and approaches. This might be a good time to talk about the curatorial process that we undertook for *Sonologia 2016*.

FI: Yes, we should also add that this is not the process most academic events go for. I think that the peer review process is certainly valid, but it can enforce a series of problems in terms of knowledge production (...) Intellectual labour tends to, as Edward Said describes, to insert itself in a specific historical sequence "filiation" and/or theoretical background "affiliation" without really questioning what are the processes that lead to such epistemic cul-de-sac⁶. Although there are risks to a personalization of the curatorial process, the process of reading over 160 submitted extended abstracts enabled us to obtain a general overview on how to establish fruitful connections, and if possible, a healthy critical oppositions between submissions.

RC: This idea of "opposition" is another way to understand the 'Out of Phase' metaphor. This idea is also mentioned in Said's discussion as a way to not only unravel the processes behind the "filiation/affiliation" framework, but also to foreground how exclusionary are these very processes...

LC: Yes, it leads to the creation of an 'other' that is unrecognised or invisible. If we look at the different histories of contemporary sonic practices, how many women or non-Europeans you have? The problem is compounded when this partial historical account is taken as the 'whole' from which to build upon critical accounts and comparisons to other milieus (...) Curatorship brings about the possibility of enacting a politics of representation and representativity in terms of gender, geography, methodologies and disciplines. In the end, I think that the burgeoning field of 'sound studies' should be weary of the aforementioned 'cul-de-sac'. This could come from a critical awareness and will to think about representation and representativity. Also, in promoting other 'voices' that bring about the 'opposition' needed to counter the problems we are discussing. As a side note, it is important to point out that this issue underwent a rigorous peer-review process that looked at a smaller selection of papers presented at the conference. Nonetheless, we are having this discussion in order to outline a continuum between our Call for Papers⁷, the curatorial process and then the organization and edition of this special issue.

RC: To complement what you said... Another important thing to us is the idea of the 'particular' as discussed by Lila Abhu-Lughod in her ethnographic work. One can summarize this approach, in the context of our discussion, as a more close-knitted relation between the idea of a 'case study' – communities, place, artwork, theoretical framework – and doing, writing and speaking about such things. It is a methodological

approach that tends to avoid cramming up generalizations, or a-priori critical stances into a said 'thing'. It is about letting the 'thing' emerge with its particularities and its own set of questions – even if it only brings about a contextual, fragmented and worldly form of knowledge⁸.

FI: Absolutely...and this is another way to strategically construct counter-narratives that avoid the aforementioned exclusionary framework, in particular when such processes were predicated upon forwarding Europe as the centre of the world...And for so long, we have done so without really questioning why was this happening⁹.

RC: I think there are some pretty interesting examples in this issue, that forward an idea of the 'particular' (methodologically speaking). In the case of Rodolfo Caesar (*Technographic listening: an experiment in feedback*), his reflection is based upon an account of how technology changed his perspective and mediated his listening experience.

LC: He brings the idea that the a-critical use of technology in general – and in music in particular – would mask what he calls the 'strong action' of technology, one that would leave marks and traces of its materiality. Thus, technology is not taken as a totally objective entity, as something we use, control and employ, but as something that enacts a form of subjectification. Caesar starts out by pointing to a previous experience, where he identified the existence of a feedback between one's perception, audio recording devices and morphological analysis in listening to a specific South American bird (Swainson's flycatchers). By feedback I mean the discovery of sonic phenomena that wasn't perceivable to him at the time of recording the aforementioned bird species. He goes on to describe other 'technologies' that enable this type of discovery process, such as drugs or the rocking movement of trains.

RC: His discussion resonates with what has been written about in a material culture remit. The fact is, different technologies in audio are not simply 'input' or 'output' devices, they actually change us in different ways¹⁰. This process is underlined in Jonathan Sterne's discussion of the effects of mp3 encoding in our everyday listening habits¹¹ (...) The work of Thokozani Mhlambi (*African Orientations to Listening: The Case of Loudspeaker Broadcasting to Zulu-speaking Audiences in the 1940s*) deals with this idea of mediation but within a strong political and historical backdrop. In this case, during the Second World War, the still governing apartheid regime in South Africa decided to install a series of loudspeakers in Durban. These were installed in order to control the black population, but also to support the on-going recruitment effort...While these system were thought as a form of sonic panopticon, the author claims that they were also (unintendedly) useful in reinforcing a sense of Zulu identity, based on a long history of oral and sonic practices, such as *Inkomo*.

FI: Some key texts in sound studies have pointed out an idea of listening as culturally mediated by the arrival of audio technologies: phonograph, telephone, radio and loudspeaker. In my opinion, perhaps through a discursive slippage, they forget to mention the context that supports this discussion: a white middle-class culture located in Europe and North America. This slippage inadvertently reinforces a long history of cultural and epistemic hegemony that gave no visibility or audibility to other parts of the world. Mhlambi's work reminds us that there are other possible histories to be heard and told.

LC: Indeed! Moving along the discussion, there are also some interesting connections between Caesar's work and José Henrique Padovani's (*The solfège of technical objects: notes on the potential contribution to sound studies and arts*) discussion of Gilbert Simondon....

FI: For sure... Padovani is trying to reflect about the often complicated relationship between 'music' and 'technology'. This is done while summarizing Simondon's ideas on technology and its effects on human agency. He effectively lays out how this discussion can be transitioned from a binary opposition between humans and machines, towards one where there are differential transfers of potential between technology and users. During this exposition, Padovani recovers Pierre Schaeffer's idea of "*Solfège*" (...) This type of discussion in the past few decades has been forcefully deterministic or enlaced with a certain techno-positivism...The NIME paradigm is an example of this¹². But for whom are these new instruments made for? Can they build a sustained community of practitioners?

The fact is, technology fails in its often-intended objectives or in most cases reflects corporate ideation – particularly when you are using consumer electronics. As a counterpoint, Padovani is trying to forward a stance that entails a more careful attention to both listening and praxis.

LC: Some of Padovani's readers, particularly those that do not know Gilbert Simondon writing, will be amazed on how his writing on 'agency' precedes the work of post-structuralists authors such as Gilles Deleuze, or in the case of the social sciences, Bruno Latour *ANT* (Actor Network Theory) framework...

RC: Another mention of Simondon's work is found in Henrique Rocha's philosophical reasoning, which calls for a more empirical and experimental approach when discussing sound. His work (*The sound beyond hylomorphism: sonic philosophy towards aural specificity*) suggests an overall epistemic change in terms of practicing a sonic philosophy. For Rocha, this practice frequently oscillates between a reductionist view focusing on discussing 'sound-in-itself' and one opposing this. For Rocha, these two points of view, although with its differences, still work within the same ontological paradigm – the hylomorphic model, which is also referred to in Padovani's text. To move away from this model, and the way it purviews matter and subject, one needs to take into the fold the local and particular connections that sound establishes.

FI: He argues for this in order to move away from a form of 'panaurality', where one tends to speak about the experience of sound in universal terms, to something in process, in transformation, in relation to. In a way, this specificity can be found in the next set of articles in the issue.

LC: Yes, for example in Sindhu Thirumalaisamy description (*Composition for temple speakers: some notes on devotional music and noise*) of her sonic intervention *Composition for Temple Speakers* – a sound work or a form of 'devotional song' made for the Shiva/Sai Baba temple in Bangalore. Through her artwork, and in connection with political and religious events in India, she pushes for a discussion of how noise should be perceived as a relational phenomenon. In the case of an ever increasing tension between secular and religious quadrants of Indian society, the sound of the temple can be seen by some as noise and by others as a sacred expression. In fact, everyday noisiness can translate to a sense of togetherness or intimacy. In contrast, there is a lack of relational awareness in how acoustic ecology describes what noisy is.

RC: There is another side to her discussion that expresses the way contemporary Indian art deals with religion, often replicating a European stance that comes from the so called 'Age of Enlightenment'. But continuing your train of thought, there is a strong relational ethos that resonates with Katrin Köppert's intricate discussion.

FI: Yes...Katrin outlines a history of art and audio-visual practices dealing with mourning and loss in regards to the AIDS epidemics (*The Sound of ACT UP! AIDS Activism as Sound(e)scape*). Her analysis focuses particularly on the issues of silence,

sound and noise and the often complicated relationship that these sonic expressions have in personal politics and aesthetics. Köppert argues that the opposition between silence and/or noise needs to be evaded when discussing forms of expressing loss and issues of visibility. In fact, this dualism can paradoxically promote conservative politics. A queer critique can offer an insight on the heteronormativity of mainstream ecological discourses, in particular when it entails the romantic binarism in the nature versus city opposition – in particular when we tend to negatively associate cities with impurity, poverty or queerness. She argues that this binarism is at the heart of acoustic ecology overall discussion of sonic phenomena.

RC: She also talks about the idea of "sound-escapade", one that avoids the normativity of urban noises or the romanticism involved with the quietness of rural life, as there is a way of thinking about silence that is specific to a political milieu.

FI: There is a sense of 'worldliness' that connects with Valéria Bonafé's discussion of her compositional work (*The experience of sonority: the dangers of a journey into the unknown*). This is done by moving away from the 'sound-in-itself' idea that is attached to the concept of 'sonority' that she discusses to a sound out in the world, in connection with other senses. It is worth stressing out that this idea of 'sonority' has been paramount to an understanding of concert music, at least since Debussy. Bonafé is trying to expand this concept, by connecting what we perceive in terms of sounds in counterpoint, to important domains of musical composition: on one side, the structural relations that support the discursive apparatus of music itself; on the other, the referential aspects, such as images, memories, ideas and concepts that we associate to sound. In this sense, the idea of sonority encompasses both the perceptive and sensorial aspects of sound.

LC: We have not mentioned yet, but the discussion that you are describing is done in relation to the creation of her orchestral piece called *A Menina que virou Chuva...*

RC: I also want to add that in her text there is a consistent description of the visual metaphors that ended up influencing her work...

LC: Sure, Bonafé explores those metaphors in order to create a friction between the acoustic qualities of a specific sound and the connections that we establish in listening to the work (...) Bonafé's contribution brings about the possible idea of sound as an image and that the compositional process can be influenced by imagetic references (such as rain or crying) (...) Valéria Bonafé's work is a good example of how praxis can be of service in terms of forwarding a critical account. Another good example of this is André Damião's practice-based research in Mobile Music (*Some considerations towards a more critical practice in Mobile Music*). In his paper, he demonstrates how artwork and research that explored the technological capabilities of mobile devices (GPS, wearable sensors, cellular phones), not only became entrapped by what large corporations had to offer in this domain, but started to reproduce the same transformative marketing discourse.

RC: Yes, he links this with a decrease in manufacture of custom-made devices and an ever reliance on smartphones and their associated closed ecologies. A funny example of this is the emergence of *i-Ensembles*. Basically, people playing virtuoso redemptions of let us say, Beethoven sonatas on their iPads. In counterpoint, he advocates for the construction or recycling of consumer electronics that are out of use (...) Linking back to Padovani's discussion, there is for me a clear idea on how this process is informed by the need of, not only sustaining a creative practice (in the political and ethical sense), but also building a community.

FI: Just to clarify what you said about the idea of closed ecologies...Damião is talking

about issues such as planned obsolescence, software compatibility and the terms of service restrictions in what can be done in regards to tinkering/modifying the equipment...

RC: Indeed! Moving on to the two final articles in our issue...I think they provide more of an overview.

LC: Yes, Jason van Eyk describes three possible perspectives through his text in terms of curating sound art works (*From Control to the Non-Cochlear – Evolving Strategies of Sound Art Curation*): the first is guided towards how sounds react in space; the second, on how sounds coming from different sources (including the sound of the exhibition place itself) can blend or react with each other; the third (and the most interesting for the author) is how to outline the curatorial work, based not only on a sonic concern, but on how the acoustic phenomena interacts (through a conceptual approach) with other elements.

RC: He exemplifies what you are saying through his own endeavours. In this case, an exhibit he developed collaboratively – with his *September Collective* – called *Symphony of Hunger: Digesting Fluxus in Four Movements*, where they fully embraced sound, but also the somatic aspects and socio-political milieu that threaded all of the artworks shown.

LC: I think it is safe to say that a lot of the contributions exhibited the potential in crossing sound with other media and Igor Reyner work (*Fictional narratives of listening: crossovers between literature and sound studies*) is no exception – demonstrating how literature and different works of fiction have been used as conceptual tools towards writing about sound in different remits. This is done through four examples: the first one, is an observation on how Pierre Schaeffer – in the *Traité des objets musicaux* – referenced *Homofaber* by Max Frisch in order to clarify his listening theories; the second one, is Douglas Kahn's use of literature, not as a way to exemplify a theory, as Schaeffer did, but as a way to build a possible narrative in regards to the history of sound in the arts; the third, refers to how literary descriptions can be used to build a form of aural history, as in the case of John M. Picker's *Victorian Soundscapes*; in the fourth and final example, Igor Reyner takes a Brian Kane's (in *Sound Unseen*) analysis of Kafka's *The Burrow* – a tale that brings about a notion of acousmatic that is similar (although with its specificities) to Schaeffer's – in order to exemplify how literature can by itself, be seen as a self-sustaining theory and theoretical model from which to discuss sound.

RC: Generally speaking, Igor's work points out that an approximation between literature and sound studies can aid in overcoming music's hegemony when we want to discuss sound.

LC: I just want to note that there is a conceptual loop in terms of how these articles were sequenced, as there is an obvious link between Igor Reyner's discussion and Rodolfo Caesar's text as he uses an example extracted from literature (in this case Paul Valery's experiential description of a train voyage to Amsterdam) in order to further his assertions on how technology changes our perception of things...

RC: Yes, I think that we've sequenced things in order for those connections to be obvious for our readers...At least we hope! (Laughs)

FI: Just to round off things, we thank to thank the Interference editorial board for this amazing opportunity! Also, we want to thank all of the participating peer-reviewers that put in a tremendous amount of work.

Bio

Fernando Iazzetta is a Brazilian composer and performer. He teaches music technology and electroacoustic composition at the University of São Paulo and is the director of NuSom – Research Centre on Sonology at the same university. His works have been presented in concerts and music festivals in Brazil and abroad. As a researcher he has been interested in the investigation of experimental forms of music and sound art. He also runs a record label and studio – the LAMI – at the University of São Paulo. He currently is a research fellow at CNPq, the Brazilian National Council of Scientific and Technological Development. Since 2010 he is the consultant for the Arts Committee at FAPESP – the São Paulo Research Foundation.

Lilian Campesato is a Brazilian performer, researcher and curator interested in investigating experimental forms of music and sound art. Her works explore the use of voice and gesture in combination with interactive electronics and audio-visual resources. She regularly presents performances in festivals and alternative venues in Brazil and abroad, such as Portugal, Spain, UK, France, Denmark, Argentina, and Colombia. She holds a PhD in musicology from the University of São Paulo (USP) with a thesis on the process of aestheticisation of noise in music. She currently is a research associate at the NuSom – Research Centre on Sonology at USP. Her main research interests are the use of noise in music and experimental forms of artistic production. She was one of the founders of Sonora, a collective dedicated to the discussion of women in music in Brazil.

Rui Chaves is a Portuguese sound artist, performer and researcher. His research and work foregrounds a discussion of presence — both physical and authorial — in the process of making sound art: an endeavour that is informed by a contemporary critical inquiry and exploration of the thematics of body, place, text and technology. He has presented his work in several institutions and events throughout the United Kingdom, Brazil, France, Canada, Portugal and Germany. He holds a PhD in music from Queen's University Belfast. He is currently a postdoctoral researcher at NuSom with a research project focusing on creating an online ‘archive’ of Brazilian sound art.

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Footnotes

¹ We want to acknowledge the help of Ana Maria Ochoa, Carlos Palombini, Ernst Karel, Franziska Schroeder, Gilbertto Prado, Giselle Beiguelman, Jairo Moreno, Laura Zattra, Linda O'Keeffe, Louise Meintjes, Makis Solomos, Manuel Rocha Iturbide, Marcia Epstein, María Andueza, Maria Lucia Santaella Braga, Marie Thompson, Mark Peter Wright, Matthew Rubery, Michael Goddard, Mikhail Malt, Morten Søndergaard, Patrick Valicquet, Paulo Chagas, Peter Cusack, Raquel Castro, Ricardo Dal Farra, Robin Parmar, Rodolfo Caesar, Samuel Araújo, Simon Waters, Sumanth Gopinath and Will Schrimshaw.

² <http://www2.eca.usp.br/sonologia/>

³ <http://www2.eca.usp.br/nusom/node/23>

⁴ <http://www2.eca.usp.br/mobile/smct2012/>

⁵ Mobile (<http://www2.eca.usp.br/mobile/portal/>); Lami (Laboratório de Acústica Musical e Informática, <http://www2.eca.usp.br/lami/portal/>)

⁶ See Edward Said's discussion of these ideas in *The World, The Text and The Critic* (1993, pp. 31-54)

⁷ <http://www2.eca.usp.br/sonologia/call-for-papers/>

⁸ See Lila Abu-Lughod's discussion in *Writing Against Culture* (1996)

⁹ See Boaventura Sousa Santos' essential discussion on these thematics in *Beyond Abyssal Thinking: From Global Lines to Ecologies of Knowledges* (2016)

¹⁰ For an introductory overview, see *Stuff* by Daniel Miller (2010)

¹¹ In *MP3: The Meaning of a Format (Sign, Storage, Transmission)* (2012)

¹² <http://www.nime.org/>

Technographic listening: an experiment in feedback

By Rodolfo Caesar

Abstract

A feedback-loop between electroacoustic devices and my own perception resulted in the 'discovery' of something that had been in front of me all the time. By using the concept of *technographic traces*, I attempt to describe processes in which technologies reveal some sort of subjectivity. Drawing analogies with the rocking of trains, and altered states of consciousness, as in Paul Valéry's prose and in Cartesian rationalism, the main objective is to testify, again, on technology's role in shaping perception and understanding.

Keywords

Rhythms out-of-sync, technographic listening, technological subjectivity, sonology, driving feedback, cogitamus

Crossing two lines

This text results from the intersection of two lines of research that I have been busy with for some time: the first deals with what we hear from so-called Nature, and the second with the interaction between music and technologies. The title I have been using to describe my recent research sums up how and where I have been placing my curiosity and myself: "Listening: between the animal and the robot."

Firstly, I will describe one of the founding examples of my interest concerning the expression of animal sounds: "analysis and synthesis of *a-metric* sounds produced by anurans and insects" (Caesar, 1996, 1997, 2002, 2008). As many composers intrigued not only with ornithology, from Vivaldi to Messiaen, but also with animal sounds in general - like Tato Taborda (Taborda, 2004) - and because I deal mainly with electroacoustic media, I became interested in the rhythmic patterns of frogs, crickets, cicadas, etc. The sample that triggered my curiosity shows two frogs, microphonically set apart doing their (perhaps unintentional) number, going in and *out of sync*.



Sound 1: Frogs going out-of/in-sync.

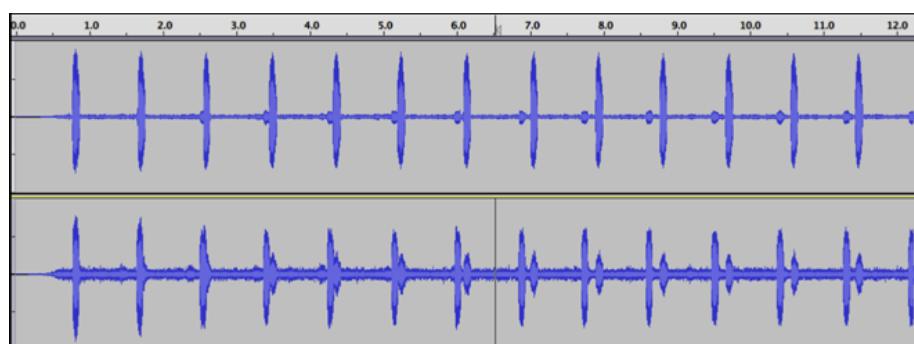


Figure 1

Sound 1's waveform showing progressive out-of-sync between two frogs.

In 1973, John Chowning invented a prolific way of using Frequency Modulation for musical purposes (Chowning, 1973). He transposed the mathematical model from its usual finality as a radio wave communications tool. What he did was a transposition of the speed of frequencies and a replacement of the radio wave medium with the acoustic one, thus enabling the building of rich musical timbre, unavailable through the subtractive and additive methods employed at that time. Following my compositional purposes of rhythmic patterns, I took Chowning's transposition one step further, by reducing the device's operator speeds to another dimension, so as to have frequencies located below the audio spectrum, which resulted in a rich way of building durations, otherwise too complicated to write by means of graphic notation. The next examples show two different interpretations of what the 'natural' world played to my ears, made possible via FM.



Sound 2: Frog sounds produced through FM.

The use of FM is exemplified in figure 2 where we see a group of grains describing an up-and-down curve, with the curve affecting the acceleration, the pitch and the volume of each grain:

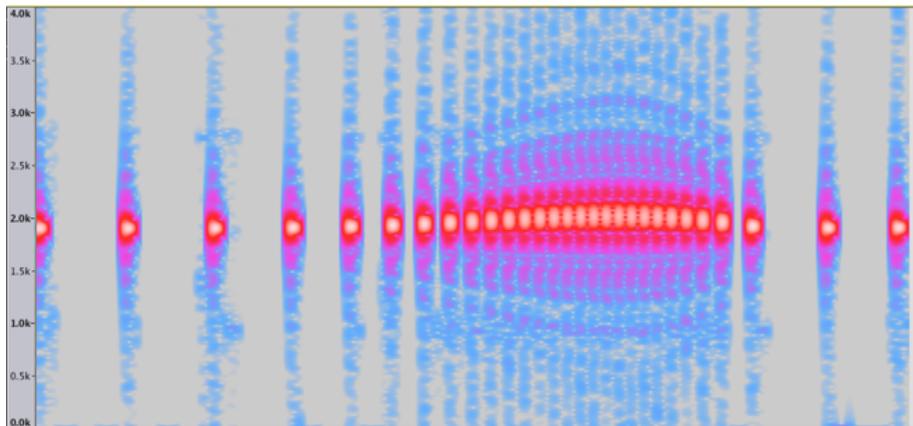


Figure 2

Grains describing a curve

It sounds like this:



Sound 3: Grains obtained by a curved shape.

If we modulate the same curve by an oscillator with the same shape, it may result in the shape below:

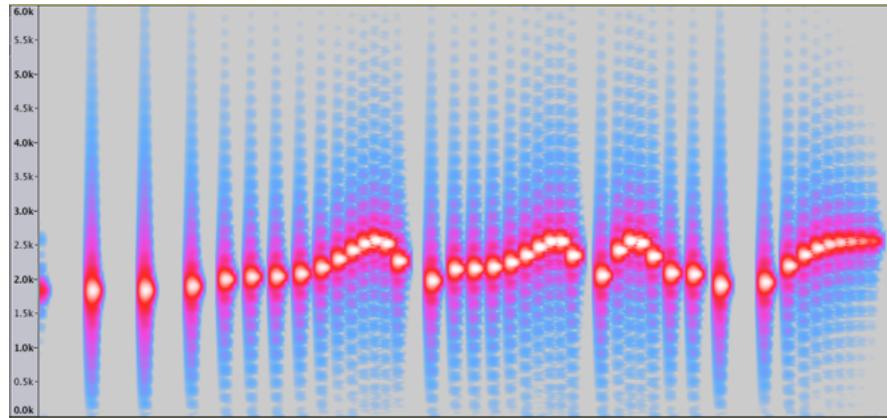


Figure 3

Grains modulated by an oscillator

It sounds like this:



Sound 4: Grains produced by the coupling of the same curved function.

Until now, I described the presence of two different tools stemming from recent technologies involved in a process of knowledge: audio recording and synthesis. It will become more complicated.

Technography

It has always been a concern to me the need to be aware of how technologies are being used, thus trying to learn each device's own peculiarities and full capacities. For a composer, the introduction of recording and synthesis technologies in music composition should be 'justified', meaning that such or such use would be acceptable whenever new machines wouldn't merely replace more expensive and/or 'older' technologies (like musical instruments). Such criteria responded to ethical attempts to avoid treading into the professional fields of fellow instrumentalist musicians. But there are also aesthetic and more general issues at stake as well.

The a-critical use of new technologies in electroacoustic music hid another no less serious issue, when composers create pieces reliant on effects designed by programmers who rarely ever get any credit and whose part in the authenticity is seldom, if ever mentioned. On a more philosophical stance, Vilém Flusser's *On writing, complexity and technical revolutions* (Flusser, 1988) is very clear on this subject.

It was perhaps symptomatic of an urge to reach universality, that the theories of listening inaugurated by Pierre Schaeffer (1966) briefly mention, but never give deserving places to, a 'technological listening' that would attempt to analyse by which means one or other effect is produced. For this matter, to animate a criticism towards the amnesia of the technical debt, to reach the composer's insouciance – especially when his choices are so clearly 'inspired' by the special effect one or other device offered – I decided to point to something bigger than the composer, calling this presence the 'strong action' of technology (Caesar, 1992). In Schaeffer's *Traité*, technical listening does not contain a conceptual tool for criticism, as does his notion of *arts-réelais* (Palombini, Brunet & Schaeffer, 2010). I have

never found consistent references to technical listening in the texts of other electroacoustic composers nor in the writings of scholars on this subject.

It is easy to exemplify these effects in the audio-visual and TV fields. For this purpose, I've chosen a recognisable technography very likely to be remembered, because of what became an unbearable cliché on many films, videos and advertisements from the 1990s: morphing. The gimmick is as outdated as the content of the example given below.

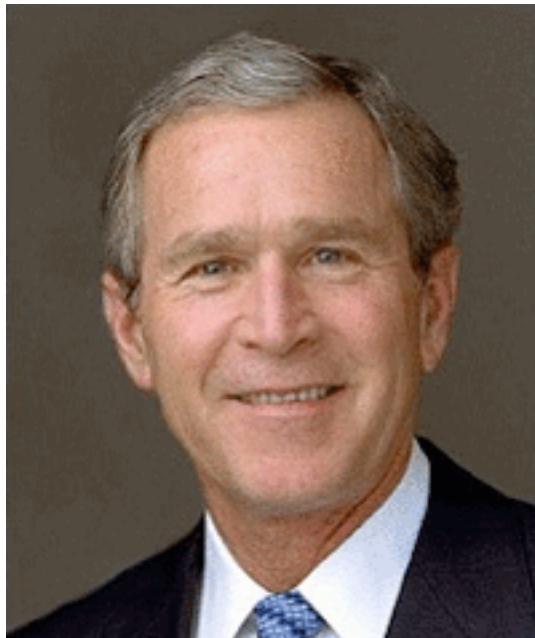


Figure 4

Morphing two politicians. (GiF) [2]

Interestingly, but not at all coincidentally, this very example illustrates an article about a computer program dedicated to *sound morphing* for compositional purposes. It is the trick whereby one can gradually move from one timbre to a different one, without interruption or superposition of the sound. There were transformations from a bee buzz to the clamor of a crowd, or from a choir boy's voice to the spectrum of a church bell: musical achievements of very reputed composers, but whose software only few of them really understood or had access to.

It was Flusser's belief that art should avoid being stupid by means of knowing and really 'using' technology in the process of making the art object. Perhaps he didn't realise, at the time, that digital arts would be developed in an attempt to allay his fears concerning the awareness of the process. But this knowledge would not become an aesthetic solution, since audiences for this art will need the same degree of technological knowledge in order to decode its products.

More recently, after becoming less interested in artworks and concerts, and helped by the readings of authors concerned with media/technology, my interests became less focused on a humanistic view. Instead of trying to see the man behind the machine, I started to see, a bit closer, man's entanglement with technology's own *subjectivity*, one that reveals itself through *technographic marks*. Such authors discuss the properties of technological devices, employing different terminologies: machine, *appareil*, *surface d'inscription*, materialities of communication, *dispositifs*, etc (Agamben, 2006; Déotte, 2007; Gumbrecht & Pfeiffer, 1994; Serres, 2012; Stiegler, 1994). It is beyond the scope of this text to find out which among them is the most adequate, or to subscribe to the most persuasive theory. In order to

legitimise this work to which I am devoted, I just wish to make myself as clear as possible in the description of an experience, which is, above all, a practice.

Although there are electronic audio devices involved in the article's title, the expression *feedback* does not refer exclusively to the *technographic traces* left on captured and re-amplified sound, such as what Jimi Hendrix created on stage. The guitar player experimented different distances between the guitar and the speakers, which acted simultaneously as *sources* and *reproducers* of sound. The precise technographic mark I would like to describe lies on a more extended loop – both in matter and in time.

The expression *feedback* is also metaphorical, because it will translate not only what sort of connections acted in my own use of machines, but how much it involved my body and consciousness as well, as they became part of the *physical / material* experience. It is a case where the feedback circulated between my understanding and an electroacoustic device, adding a little bit of knowledge to my unfamiliarity with ornithological topics.

After this explanation, I will give examples in broader areas.

Firstly, however, I need to explain the recurrent use of quotes, as I have done for 'Nature' and 'music'. I did so, because I find it increasingly difficult to establish clear boundaries, especially whenever 'music' appears – in regards to its' practice and its' knowledge. Such vagueness permeates the whole text and the research with which I have been busy. The world of 'animal' sounds poses plenty of conceptual challenges, for it supposedly expresses 'non-musical' conditions, which I don't want to judge. Thus, the use of floating concepts became a recurrent *medium* in my professional life, stimulated by the connection with contemporary music – especially electroacoustic music, the 'music of all sounds' – and with Fine Arts in general, which, during the second half of the last century, or more precisely ever since Marcel Duchamp and Dada, created repertoires where the establishment of limits is cheerfully complex. Therefore, quotes, here, are not ironically intended. They just mean a dynamic use of words. Instead of trying to solve complex themes like 'humanity', 'animality' and 'machine', where limits keep being questioned, I will only try to describe the radical alteration in attitude during a research undertaken between the years 2011 and 2014.

The feeling of being part of a feedback-loop has happened thanks to what I came to understand as *electroacoustic literacy*. What I mean by literacy is an understanding of the relationship between reading & writing texts, using letters and/or other symbols. A comparable relation happens when one participates actively in a process of audio technology involving pickup, recording, processing and reproduction. In 'usual' literacy we are part of a process that mixes at least several materialities: the letter, the written language, pen and paper to take notes, and the body, provided with eyes, memory and consciousness to participate in this mixture. In the electroacoustic experience, the process is similar but not less important to investigate.

Catching the Flycatcher

In several regions in Latin America, there is a bird whose vocalisations become fully observable at the peak of summer.

Each day Swainson's flycatchers vocalize four or five different – and *perhaps random – items*, which all sound separate and scattered between dawn and nightfall. (I decided to employ the word *item* instead of Biology's usual *call*, only because I am not sure how far the bird is really only calling, but this is a subject for another article. This word will only mean that there is a difference between them.)

As I went for a fully dedicated *research into animal listening*, I noticed that during the day some items that first appeared to me as if they belonged to different birds, actually came from a single individual. By the end of the evening one could listen to five items grouped

together, strung across a progressive sequence, each one followed by another, all five joined in a solo that stands out in the relative silence of the other species.

As far as my first perception of the Swainson's Flycatcher was concerned, I realised I was not the only agent involved: it was a process synchronized with audio recordings and their playbacks, without which I would not have paid enough attention – and consequently understood that the five previously separate items, actually came from one individual until then unknown to me.

This experience took place during a survey period held during postdoctoral research at the Universidade Federal de Minas Gerais in Belo Horizonte, that focused on the observation of acoustical animal expressions in forests and savannahs, near the place I was living.

What is remarkable in the Swainson's Flycatcher expression is that, during its solo, the *items* line up, arranged in a row of increased complexity.



Sound 5: Flycatcher.

There is an evolving model: following the first, a plain note, a *son tonique* – as Pierre Schaeffer would describe a sound with a recognizable pitch and harmonic spectrum (Schaeffer, 1966) – the sequence evolves toward a more elaborate *son complexe*. A spectral analysis reinforces this perception.

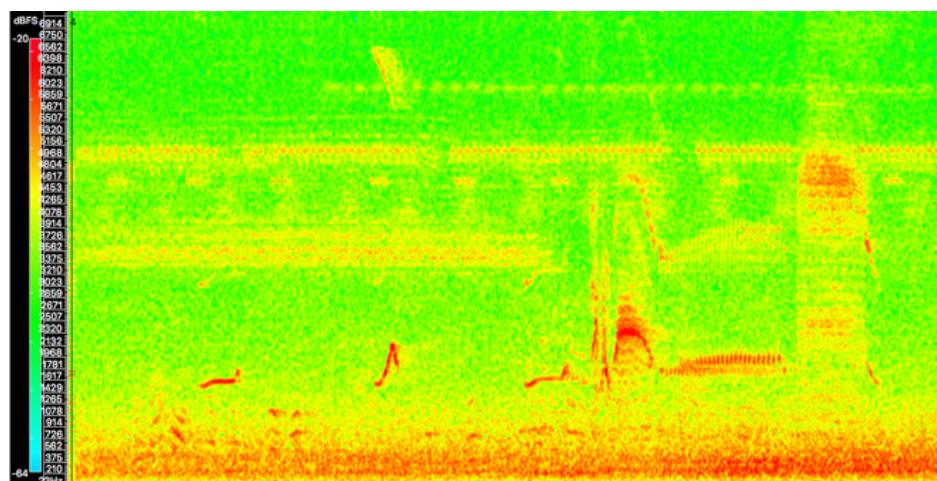


Figure 5

Spectral analysis showing Sound 5's flycatcher's different items

An almost straight dash, the note, followed by another in ascending-descending curve, another dash, this time followed by a more complex object, similar to the second curved item, comes with more energy, and then a trill located above the initial dash, finally leading to the complex mass of sound resolved in a high-pitched frequency modulation. At this point the flycatcher resumes the cycle, which will only be silenced by the arrival of night's darkness.

During work sessions in the studio, while listening to recordings, for instance to sort older

items from other individuals of other species, taken in other places, taken in other places, I noticed the presence – until then veiled to my ears – of those, now identified, items of the Swainson's flycatcher. Although I've had always ignored this fellow, now its identification in many recordings jumped to my ears, thanks to a special interest I acquired after identification. One can notice here a slow *driving feedback*, as if the microphone capsule had first guided my attention to the Swainson's Flycatcher's solo, and – once identified – back to the recognition provided by playback.



Sound 6: A very distant flycatcher discovered among frogs and a *caracara*.

A sample recorded back in Rio de Janeiro, many years ago is included below – before I knew the bird existed. What I first thought as being a *bem-te-vi*, the Great Kiskadee (*Pitangus sulphuratus*), may be the flycatcher. It is worth to stress that this act of recognition or doubt is too a result of the mediation allowed by audio technology. (Interestingly, this bird vocalizes more stridently than those in the forests of Minas Gerais. Perhaps this is due to a need to be heard through the loud and varied urban sounds.)



Sound 7: A flycatcher found in a recording taken in Rio de Janeiro, before I noticed their existence.

As far as *selectivity* is concerned, the mere use of recording equipment stimulated a different attitude in regards to my ‘objectivity’. A sort of *protagonism* of the electroacoustic circuit operated together with my attention, leading me to get closer to the bird, while being instrumental in the work of piecing the items together. Aware of the influence of mediated-listening, I posed myself methodological questions on how to start a new research, still focused on animal vocalisations, reviewing everything that, until then, had led me to the fieldwork. It became clear that my choices should be put under scrutiny. I am very thankful to the organizers of the ‘Out of Phase’ event [1], because no expression describes better my perplexity after this experience.

In the beginning of the fieldwork, my attention toward animal vocalisations was directed, above all, to the search for individuals capable of delivering ‘curious’ and ‘composable’ sounding items, i.e. presenting ‘musical interest’ to my ears. Now, taught by the experience with the flycatcher, I acknowledge the reproduction of a colonial rapport with the exotic, in resonance with Edward Said’s discussion (Said, 1978). In the beginning, I went in search of ‘Eastern’ animals – in their distinction from our ‘Western’ music. The electroacoustic circuit, once I placed myself out of phase, helped me at least to be aware of my own subjectivity, and to start to pay attention to other less ‘spectacular’ but nevertheless very interesting vocalisations.

To conclude this section: it is as if the *cogito*, the Cartesian ‘I think’ – if I wanted to insist in object/subject polarisation – had to be replaced by ‘we think’, this ‘we’ being constituted by me, the machinery involved, the Swainson's flycatcher, the flies or whatever else, the environment, etc. Once aware of the role of this mixture of agents, if one insists on keeping a scientific objectivity, one needs to participate in a sort of post-Cartesian *cogitamus*. It is

not my intention to persist in such binarity.

As for the dowser's fork and the shotgun microphone, the recorder and my brain memory, at every time, each tool expressed, in their own ways, a 'mixed-media subjectivity' that I have been trying to identify whenever *technographic traces* are detectable. The traces responsible for the flycatcher experience acted very positively towards my understanding of environment, harmony, silence and other musical stuff that may attract a composer's ears.

Sometimes, more subtle subjectivities reveal themselves in less obvious media, but may be responsible for unforgettable moments and huge consequences, not only aesthetically speaking. In this regard, I would like to give as an example the effect of trains on Paul Valéry's writings.

Different transports

Coming back from a stay in Amsterdam, where René Descartes lived two centuries earlier, Paul Valéry surrenders to the rocking movement of the train, as described in his narrative *Retour de Hollande* (Valéry & Bersier, 1946). The rhythm of the wagons induced Valéry into a *mediated abstraction*, in what he understood as a mental state conducive to Cartesian meditations. Such condition is a clear and abstract mental alertness, stimulating reasoning 'in its pure state'. It happens while the train moves, unattached to cities, their meanings and histories. What matters is the movement between them and its effect. But far from a philosophical style, Valéry's text, made up to describe the condition, plunges us into poetry, close to hallucination.

This is what the poet had in mind while in Cartesian meditation:

"A voyage is an operation that makes cities correspond to hours. Nevertheless, what I consider the most beautiful of it, and the most philosophical, lies in the intervals between these pauses.

Apart from kids, I don't know if there are sincere rail amateurs who are *train-pour-le-train* aficionados. I don't see those who would know how to enjoy, as enjoyable as it is, the roar and the power, the eternity and the route surprises. Children are the great masters of absolute pleasure. As far as I'm concerned, as soon as the wagon's block starts moving, I abandon myself rocking to a naïve metaphysics mixed with myth.

I leave the Netherlands... Suddenly it seems to me that Time starts; Time 'se met en train'; the train transforms itself in Time's model, from which it takes its rigor and assumes its power. It devours all visible things, it agitates all mental things; with its mass it attacks brutally the world's face, sending bushes to the devil, houses, provinces; it drops trees, drills arches, expedites posts, collects rudely all lines as they cross, and channels, furrows, trails; it changes bridges into thunders, cows into projectiles, and the stoned structure of its way in a carpet of trajectories... Even the ideas, always surprised, dragged as if stretched by the torrent of visions, modify themselves, like a sound whose origin flies away in the distance." (Valéry & Bersier, 1946)

Comparable to this *technographic trace* of the train on Valéry's meditation, may be the state of being chemically altered during *music criticism*, as told by Douglas Kahn.

Opening a Conference at The Fourth Annual 'Activating the Medium' Festival 2001, the North American musicologist chronicled an analytical description of his experience in listening to a piece found on a cassette tape (Kahn, 2001). While he was looking for something to entertain himself, Kahn randomly chose a tape lying on his table and put it to play. As he developed a deeper interest in what he listened, Kahn started to exercise a more formal description. After the work had finished, he discovered that the recorded music was not really a musical piece (by some composer); it was nothing more than residues on a demagnetized cassette, which previously might have stored a piece by a jazz musician. The

demagnetization was not strong enough to erase all acoustic traces from the tape, leaving, instead, distorted bits of information, to a point that made the original unrecognizable. Before listening, Kahn had smoked a known herb capable of producing the effects thus described by him:

“Euphoria. Thought magnification all the way to thought animation; formal structures seen on their own terms; aesthetic experiences, personal and sexual experiences, all brought into high relief. Self and other mix and pull apart.”
(Kahn, 2001)

(I need to reserve the word ‘Perspective’ for further development, below)

Then, Douglas Kahn describes the contents of his listening experience, from which I extract two paragraphs:

“The repetitive sweeping set up a pulse, which at once related to the pace of the trade-offs from one instrumentalist to the next, and to the independent rhythmical elements submerged across the sweep from one moment to the next. There were little recursive *eddies*, mostly at the trade-offs, which would mark time by almost imperceptibly backing up now and then, and these too were taken up in the momentum of the pulse. This pulse had little in common with those used in some musics – popular and unpopular alike – where they are little more than a mushy metrical backbeat. This was more akin to Chinese pulses where the beating of the artery might be described as the "movement of water sliding over a crack, a man undoing his belt, or someone wishing to wrap something up, but lacking the cloth to go all the way around." (these were mentioned by an incredulous French physician in the 18th century).

There were some things this music didn't do. It didn't dramatically change direction, or settle in at one spot, or exhibit any real lateral dynamic. Although streams do not run uphill, they will settle into pools, plunge over a cliff, fade into other streams or violently take other streams into themselves, and some can even appear to gradually run uphill. Multiple lines could have joined the sweep and the sweep could have angled out from the proscenium and added other dimensions. These limitations were good, because it meant that this group had plenty of other directions to explore. Having made a huge breakthrough, they had only scratched the surface. That seems to be the true test of artistic innovation.” (Kahn, 2001)

Perhaps inaugurating something close to a ‘musicology under the influence’, Kahn ‘discovered’ a song that, for our judgment (I mean: in a ‘correct’ frame of mind) did not exist as such until Kahn invented it. What he experienced resulted from a bunch of scattered residual acoustic *items* – put together by his altered conscience. It is not different from my experience with the electroacoustic circuit, when ‘we’ – I and all other stuff surrounding me – assembled five items and then ‘discovered’ the flycatcher.

Who would nowadays deny Kahn’s experience as less ‘scientific’ and/or ‘not-musical’? The fact of being under the influence doesn’t change too much of reality, and doesn’t remove from the analysed piece, even if not a ‘piece’, its musical power. Being just a non-composed thing does not prove it can’t sound musical to someone.

The influence of drugs on perception points to the subjectivity of this chemical technology, as it leaves traces of a technology. I believe drugs should not be considered less of a medium than optical fibre.

Perspective

I asked the reader to take note of the interesting use of the word *perspective* by Kahn to describe his experience. It is the frame of mind one believes to be in, entitling one to the condition of objectivity. Perspective is a medium, a technique in drawing and architecture, which emerged and became celebrated from the Renaissance until today, now governing the supposedly natural reproduction of the visual field. The twentieth century saw a revival of this illusion in its sonorous / musical transposition in the so-called *stereophony* and later the *3D*.

Today, with the benefits granted by hindsight that our times have permitted, we may propose an understanding of the Cartesian philosophy as related to another altered state of mind, that was stimulated not by means of rail transport - as seen in Valéry and which was obviously non-existent at the time of René Descartes -, but by a visual tool capable of providing a *stereoscopic* sense that lead to the separation between subject and object, the ‘Perspectiva’ that Brunelleschi and other Renaissance artists rediscovered and diffused many years before the issue of the *Discourse on Method*.

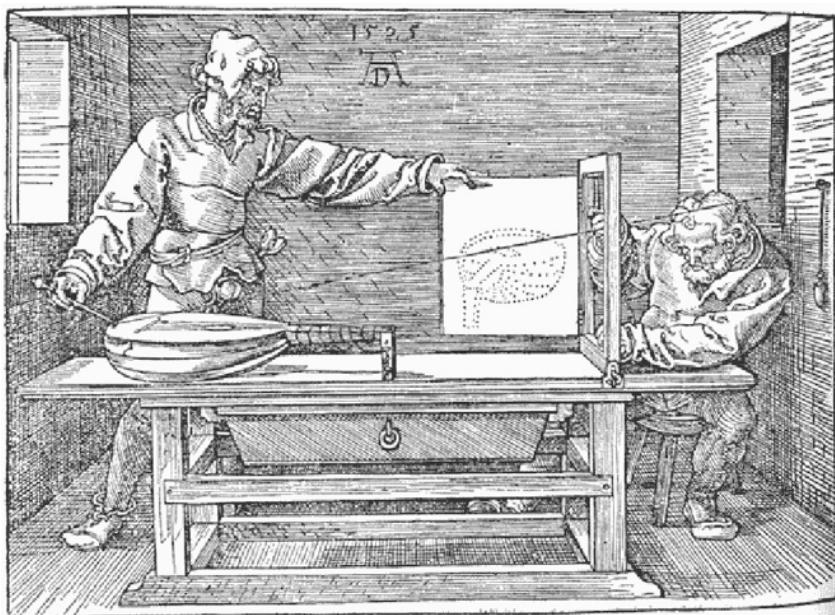


Figure 6

The device permitting to draw with perspective. Illustration by Albrecht Dürer (In Unterweysung des Messung, 1535)

Without this device, by which means the artist sees the vanishing point through a flat mirror, Brunelleschi would have hardly created the foundations for the Renaissance perspective. And without it, the Renaissance culture would not have adopted the vanishing point, within which one could focus on the object, separating it from the rest and from oneself, so as to constitute the couple subject / object, foundation of the Cartesian rationalist philosophy.

Many authors agree, and even René Descartes' own biographer, that the great philosopher-mathematician's *Discours de la Méthode* was influenced by three famous dreams that happened during the night of the 10th of November of 1619. Adrien Baillet, the biographer, narrates the dreams as if they were his own, with a precision that can only be due to having been told by Descartes himself. There were three very complex dreams, but for this text I will direct my attention expressly to Baillet's own words (Baillet, 1691), as he looks for the possible sources of Descartes' dreams:

“This last imagination had certainly something of an enthusiasm, so much so that it would lead one to believe that M. Descartes had something to drink before going to sleep. Actually, It was Saint Martin’s Eve, a day in which it was a costume to *faire de la débauche*, at the place where he was, in France. But he assures us that he spent the evening and the whole journey in sobriety, and that he was already without drinking for three months. He adds that the *génie* who excited his enthusiasm – a condition, he felt, warmed his brain for some days – foretold these dreams even before he went to bed, and that the human *spirit* had no part to play.” (Baillet, 1691, pp 81-82)

But in a more rational guise, one puts less strain in *belief* by simply inferring that Descartes’ *malin génie* – the counter-incentive that helped him build his philosophy – had more chances to appear in dreams when the dreamer was mediated by *spirited* technologies. Which, by the way, constituted one of St. Martin’s notorious knowledge, especially as white wine is concerned.

Conclusion

It is not my intent, and out of our reach to stop this continuous process of intoxication whereby we become the most mixed media. I am not ‘against’ being intoxicated. I am, or we are all, now, so intoxicated by all sorts of media that one would not know where to start and where to draw a line between ‘us’ and the ‘media’. From the alarm clock and toothpaste in the morning until the last elevator noise in the night we find time to spend with twitter and with buses, with TV sets during breakfast at the hotel, etc. How can one be ‘against’ all that? It’s too much, and perhaps we should try not to feel overwhelmed. We may be rewarded whenever intoxication is at least acknowledged and identified.

For this to happen, one of the best medicines (another toxic substance?) is to remove ourselves from the ‘natural’ state we believe to be, and become somehow ‘out-of-phase’. For instance: when we invert the phase of one of the channels of a stereo recording, the notion of ‘natural’ space is destroyed, but other weird spatial feelings ensue. A sensation of ‘unnatural’ is created, enough to call the attention to the technographic trace of the stereo system that the music industry started to sell in the fifties, and we naturalized in our electroacoustic pieces, especially in the *soundscape* genre. Once ‘out-of-phase’, the recognition of the effect may induce the artist to ask themselves how much of Brunelleschi – or even Descartes and ‘objectivity’ – they want to keep propagating in works of art. Art, supposedly, is the field where we are not only allowed to – we actually should – make questions instead of accept all things as – we might believe – they ‘are’.

Footnotes:

[1] I An earlier version of this text was presented at the *SONOLOGIA 2016: out of phase* conference that took place in São Paulo, November 2016 (22nd to the 25th).

[2] No author could be found for this animation. Although it all points that it was made during the Bush transition to Barack Obama’s presidency.

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Bio

Rodolfo Caesar is a professor at UFRJ School of Music in Rio de Janeiro. He studied in the early days of the Instituto Villa-Lobos, as it was conceived and coordinated by Reginaldo Carvalho. There began Rodolfo's interest in the relationship between new technologies and music. Having been a Pierre Schaeffer's ‘stagiaire’, he graduated in electroacoustic music at the CNSM de Paris. Since then, Rodolfo composes autonomous pieces, or works related to other arts, such as dance, theater, cinema, poetry and the visual arts. His pieces are displayed in galleries or museums, or played in concerts and radio broadcasts. His current research project, funded by CNPq (National Counsel of Technological and Scientific Development), addresses music's different materialities, as it questions bio-acoustics and contemporary musical aesthetics.

African Orientations to Listening: The Case of Loudspeaker Broadcasting to Zulu-speaking Audiences in the 1940s

Thokozani Mhlambi

Abstract

This paper tracks the development of loudspeaker broadcasting system for African listeners in South Africa, in the 1940s. The paper argues that although such development seemed to take place under the constraints of Second World War recruitments, however in the realm of listening, it was extending on previous listening techniques (related to the *inkomo*, cow, a key object in Bantu-speaking cultures of Africa); it drew on commemorative forms; etc. and the fact that it had to draw on such commemorative forms for its viability demonstrates its reliance on historical antecedents (albeit caricatured in form), that demonstrated at once the resilience of the past, as well as its incomprehensibility in relation to colonial/segregationist conditions of governance. In this way the paper is a contribution to sound theory, in terms of the elaboration of listening as a category by which we come to know the world we live in, from African perspectives.

Keywords: SABC, broadcasting, Zulu radio, loudspeaker, izibongo, listening

Introduction

This paper is a contribution to sound theory, in terms of the elaboration of listening as a category by which we come to *know* the world we live in. When French physician Rene-Theophile-Hyacinthe Laennec invented the stethoscope, he published an entire treatise explaining the act of listening to the body of a patient in 1819. The treatise's aim was to teach doctors how to listen but also how to think about the act of listening to patients. The stethoscope went on to become the single most influential medical invention of 19th century Europe in the diagnosis of patients. Listening became a vital skill necessary in the creation of a new medical epistemology. And as Jonathan Sterne explains, by the time the preoccupation with listening entered the field of broadcasting it was not necessarily a new thing, it emerged with its own sense of “intuitive knowledge” about how to listen and how to think about listening (Sterne, 2003, pp. 89-101).

Sterne argues that techniques of listening that became widespread with the diffusion of the telephone, the phonograph, and the radio early in the 20th century were themselves transposed and elaborated from techniques of listening developed elsewhere in middle-class cultures over the course of the nineteenth century. Important about this practice, as Sterne tells us, is the emergence of a skilled practice of listening to specific sounds while ignoring others. The success of the instrument was that it drew on auditory attention for medical diagnosis. It transformed diagnosis from a procedure based on the patient's account of their sickness, towards an empirically verifiable classification of disease:

Listening moved away from an incidental modality of intersubjective communication to a privileged technique of empirical examination. It offered a way of constructing knowledge of patients independent of patients' knowledge of themselves. The truth of a patient's body became audible to the listener on the other end of the stethoscope (Sterne, 2003, p.128).

The development of the stethoscope and instructions for its use involved the organizing of space (inside the body, in middle-class homes) in Europe and thus helped create and frame

sonic events. Sounds were then grouped into ‘interior’ sounds (deemed as important) and ‘exterior’ sounds which were to be ignored (Sterne, 2003, p.128). If we are to believe the assertions of Sterne, then we might say that African subjects coming to confront modern technological rituals of listening must have also come with their own intuitive sense about how to listen and how to think about listening.

HIE Dhlomo, a great African thinker, journalist from South Africa became one of the first Zulu-speaking presenters on the loudspeaker broadcasting system that were set up in the 1940s during the Second World War. In thinking about this practice, Dhlomo believed that an African genealogy of listening could not simply be tracked from the technological developments that were contemporary, he felt that understanding the role of *inkomo* (cow) and its various utilities that existed prior to (and notwithstanding) colonialism could better explain early listening orientations from the Zulu-speaking African point of view. He argued that broadcasting technology was extending on this traditional practice of announcing news using cow horns. In this paper I look at Dhlomo’s argument for precisely this purpose, of understanding the social role of *inkomo*, and then look at the particular moments of acoustic clash and shifting cognitive registers that occurred when loudspeaker broadcasts were first introduced in the 1940s in South Africa. But before getting into Dhlomo, let me track the development of broadcasting for African audiences.

How loudspeaker broadcasting developed

The first loudspeaker broadcast for African audiences took place on the 8th of July 1941, at the mine compounds of the Witwatersrand (Johannesburg) gold mines. African mineworkers who had flocked the city from far regions of the continent, even up to central Africa, would have comprised the congregation of listeners on the day. [1] Many of the mineworkers spoke different languages, and would have been aware that the announcements made in Sotho and Xhosa, would exclude them. But those who could understand Zulu were addressed the following day.

The loudspeaker broadcasts were then launched in Durban, a colonial port city on the east of South Africa, whose industrial growth attracted a significant African population from the countryside. Unlike in Johannesburg, the population in this region spoke mostly Zulu, and were therefore addressed solely in this language on the loudspeakers. In this sense, the broadcast system proved more effective here, due to the fact that most people who listened could understand what was being said. Loudspeakers were installed in the following places: beerhalls, hostels, and factories where Africans worked both in Durban and in the nearby town of Pietermaritzburg. [2] A total of 60 areas were wired-up, the broadcasts were 30 minutes and divided into three segments: First was the news, then the playing of music, and lastly a special talk of some kind. [3]

The loudspeaker system was successful in several fronts: (1) it was fairly easy to install, at a low cost; (2) it could with immediacy capture a large African urban population into the community of listeners; (3) and finally, the loudspeaker broadcasts could be easily woven into the already existing ‘entertainment system’ of music-dance competitions, theatre and outdoor film-screenings (see Peterson, 2000). Gatherings of this nature were few and far between, given the severe restrictions on Africans assembling in public areas.

Durban was the most logical step in the implementation of the loudspeaker broadcast after Johannesburg. Dhlomo described the city as that place “where one can bring the country to the city and the city to the country.” [4] Apart from the fact that it had a significantly sized African urban population, it had also witnessed a lot of militant responses to domination. Dockworkers, rickshaw pullers, industrial/commercial workers, waiters, motorcar drivers—these were the professions that comprised the majority of the African working population in the city (La

Hausse de Lalouviere, 2000, p.114). And would have most likely been the target group of listeners.

The desire to create mass listening events went hand-in-hand with the state's aim to transform itself into an acceptable political structure with wider appeal. Through technology the state could bulldoze its way into people's lives. But for it to achieve this effect it needed to recall some of the crowd gathering and commemorative forms from a bygone era; a bit of ritual, a bit of *izibongo* (praise-poetry), whatever would win the day, to secure its place in the minds of people. "Thanks to the war, the SABC [South African Broadcasting Corporation] has discovered the African listeners," said Dhlomo in 1945. [5]

The person in charge of the loudspeaker broadcasts from the Durban studios of the SABC was a man by the name of Hugh Tracey. Tracey apparently got the idea of the loudspeaker broadcasts to Africans in Natal when he discovered that a rumour was spreading among Africans that every Zulu speaker would earn 10 shillings a day when Hitler arrived (Couzens, 1985, p.208). These views were echoed in official records:

Representations from various quarters were made to the Corporation to set aside a portion of each day's programme for the purpose of broadcasting a special war news service to Natives, with the object of counteracting unfounded *rumours*. While fully realizing the importance of the object in view, the Corporation felt than any attempt to reach that object by the means suggested could only be of doubtful value, and therefore suggested another method of achieving the same end. [6] [my emphasis]

The authorities wanted a fluent Zulu-speaker to present the broadcasts. Charles Mpanza was asked to do the job. He was already working under the Chief Native Commissioner, as an officer in the Pietermaritzburg office. [7] But apart from his position in government, Mpanza was also the Secretary of the Zulu Society. An educated African's organization, the Society was largely viewed as a thought-leader in Zulu language matters. He then introduced the name of Dhlomo as one who he could work within the broadcasting scheme. Mpanza sourced the musicians to use on the show and also paid them. He prepared the scripts and arranged for guest speakers. All the scripts and talks given by guest speakers had to be translated into English and given to the Studio Manager of the SABC in Natal to approve beforehand. [8] So although, Mpanza presented the Pietermaritzburg broadcasts and his friend Dhlomo the Durban ones, the Studio Manager (who was Hugh Tracey at the time) was ultimately in charge.

But, as will be shown here, Dhlomo was not only doing the work of broadcasting, he was also seriously thinking about what it meant to be broadcasting to an audience who seemingly had no listening precedent. The Zulu language belongs to a cluster of languages called the Bantu language group, a category understood by linguists to designate a possible inter-relationship among those who speak it, in terms of the long past (Nurse and Phillipson, 2007). What is certainly common amongst many Bantu language speakers is the centrality of *inkomo* in figuring early social and economic formations (Mafeje, 1991: 60). Dhlomo's meditation on *inkomo* is therefore warranted from a historic and socio-cultural perspective. He outlines a series of significations of *inkomo* into seven broad categories, namely: (1) utilitarian aspects; (2) economical side; (3) military connections; (4) political influence; (5) social life; (6) religion, ritual and medicine; (7) miscellaneous. It may be worthwhile to summarize his whole perspective before honing-in on the implications in terms of listening orientations.

Inkomo in the kraal of the household were the pride of the home. While the king was the symbol of the authority, glory and essence of that life, the *inkomo* was more than that—it was life itself. Besides providing the traditional person with food, *inkomo* stood as a symbol invested with spiritual, political and economic significance. To settle political disputes between clans *cattle* were exchanged, with the understanding that once 'your cows were now in my

kraal' we have become basically families, we can therefore no longer be at war. Excellence in military intelligence and agricultural production were rewarded with cattle, the number of cattle you owned was linked to your labour activity, and thus your economic status. Cattle were also seen as a link between the visible and the invisible worlds. To purify both yourself and those you have defiled you would use *inkomo*. The cow was therefore imbued with spiritual significance. The loss of one's cows was equivalent to losing one's child. [9]

For our purpose, it is to the utilitarian aspects of *inkomo* we must now turn our attention towards. The first, that "The horns were used as loudspeakers to summon the people to the tribal assemblies or to carry one's voice across hill and vale". The second, that "Many are the uses of the skin of the *inkomo*...there is the drum. It should be remembered that the drum played no small role in tribal life, as it was used as a kind of radio to broadcast news and secret codes besides being a musical instrument." [10] In both these instances, Dhlomo paints the picture of early elaborations of listening culture before broadcasting. By bringing these to bear in so systematic an essay, he was invariably providing an observable genealogy of broadcasting outside of the Western encounter. The implications are in this instant very vital, as blacks were often excluded from full participation in the broadcasting technologies based on the assumption that they were under-developed, both in terms of mental capacities (cognition) and historical precedents.

Technophobia of Segregation

In the 1940s, during the Second World War, the South African state had a technophobia over what Africans might do with technology. There was a lingering fear that Africans might possibly insurrect at the end of the Second World War, with the possibility of civil war; the fear that the war might expose Africans to new ideas:

1. That the African man might discover himself the military equal of the white man.
2. According to the Job Reservation Act of 1924, the 'advanced' employment market (of which broadcasting was considered a part of) was restricted to the white minority only (Khumalo, 1996, p.6). This exhibited the fear that African man might discover himself the scientific equal of the white man.

The outcome of the government's tiptoeing around race was a ludicrous situation where Africans were used for certain war duties, in order to free whites for actual combat. But now because African soldiers were not allowed to carry firearms, white soldiers had to be used to protect black soldiers. The exercise was self-defeating. This technophobia was accompanied with the suppression of information on the success of the military units from other African countries (such as the King's African Rifles, which incorporated soldiers from East and West African British territories), motivated by the "fear that public recognition of the part played by African troops might give material for political criticism here in the Union, or might perhaps seem to detract from the glory of the white South African troops." (Alfred Hoernle cited in Grundlingh, 1986).

In 1940, the Director of the Non-European Army services refused to send the assistance of a band to recruitment troops for Africans in Northern Transvaal. He felt that the means of recruiting Africans ought to be "unostentatious" (Grundlingh, 1986, p.19). So sound was suppressed out of fear. Although sound was used to attract attention in the case of white Afrikaner recruitment rituals, sound could also be controlled to detract attention in the recruitment of African troops (Grundlingh, 1999, p.355). It shows how sound and ritual cooperated to order social reality (i.e. of racial superiority) as well as to command national loyalty (i.e. by instructing people to enlist in the army). This is an important illustration of the significance of the sonic dimension in configuring exclusion. "Sound is suited to the task of establishing presence," we are told by Carolyn Birdsall in her study of German Nazi

soundscapes, it “can appear in the auditory imagination, even if their source cannot be seen” (Birdsall, 2012, p.36). However, it can also eliminate presence, for those who must be seen but should not be heard. 76 000 African men, mostly from the Northern Transvaal, enlisted in the Defence Force during the Second World War. Foreign African troops were prevented from staging public processions in the country, just in case their parades discouraged local Africans from fighting without weapons. In cases where the rhythms of warfare in North Africa proved impossible to overcome with colour-bar policies, Africans *were* given rifles. This was however kept from public knowledge (Grundlingh, 1986, pp. 27-29).

For some African leaders inclusion in the military squad would confirm their claims to full citizenship, government was very aware of this. So while the state was embarking on a campaign to have loudspeakers connected for Africans to listen, another effort was also underway to de-signify the presence of African soldiers in the war. The spatial process of increasing state pronouncement by installing loudspeakers in visible public areas, earmarked sound as a disciplinary practice of control. It obviously heightened the aural and spatial awareness of the state and its own imperative. But the sonic dimension of the loudspeaker system was transgressive, for it could be heard in the soundscape even when the source could not be seen. Because sound blasts whether you want to listen or not, it insists on its presence in the auditory imagination, as people walked by coming from work, or sat for a quick drink with friends they would unavoidably hear what was being said. In this sense the success of the loudspeaker broadcasting system drew on both visual presence and acoustic strategies.

The beer hall on Victoria Street was one of the most popular venues for Africans to gather in the city of Durban in the early 1940s. It was municipal owned and provided a permitted environment for entertainment purposes and the sale of alcohol. The sounds coming out of the loudspeaker provided background accompaniment to those mingling with friends, they were also a reminder of the fact that this was a government controlled environment. [11] The news delivered by government representatives on loudspeakers were thus part of the audio-markers of regulation.

The Victoria Street beer hall was also an *isicathamiya* performance venue. Some of the African middle-classes patronised these venues, as they were more orderly than the illicit entertainment venues in the slums. But Victoria Street beer hall was more than just a recreational centre, it was a gateway to other venues that were less government controlled. The ‘real’ *isicathamiya* took place at the shebeens (make-shift pubs) in the Samseni area, which were conveniently located by a direct bus line from Victoria Street. Here, people could purchase stronger concoctions of liquor and things other than the low alcohol-content beer sold at the municipal-operated venues (Maloka, 2004: 126). They could also dance for much longer into the night, although this would have to be done quietly so as to not provoke the Indian landlords. It is in this context that *isicathamiya* (a type of music genre, pioneered by the likes of Ladysmith Black *Mambazo*) acquired its delicate gestures and hushed voices that have become the most distinctive features of the style (Erlmann, 1991, pp. 83-84 & Gunner, 2008).

The movements of African men between regulated city spaces and less controlled fringe areas, between urban areas and rural homelands, as they sought to bring to life the realities of migrant existence provided some of the most vexing challenges for white rule in the 1920s to 1940s (see Couzens, 1985 & Erlmann, 1989, pp. 259-273). Urgent disavowals of war rumour, as those undertaken in the loudspeaker broadcasts, have to be considered in light of the sense of ambivalence many Africans had towards the segregated country and its consequent involvement in the war. Resolutions taken by the *African National Congress* (ANC) [12], the Transvaal Non-European People’s Conference and similar organizations emphasized that Africans should not take part only as labourers, but that they too should be armed in battle. The ANC noted that, “the territorial integrity of the Union of South Africa can only be effectively defended if all sections of the population were included in the Defence System of the country on equal terms” (see Grundlingh, 1986, pp. 14,17).

From Dhlomo's theorizing, African men and women who congregated around these broadcast venues were not engaging in entirely new techniques of listening; rather such listening contexts were progressive development of old technologies related to *inkomo*. It must be remembered that loudspeaker broadcasts, unlike perhaps domestic radio broadcasts, were rooted in the notion of crowd-gathering that were the hallmark in the development of colonial governance in Africa. 19th century British colonial administrator, Theophilus Shepstone, chose to resolve the challenge of native governance using caricatures of African indigenous models. He placed a lot of emphasis on ceremonials of assembling and gathering of crowds. The strategies paid rigorous attention to detail, they were also imaginative and included the acting out of the role of the then deceased Zulu king, [Shaka kaSenzangakhona](#), in public ceremony. Transposing the indigenous elements, Shepstone himself would play the role of Shaka. Modes of public address, including heralding, *izibongo* (praise poetry) would be invoked: People were called forth to assemble. And then later "The majority of assembled people dispersed back to their homes". Processions were made with Shepstone at the head, "followed by the brass band, the two field pieces, and the column of mounted Volunteers." Even the voice was exploited for its capacities. He would address in fluent Zulu, "pausing throughout to obtain vocal assent" in the instructions he was giving (Hamilton, 1998, p. 78).

Loudspeaker broadcasts in public venues should be considered in relation to this history of gathering and dispersing African crowds for the purpose of colonial governance. It must be kept in mind, that in instances where African themselves initiated gatherings, these were legally restricted in urban context. Most African self-initiated listening 'entertainment' was restricted to the church and private spaces within the urban environment. [12] In the 1920s, for example, as Durban city officials enforced strict restrictions on natives and the use of the City hall (and other public premises), the church hall and school room were transformed into vibrant music performance centres. They became distinct public spaces in the cultural geography of Africans in the city. Petros Lamula, a pastor of the Norwegian Missionary Society, developed a reputation among Durban's movers-and-shakers due to his promotion of musical concerts at his inner-city church in the 1910s and 1920s. Cultural anxieties and racial tensions were so rife that he was, like other black clergy, "at pains to distance himself from gambling, sheebeens, [ingoma](#) and other activities viewed as 'dangerous' by city officials and the police (La Hausse de Lalouviere, 2000, pp. 48-49, 52 & 143-144). Crowd-gathering of African audiences became the exclusive instrument of the state. Africans therefore had become suspicious of any attempt to introduce them to loudspeaker broadcasting technology. Dhlomo's assertion that broadcasting technology therefore was contributing to the transformation of Zulu culture rather than eroding it, should be considered in this regard. It was an intervention intended to dissociate listening technique from the apparatus of the state. And it was crucial in re-shaping the instructive element of colonial governance and the kind of psychology of crowd-gathering which it promoted.

Dhlomo's argument stands in contradistinction to Sterne's starting point of the medical device, which seems to designate the genealogy of listening as the field of European middle classes. If the stethoscope, and subsequent inventions of telegraphy and radio are instances tracking the genealogy of listening in the Western sense, then it is the *inkomo* horn and skin-drum that marks instances of listening in the African Zulu sense.

South Africa's wartime soundscape, was not of emergency sirens and bomb explosions, but of public announcements and radio crackle—these really exhibited the usefulness of loudspeakers. But the loudspeakers were also empowering in the sensorial dimensions of African bodies in the country, whose listening orientations were affirmed in that moment. The entrance of loudspeaker broadcasting may have declared 'hush!' to the rumour mongering, and conversations that were happening in African social spaces, but it also did so much more. The real innovation was in the extension of iterations of listening, that Africans were well attuned to, which is what made the medium attractive to African audiences in South Africa.

Biography

Dr Thokozani Mhlambi is the NRF Postdoctoral Fellow in Innovation, at the Archive & Public Culture Research Initiative at the University of Cape Town. An internationally recognized South African-born cellist & composer, Mhlambi's style of music draws from the rich Zulu-speaking heritage, while still asserting global standards of quality music-making. Mhlambi was also one of the featured artists in the World Summit on Arts & Culture. His piece "Ukuxhentsa kwa Miriam: Inspired by the life of Miriam Makeba" was proudly published by the Miriam Makeba Foundation on their online platforms. He is a winner of the African Studies Prize 2009. He has published on numerous music related topics including kwaito, house music and early radio broadcasting.

Footnotes

- [1] “Broadcast to Natives”, Department of Native Affairs (1942). TAB NTS .9655/520/400/13(1) and TAB NTS .9653/520/400(9), National Archives Repository, Pretoria.
- [2] “Letter to the Town Clerk,” Pietermaritzburg Municipal Native Administration Minutes (1940). 4/4/2/299, Pietermaritzburg Archives Repository.
- [3] “Broadcast of Information to Natives”, Pietermaritzburg Municipal Native Administration Minutes (1940), 4/4/2/299, Pietermaritzburg Archives Repository.
- [4] This he said after having spent some time away in Johannesburg and seen the conditions of overcrowding, drunkenness and urban decay there. ‘X’ [H.I.E. Dhlomo], “On Durban,” *Ilanga*, 22nd February 1947.
- [5] “Busy Bee”, *Ilanga* 16th June 1945.
- [6] SABC Annual Report.
- [7] Papers re. Chief Native Commissioner (1939), A1381, IV/2/2, Pietermaritzburg Archives Repository.
- [8] Hugh Tracey, Letter the Secretary of the Zulu Society, “Broadcast Performances,” 6th May 1941, A1381, IV/8, Pietermaritzburg Archives Repository.
- [9] ‘Inkomo in Zulu Life’, *Ilanga* 6th December 1947; continued ‘Inkomo in Zulu life, *Ilanga* 13th December 1947.
- [10] ibid.
- [11] Municipal owned beer halls were established in 1938 in order to control the sale of liquor in the cities of South Africa. (see Maloka, 2004).
- [12] This is the political party that eventually lead the road to democracy, under the leadership of Nelson Mandela in 1994.
- [13] In addition, under the Slums Act (1934) people could be removed for whatever reasons, including for re-zoning from residential to industrial area, to upgrade area before re-accomodating. In the most extreme cases, settlements could be demolished even prior to municipal authorities establishing what the land was going to be used for. (Beavon, 2004 also see Parnell, 1988).

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The solfège of technical objects: notes on the potential contribution of Gilbert Simondon to sound studies and arts

By José Henrique Padovani

Abstract

The extended meaning of solfège in Pierre Schaeffer's theoretical and artistic work is briefly introduced. Then, Gilbert Simondon's philosophical ideas are summarised, and their potential contribution to the field of sound studies is discussed. Simondon's concepts of 'individuation', 'transduction', 'information', 'modulation' and others are presented, as well as his main critical analysis of the hylomorphic perspective. Simondon's attempt to seek a more congruous and well-balanced coupling between human and technical beings is corroborated, and this corroboration supports the contention that this approach to sonic practices demands a 'solfège of technical objects' that may have political and ethical consequences, as well as theoretical and artistic reverberations relative to how we deal with sounds.

Keywords

solfège, technology, technical object, individuation, Gilbert Simondon

Introduction

The perceptive processes and the very concept of what is related to the term *solfège* were deeply transformed by post-war music and sonic practices. This occurred due to the creative and theoretical reconsideration of *solfège* by Pierre Schaeffer (1996, pp. 490-508) and as a consequence of the development of techniques and *technical objects* that changed how we imagine, create, perform and listen to sounds and music.¹

The post-war period also saw the development of new technological resources, such as studio equipment and the first digital computers, that had a growing impact on sound and music creation, production and diffusion. During this period, Gilbert Simondon wrote his works *L'individuation: à la lumière des notions de forme et d'information* (Simondon, 2005a) and *Du mode d'existence des objets techniques* (Simondon, 1989), both of which were published in 1958. In the first, Simondon presents a new philosophical framework to address the issue of *ontogenesis* through the concept of *individuation*, i.e. the process through which an *individual* originates and detaches itself from a surrounding environment. In the second, he develops the outcomes of these new concepts and casts new light on the question of technology by introducing his theoretical formulations of technical objects.

If the work on individuation can enrich sound studies by providing new conceptual formulations, such as 'dephasing', 'information', 'transduction', 'modulation' and other key terms to Simondon's thought, the thesis on the technical objects is of interest for broader reconsideration of musical practices that were redefined by Schaeffer's *solfège généralisé* and his *programme de la recherche musicale*. We imagine, listen, create and perform sounds and music through the mediation of technical objects and techniques.

The practices and approaches proposed by Schaeffer and other post-war composers and artists could only flourish and develop due to the concomitant development of new techniques, technical objects and technical ensembles, such as amplification, the microphone and the radio studio, respectively.

These new technical resources not only allow us to perform sound-related activities in new ways, they also require us to understand the technical particularities that shape our mediated interactions with sounds and our own imaginative and auditory faculties. As will be shown from Simondon's ideas, if on one hand these new technical objects enable us to have a completely new relationship with the creation and perception of music and sounds, on the other, they require a new dialogical interaction with their mechanisms and modes of operation. These tools, instruments, devices or machines reproduce, to a certain extent, the stereotyped human ideas, gestures and operations that are registered in their gears, technical parts and procedures. When using them, we not only deal with sounds but also with the preconceived ideas that we set in motion when we use these objects to mediate different actions, such as listening, composing and performing.

This article presents some of these Simondonian concepts and ideas and relates them to listening, imagination and creation practices summarised in the already extended meaning of the term *solfège* after Schaeffer. Particularly, this article aims to introduce Simondon's thought into the fields of sound arts and studies, and to outline the potential reconsideration of these practices, starting from the pursuit of an active interpretation of the technical objects that mediate our activities.

Solfège

One of the reasons that Schaeffer gives to justify his *programme de la recherche musicale* and his project for *solfège experimental* is the diagnostics that, in various fields, such as music theory, education and composition, it was possible to identify the primacy of activities of sound production and fabrication according to certain types of 'schemes, notations or intentions', i.e. *thème*, at the expense of listening and the effort required to refine our perception of sounds, i.e. *version* (Chion, 1983, p. 90; Schaeffer, 1996, p. 147). Indeed, the main target of traditional *solfège* was not the perception and production of sound itself, but the music parameters that could be notated using the schematic symbols of music scores. Schaeffer's new generalised *solfège* offered methodical resources to develop 'the art of better listening', thereby inverting the unbalanced relation between *making* and *listening*. This was proposed by presenting conceptual and methodical tools to identify, describe, analyse and manipulate *sonic objects*. The Schaefferian *solfège* precisely aims to enable, among other things, the identification of individualised *sonic objects* by recognising the qualitative features that allow us to 'isolate them from the sound chain' (Chion, 1983, p. 35) and to enable the recognition of their morphological characteristics, thereby providing new concepts and parameters to describe them qualitatively (Chion, 1983, p. 113). This is done through *reduced listening*, which largely depends on the mediation of technical objects and the new sound handling techniques that they enable, notably 'cut bell' and 'locked groove', which are two primitive experiences that would later be developed in concepts such as *reduced listening* and *sonic object*.²

It is possible to relate Schaeffer's *solfège* to the two main topics that Simondon develops in his theses, i.e. *individuation* and *technology*.

In approaching *solfège* from the perspective of Simondon's theory of *individuation* and his philosophy of technology, what Schaeffer understands as a *sonic object* depends on both its *individuation* and *technical* mediation. The sounds of a bell or violin exist as individualised *sonic objects* from the moment they are perceived as being dynamically detached (*individuated*) from a background sound chain through a process called *transduction*, to use the philosopher's terminology. Simply put, a *sonic object* can be considered a *sonic individual* that originates and holds its individuality when it is not merged with other sonic objects or the underlying sonic environment. On the other hand, the recognition, description, analysis and manipulation of such objects depend on the mediation of specific *technical elements*, *technical objects*, *technical ensembles* and *techniques*. In fact, despite the focus on *listening* and the proposition of procedures and concepts to deal with sounds, this new *solfège* emerged and developed from direct manipulations and experimental interactions with the technical objects found in the studio. Using tools such as the turntable, mixer, and *phonogène*, or even by developing and applying specific idiosyncratic inventions, such as the *potentiomètre d'espace* (Manning, 2004, p. 26) Schaeffer had key insights for his theoretical and artistic work, e.g. as previously mentioned, with the 'cut bell' (Schaeffer, 1998, pp. 115-16).

To establish viable connections between these Simondonian concepts and the sound practices and studies that can be related to the term *solfège*, it is important to outline Simondon's main ideas.

Dephasing, information, transduction

In his thesis on *individuation*, Simondon's perspective is preceded by a critique of *substantialist* and *hylomorphic* views.

"The reality of being as an individual may be approached in two ways: either via a substantialist path whereby being is considered as consistent in its unity, given to itself, founded upon itself, not created, resistant to that which it is not; or via a hylomorphic path, whereby the individual is considered to be created by the coming together of form and matter. The self-centered monism of substantialism is opposed to the bipolarity of the hylomorphic schema. However, there is something that these two approaches to the reality of the individual have in common: both presuppose the existence of a principle of individuation that is anterior to the individuation itself." (Simondon, 2005a, p. 23; 2009, p. 4).

Rather than taking the individual for granted, Simondon argues that we should attempt to understand the process of individuation and 'know the individual through the individuation, rather than the individuation through the individual' (Simondon, 2005a, p. 24; 2009, p. 5). He adds that the process of *individuation* results in the actual *individual* and also creates the 'individual-milieu' pair.

"*Pre-individual being is being in which there is no phase*; the being in which individuation occurs is that in which a resolution appears through the division of being into phases. This division of being into phases is becoming. Becoming is not a framework in which being exists, it is a dimension of being, a mode of resolution of an initial incompatibility that is rich in potentials. *Individuation corresponds to the appearance of phases in being that are the phases of being.*" (Simondon, 2005a, p. 25; 2009, p. 6).

Simondon's use of the word *phase* can be related to two slightly different meanings of this term in physics. When used to address the study of matter, materials and systems, *phase* can be defined as the 'homogeneous part of a heterogeneous system that is separated from other parts by a distinguishable boundary' (Rennie, 2015, p. 426). When used to describe oscillatory systems, the term *phase* acquires a dynamical and relational connotation, describing the

"stage that a periodic motion has reached, usually by comparison with another such motion of the same frequency. Two varying quantities are said to be in phase if their maximum and minimum values occur at the same instants; otherwise, there is said to be a phase difference." (Rennie, 2015, p. 426).

Considering these two connotations of the term *phase*, an *individual* not only has a *different phase* regarding what surrounds it, but also has a *phase difference* compared to other dynamical processes that may occur nearby. In the first definition, an individual arises when it detaches from a background homogeneity with the clear emergence of 'a distinguishable boundary' between the *individual* and the *environment*. In the second definition, the dynamical process of individuation is characterised by a process in which the *individual* not only dissociates from a medium, but also becomes and stays *out of phase* in relation to surrounding objects, processes, substances, etc.

According to Simondon, the individual arises not from some sort of demiurgic association between a given passive *matter* and an equally abstract *form*. Rather, it emerges from the process of *allagmatic exchange* of energy (*transduction*) that informs the being 'from part to part' and in different orders of magnitude, i.e. from both inside and outside the edges of what will be the resulting individual. [3] From this perspective, rather than the notion of *form*, we should think about *individuation* in terms of *information*. However, such *information* is not conceived as the 'signals or to the supports or carriers of information in a message, as the technological theory of information tends to do' (Simondon, 2005a, p. 35; 2009, p. 12), rather it is *information* considered as the *momentum of individuation*, i.e. *information* demands the *dephasing* of a pre-individual being and its subsequent division into *individual* and *milieu*. *Information...*

"[...] is a *demand for individuation*, for the passage from a metastable system to a stable system; it is never a given thing. (...) Information can only be inherent to a problematic; it is *that by which the incompatibility of the non-resolved system becomes an organizing dimension in the resolution*; information supposes a phase *change of a system*, because it supposes an initial preindividual state that individuates itself according to the discovered organization. Information is the formula of individuation, a formula that cannot exist prior to this individuation." (Simondon, 2005a, p. 31; 2009, p. 10).

If *information* can be understood as the *demand of individuation*, the process that propagates *information* and describes the dynamical process of *individuation* is referred to as *transduction*.

"By transduction we mean an operation – physical, biological, mental, social – by which an activity propagates itself from one element to the next, within a given domain, and finds this propagation on a structuration of the domain that is realised from place to place: each area of the constituted structure serves as the principle and the model for the next area, as a primer for its constitution, to

the extent that the modification expands progressively at the same time as the structuring operation. A crystal that, from a very small seed, grows and expands in all directions in its supersaturated mother liquid provides the most simple image of the transductive operation: each already constituted molecular layer serves as an organizing basis for the layer currently being formed. (...) Transduction can be a vital operation; it expresses, in particular, the direction of the organic individuation; it can be a psychic operation and an effective logical procedure, even though it is not limited to logical thought. In the domain of knowledge, it defines the veritable process of invention, which is neither inductive nor deductive, but transductive, which means that it corresponds to a discovery of the dimensions according to which a problematic can be defined. It is that which is valid in the analogical operation. This notion can be used to understand the different domains of individuation: it applies to all cases where an individuation occurs, expressing the genesis of a network of relations founded on being. (...) Transduction corresponds to this existence of relations that are born when the preindividual being individuates itself; it expresses individuation and allows it to be thought; it is therefore a notion that is both metaphysical and logical." (Simondon, 2005a, p. 32; 2009, p. 11).

According to Simondon's perspective, *transduction* is a process that occurs not only in chemical or physical operations, but also in biological, psychological and social dimensions, thereby driving the *individuation* process through the propagation of *information*.

Thus, the term *transduction* is not restricted to its connotation in acoustics and audio engineering as the process of transmission/conversion between different forms of energy through *transducers*, such as microphones, loudspeakers, etc. (Rossing, 2007, p. 761). Simondon's perspective reconsiders these processes as not distinct from others that are at stake when, for instance, we are creating, listening to or interacting with sounds. The very recognition and delimitation of individual *sonic objects* can be related to a *transduction* process that occurs not so much during the mechanism of recording/reproduction, but, above all, in the perceptual and psychophysiological processes that enable us to detach these sounds from a continuum and identify, analyse and manipulate them individually using technical means.

Technical individuation

Given that *individuation* and *transduction* are processes that can be investigated in multiple dimensions (physical, chemical, biological, psychological, social, etc.), they can also be applied to sound studies as a means to understand how we identify, qualify and deal with *individual sounds*. Furthermore, Simondon's thought is particularly suggestive regarding the application of technical concepts, images and words to develop a theoretical perspective on *ontogenesis* and *individuation*.

In this sense, it is relevant that the very first paragraphs of his thesis on *individuation* refute the *hylomorphic* schema, not because it departs from a dualistic perspective on physics and technology—which, in principle, could explain how objects such as a brick or statue are produced by addressing their *formal* and *material causes*—but rather because this model is highly abstract and distant from actual technological mediation. It ignores the handicraft knowledge and work that result in real individual objects.

“The technological character of the origin of a model does not invalidate this model, with the condition that the operation which is used as a basis for the formation of the utilised concepts passes entirely and expresses itself without deterioration in the abstract model. If, on the contrary, the abstraction is carried out in an unfaithful and summary manner, by masking one of the fundamental dynamisms of the technical operation, the model is false. Instead of having a true paradigmatic value, it is nothing more than a comparison, a more or less rigorous juxtaposition according to the cases.

However, in the technical operation which gives rise to an object having form and matter, like a clay brick, the real dynamism of the operation is extremely far from being able to be represented by the matter-form couple.” (Simondon, 2005a, pp. 39-40; 2007a).

Taking brick production as an example, Simondon argues that both the mould and the clay cannot be reduced to the *hylomorphic* scheme. Both have properties that are carefully developed during their own technological production and whose *formal* and *material* functions are crucial to individuation of the brick through the manufacturing process. Nevertheless, the final brick is not the sum of *formal* and *material* dimensions. It is the *mediation* between two different technical elements: the clay and the mould. These two elements, as well as the energy that the artisan transfers to the clay, *inform* each part of the individual from different *orders of magnitude*.

What distinguishes Simondon’s view of *technical individuation* from the *hylomorphic* scheme is that, even in the case of an apparently still object, such as the brick, the process of individuation that underlies its manufacture is *dynamical*. Thus, it cannot be completely represented by the motionless image of the *hylomorphic* combination of matter and form.

This dynamical approach makes it possible to compare, as not essentially distinct, heterogeneous technological processes, such as the *moulding* of a brick and the electrical *modulation* of triodes.

“The difference between the two cases lies in the fact that, for the clay, the operation of taking form is finished in time: it tends, rather slowly (in a few seconds) towards a state of equilibrium, until the brick is taken from the mold; one uses the state of equilibrium while unmolding when it is reached. In the electron tube, one employs a support of energy (the cloud of electrons in a field) that presents a very weak inertia, so that the state of equilibrium (adequacy between the distribution of the electrons and the gradient of the electric field) is obtained in an extremely rapid time compared to the preceding (some billionths of a second in a tube of greater dimensions, some tenth of a billionth of a second in the smaller tubes). Under these conditions, the potential of the grid of order is used as a *variable mold*; the distribution of the support of energy according to this mold is so fast that it is carried out within the smallest minimum time for the majority of the applications: the variable mold is then used to vary in time the actualization of the potential energy of a source; one has stopped not when equilibrium is reached, one continues by modifying the mold, i.e., the grid voltage; actualization is almost instantaneous, there is no end to its release from the mold, because the circulation of the support of energy is equivalent to a *permanent release from the mold*; a modulator is a *continuous temporal mold*. (...) The mold and the modulator are extreme cases, but the essential operation of taking form is achieved there in the same way; it consists of the establishment

of energy, durable or not. To mold is to modulate in a final way; to modulate is to mold in a continuous and perpetually variable way." (Simondon, 2005a, pp. 46-47; 2007b).

By challenging the *hylomorphic* view that reduces technical and artistic creations to the association of passive and abstract *forms* and *materials*, Simondon disputes perspectives that underestimate or ignore the real handicraft and technical processes that are in progress when an artisan works in his workshop. Such perspective 'corresponds to the knowledge of a man that remains outside the workshop and does not take into account anything except what goes in and what comes out' (Simondon, 2005a, p. 46). He also rejects the very social and intellectual perspective that segregates technological operations from knowledge and culture and delegates the power to create individuals to an abstract form.

"We could say that, in a civilization that divides men in two groups, those who give orders and those who execute them, the principle of individuation, according to the technological example, is necessarily attributed to either form or matter, but never to both together." (Simondon, 2005a, p. 58).

Mechanology and the social, ethical and political dimensions of the study of technology

The critique of the *hylomorphic* perspective is, as can be seen, not simply a matter of *ontogenesis* and *individuation*. It reflects a political, ethical and epistemological framing of reality related to how one understands the relations between humans, nature, machines and culture. Likewise, in the beginning of his thesis on *technical objects*, Simondon underlines the need to recognise these objects as human artefacts in the same manner other objects are recognised, such as books and works of art. From this comes his claim to reintroduce technical things 'in the culture', surpassing misoneistic and technophobic approaches to technology.

"The opposition established between the cultural and the technical and between man and machine is wrong and has no foundation. What underlies it is mere ignorance or resentment. It uses a mask of facile humanism to blind us to a reality that is full of human striving and rich in natural forces. This reality is the world of technical objects, the mediators between man and nature.

Culture behaves towards the technical object much in the same way as a man caught up in primitive xenophobia behaves towards a stranger. This kind of misoneism directed against machines does not so much represent a hatred of the new as a refusal to come to terms with an unfamiliar reality. Now, however strange this reality may be, it is still human, and a complete culture is one that enables us to discover that this stranger is indeed human. Still, the machine is a stranger to us; it is a stranger in which what is human is locked in, unrecognised, materialised and enslaved, but human nonetheless. The most powerful cause of alienation in the world of today is based on misunderstanding of the machine." (Simondon, 1989, pp. 9-10; 1980, p. 11).

Thus, the theoretical question that arises relates to acquainting the humanities with the gestures and thoughts set down in the technical objects and their mechanisms. Rather than conceptualising technology in a strictly pragmatic or fatalist way, Simondon refuses both technophobic and positivistic approaches to *technology*, thereby rejecting the broad *alienation* they imply.⁴

However, this *alienation* is not just the political and economic one between men and the means of production identified by Karl Marx (Marx, 1986, p. 60). It is a rather extensive *psychophysical alienation* in the sense that segregation between humans and technical objects implies, first and foremost, an ignorance regarding *machines* and *technical things*, and this separation leads to their reduction to the status of pragmatic means to acquire power. In this technocratic perspective,

“the machine is just a mean; the end is the conquest of nature, the domestication of natural forces by means of an initial servitude: the machine is a slave that serves to make other slaves. (...) But it is hard to free yourself by transferring slavery to other beings, men, animals or machines; to reign over a population of machines is still to reign, and every reign supposes the acceptation of schemes of servitude” (Simondon, 1989, p. 127).

Regarding Alienation

“Man’s alienation in relation to the machine has not only a social and economic sense; it has also a psycho-physiological one; the machine does not extend anymore the body scheme, neither for the workers, nor for those that possess the machines. The bankers whose social role was exalted by the Saint-Simonian mathematicians and Auguste Comte are as alienated in relation to the machines as the members of the new proletariat.” (Simondon, 1989, p. 118).

“But it is true that the economic conditions amplify and establish this alienation: the technical object does not belong to the men that use them in the industrial life. The relation of propriety is, nevertheless, too abstract, and it would not suffice that workers become the owners of machines to reduce abruptly the alienation; to possess a machine is not to know it. (...) We would need to discover a social and economic mode in which, the individual that uses the technical object would not only be the owner of this machine, but also the man that chooses and nurtures it.” (Simondon, 1989, pp. 251-252).

While the first part of *Du Mode d’existence of technical objects* exposes the general Simondonian concepts regarding the specificity of *technical elements* (i.e. infra-individual technical objects), *technical objects* and *technical ensembles*, the second part of this work, which addresses the relationship between technical objects and men, and the courses on *invention* (Simondon, 2005b) and *perception* (Simondon, 2006) expose ideas that are of interest to bring this philosophical framework closer to contemporary sound studies and practices. Simondon develops the theoretical notion of the machine as a dynamic and interactive repository where human thoughts, memories and gestures are translated and registered in the serial memory of gears or other mechanical processes that can be actualised when the technical object is set in motion.

This global perspective leads Simondon to propose *mechanology* as a science that, parallel to the study of single technical elements (i.e. *technology*), would be directed to the study of the *individual technical objects*.

“Infra-individual technical objects can be called technical elements. They differ from true individuals in the sense that they have no associated milieu. They can be integrated into an individual. A hot-cathode tube is more a technical element than a complete technical individual. It can be compared to an organ in a living body. In this sense, it would be possible to define a new science of general

organology. This science would involve the study of technical objects at the level of the element. It would be part of the science of technology, including mechanology, whose subject of study would be complete technical individuals” (Simondon, 1989, pp. 64-65; 1980, p. 56).

Human-machine coupling

The relationship between humans and machines essentially comprises a *coupling* relation. While this interaction is characterised by the physical and gestural *coupling* that takes place when humans use tools, e.g. shovels and levers, there is also a *cognitive* or *psychological* dimension in this relation, i.e. the *coupling of memories*.

“Machines could not store *shapes*, but only their *codification in series* – such as the gears’ teeth, the bits in a digital computer or, in analogical surfaces, the magnetization variation along an electroacoustic tape or the groove curves of a vinyl disk.” (Velloso, 2013, p. 125).

On the other hand, humans can retain the overall *shape* in memory but are not as capable as machines to store a large amount of data in a given series.

The coupling between these two kinds of memories (and the related physical and gestural operations) thus depends on a sort of common coding. The ‘good’ coupling between these two different *memories* happens

“from the moment in which it is possible to achieve a partial convertibility between them, so that a synergy becomes possible. (...) There is coupling when a single and complete function is fulfilled by the two beings”(Simondon, 1989, p. 124).

According to Simondon, alienation occurs when this function is compromised somehow, i.e. not only when it is interrupted or unachievable given specific or contingent circumstances, but also when it is disturbed: when the technical interaction of human beings does not imply a meaningful translation of the gestures, thoughts and procedures registered and encoded in the machine mechanisms.

If the *coupling* of humans and machines presupposes the *translation* of what is encoded in the mechanisms of technical objects to human memory, the process of human-machine *coupling* depends on the meaningful fulfilment of a ‘single and complete function’ and imposes further challenges to this process. In concrete terms, a long chain of technical mediation between a human being and the technical operation that interposes the translation between these two *memories* is established. Therefore, increasing effort is required to understand the technical elements and mechanisms that take part in the machine’s operation. If it is true that such a task is nearly utopic in the concrete *coupling* between humans and most technical objects of our time, this synergy can be sought in different levels to establish the relationship between humans and machines that Simondon endorses.

It is especially relevant to think about activities, such as those we are accustomed to undertaking in sound practices and studies, that presuppose human-machine interactions in various processes, such as *creation* and *invention*. According to this perspective, to be able to establish a meaningful *coupling* with machines in contexts that imply *creation/invention* is to be able to ‘make your mind operate as a machine would operate’

and, conversely, to understand the machine operations and mechanisms as the mechanical reproduction of human ideas and gestures.

“The machine is a deposited human gesture, fixed, transformed into stereotype and power of resumption. (...) Between the man that invents and the machine that operates there is a relationship of isodynamism, more fundamental than the one that Form psychologists had imagined to explain perception by naming it isomorphism. The relationship of analogy between machine and man is not at the level of the corporal operations; (...) the real analogous relationship is between man’s mental operations and the physical operations of the machine. These two operations [*fonctionnements*] are parallel not in ordinary life, but in invention. To invent is to make your mind operate as a machine would operate, not according to causalities, too fragmentary, nor in accordance to the goal, too unitary, but in accordance to the dynamism of an operation that was lived, captured, because it was produced, witnessed in its genesis. The machine is a functioning being. Its mechanisms concretise a coherent dynamism that once existed in thought. Thought’s dynamism, while the invention occurred, was converted in functioning forms. Conversely, the machine, while it operates, produces or goes through a number of variations around the fundamental rhythms of its operation as they result from its defined forms. It is these variations which are meaningful, and they are meaningful with respect to the archetype of operation that is thought in the process of invention. One has to have invented or reinvented the machine so that the operation variations of the machine become information.” (Simondon, 1989, pp. 138-139).

In an optimal *coupling* between humans and technical objects, the operation one tackles while interacting with a machine involves the ability to recognize, decode and interpret human gestures and thoughts captured and registered in its operating mechanisms at the moment of invention. To invent, on other hand, consists of being able to formulate the isodynamic analogy that enables the inventor to inscribe in gears, programs or any kind of dynamic technical process his thoughts and gestures. Finally, to operate or use a machine is, ideally, to understand how the input gestures that control the mechanism modulate the actions of the human-technical couple and make the whole engine work.

Technical methods – instruments/tools (*appareils/ustensile*), machine-tools/machines, and networks

While the ideas presented in the two books summarised above allow us to glimpse a potential impact of Simondon’s thought in practices and studies, it is worth presenting a further categorisation that Simondon undertook to understand the specific particularities of certain types of technical operations with specific *technical objects*.

In his 1968 lecture *L’Invention et le développement des techniques* (2005b), Simondon establishes five different technical stages to understand *technology* and *technical objects* and their relation to human activities. These stages correspond to: (1) the *technical method*; (2) the *tool* and the *instrument*; (3) the *apparatus* and the *utensil*; (4) the *machine-tool* and the *machine*; (5) and the *network*. While the differentiation between these stages is interesting relative to anthropological theory of technological development, it is mainly relevant because it enables us to think about specific technological operations and objects, as well as the overall characteristics implied when we use certain tools, instruments and other technical objects when dealing with sounds and music.

The first technical stage, i.e. the *technical method*, is characterised by Simondon as the pre-instrumental technique. The *technical method*'s main characteristic relies on the massive, synchronic and fractionalised execution of a given task by a group of individuals with essentially no tools, instruments and technical objects. This process occurs in human work (as in the primitive techniques of construction and material transportation) and in animal behaviour (as in the coordination of the individual activities of bees and termites) (Simondon, 2005b, p. 87).

The second technical stage replaces the synchronic, fractionalised and massive unmediated execution of a task by more individualised and mediated work with tools and instruments. At this point, Simondon makes a conceptual distinction between *tools* and *instruments*. While *tools* are prosthetic regarding the *actuation* of the living being in the world, the main function of *instruments* is to mediate our *sense* organs.

Both *tools* and *instruments* have three main functions, i.e. *extension*, *transformation* and *isolation*. Drumsticks, violin bows and guitar plectrums are examples of *tools* that undertake those functions in actuation through musical instruments, which, according to this terminology, we could refer to as *musical tools*. On the other hand, microphones, noise cancelling headphones and earplugs are examples of *instruments* that *extend*, *transform* and *isolate* our auditory senses in specific situations, respectively.

Of course, this categorisation is schematic and does not intend to individualise *functions* or segregate *instruments* and *tools* as necessarily distinct technical objects. A single *tool* or *instrument* typically performs multiple functions by *extending*, *transforming* and *isolating* our interaction with the world. Likewise, *technical objects* usually act as both *instruments* and *tools*. This integration of functions can be illustrated easily by a walking stick that, as a *tool*, extends our hands and arms to 'reach' the floor and support the body and, at the same time, is used to extend, transform and isolate the *sense* of touch, thereby allowing one to *feel* the floor characteristics through the walking stick.

The third technical stage is qualified by the introduction of *apparatus* [*appareils*] and *utensils* [*ustensiles*], which reveal the coupling of *tools* and *instruments* to a mechanic nucleus that modulates the relationship between inputs and outputs.

"The second technical revolution is the detachment of the technical object from the operator's organism: the instrument works as an input to the *apparatus*; the tool works as an output; the *apparatus* is thus the central point, the mediator of this coaptation between an instrument and a tool through a source of energy, that makes the machine. One could say, therefore, that the machine is constituted by the process of individuation in which the center is the *utensil*, plus the *apparatus*, node of the relation, entrance of the auto-correlation and starting point of the independence from the human organism that acts as holder and as a draft, since the instruments and tools that were created for the operator organism can be brought to the machine at the expense of adaptive modifications; in a fractionalised fashion, the organism is thus as a model, as an archetype, to the main sensor and actuator organs of the machine; but it takes a third reality, that of the *utensil* and the *apparatus*, to operate, apart from man, the connection between sensors and actuators.." (Simondon, 2005b, p. 95).

The fourth stage consists of the *machine-tool* and the *machine*. Both the machine and machine-tool are built around a ‘central system of correlation that may be a *modulable* source of energy or a device as a gear’. Both have their own energy source to produce work and to correlate sensors and actuators. If *machine-tools* must be operated by humans, they tend to be more and more autonomous regarding human gestures and operation. As *modulators* of human gestures, these objects require a very feeble ‘source of input (control) to govern the work transformation (on actuators) from the energy borrowed from an external source (animals, water flow, wind, combustion)’ (Simondon, 2005b, p. 97). The *machine* takes this particularity to the extreme, and it is so autonomous relative to human operators that the latter assume the role of observers or sentinels that guard and maintain the machine.

The last stage corresponds to technical networks, in which each machine is an autonomous core that intercommunicates with other machines through receptors and actuators..

“The basic characteristic of the network is the virtual presence of all possibilities of the central organism in every terminal, either in the transmission or in the reception.” (Simondon, 2005a, p. 100).

Conclusion: towards a solfège of technical objects

Since Pierre Schaeffer’s *solfège* (Schaeffer, 1966) and other subsequent and important theoretical contributions to the field of electroacoustic music, such as David Smalley’s *spectromorphology* and *spatiomorphology* (Smalley, 1997; Smalley, 2007) or Leigh Landy’s *sound-based music* theorisation (Landy, 2007), a large part of the theoretical enterprises on sound arts and studies have addressed *sound* primarily as a *phenomenon*. With different tools, they address *sounds*’ spectral, psychophysiological or qualitative features, describing their different characteristics that can be perceived, analysed or manipulated with the aid of recordings, sonograms and other technological tools. While these theoretical frameworks resulted in invaluable concepts and strategies to produce, categorise, scrutinise and understand *sounds* in different contexts by bringing together a series of interdisciplinary resources from several fields, such as psychoacoustics, phenomenology and structural linguistics, it can be said that the consideration of technical tools and technological mediation processes are primarily contingent on these works.

Even if Simondon does not directly address sound practices and music in his works, his ideas regarding *individuation* and *technology* can lead us to reconsider technology mediation in sound practices and studies. First, while processes such as sound production, transformation and perception are not easily explained in terms of the *hylomorphic* schema of form/matter coupling without losing their dynamic and concrete dimension, they can be fruitfully addressed in terms of *individuation*, *information*, *transduction* and *dephasing*. Sound production and perception are by nature dynamic processes that rely on the propagation of an energy to produce dynamic structures (*information*) that acquire and retain their individuality as long as they preserve a clear boundary (*different phase*) and independency (*phase difference*) in relation to the surrounding sound environment. From a Simondonian perspective, we could think in terms of *individual sounds* (or sounds ‘in process of *individuation*’) rather than *sonic objects*. Second, the very *technical objects* and *technical chains* that mediate our sound production, perception and manipulation processes acquire, from this perspective, a concrete anthropological relevance and a social, cultural and political dimension. These

tools and their mediation processes determine what we listen to and how we listen, what and how we analyse/theorise, and what and how we create and perform. In the same way that technological acquisition and subsequent refinement of music notation have deeply changed music production, reception and theorisation over the centuries, the technical objects and processes related to sound arts, practices and studies have created specific modes of listening, studying and creating sounds that rely on how we engage these tools and techniques, how we attach our bodies and minds to them while dealing with sounds and even how we invent or reinvent these tools.

This article does not attempt to establish some sort of theoretical programme or present a methodological framework to be applied to the interpretation, invention and reinvention of techniques and technical objects in the immense variety of contemporary sound practices. Nevertheless, the Simondonian theoretical work presents worthwhile ideas and an equally valuable ethical perspective regarding the auditory and creative activities that imply the use of technical means, as well as those that presuppose their invention and adaptation to new enterprises.

If many theories and concepts derived from Schaeffer's connotation of the term *solfège* have enriched how we think about sound and the sound-related creative, analytical and theoretical dimensions, it is possible to postulate a *solfège* that happens *through* technical beings and is also directed at these very technical beings. This does not imply that sound particularities are to be ignored or relegated to a second plane, but rather that we should bear in mind their technological dimension. The *sonic object*, the *spectromorphologically* analysed sound or even the ephemeral live-electronics' 'real-time electronic sounds' produced in interactive contexts are the sounding trails of technological processes, tools, instruments, machines and mediations. These technical resources involve the historical acquisition and accumulation of stereotyped gestures and thoughts and of *modes of listening and making sounds*. In Schaefferian terms, we could say that they embody *themes and versions*.

Pragmatically speaking, despite any theoretical and philosophical justification, Schaefferian concepts and practices, such as *reduced listening* and *acousmatic music*, are likely to rely more on the ancient *circular* movement of the gramophone, on the corresponding form of the disc recording, which, according to Adorno (1990, p. 59), can be traced back to the automated organs, and on the latent technical possibility to 'freeze' sound in *loops* by manipulating *technical objects*, such as the lathe, turntable and a disc with locked grooves, than on the Husserl concept of *epoché*. This is not to say that these and other concepts (such as those that Schaeffer borrows from linguistics) are not important to his theory and interpretation of sound practices. On the contrary, they proved to be valuable conceptual tools to understand, *a posteriori*, the new sounding phenomena that Schaeffer was only able to listen to, contemplate and manipulate from the moment at which his human senses and organs could be prosthetically extended to enable him to listen to and handle these phenomena as *individual* sounds.

Today, with computational technologies that were practically unthinkable a few decades ago, even when Simondon and Schaeffer wrote about technology a few decades ago, it has become possible to reconsider, once again, the *solfège*, which is an outdated term that, nevertheless, can conceptually gather different practices and activities related to our interactions with sounds and music. For example, we witness the ordinary application of technologies that massively compute and process a large number of sounds to perform the automatic recognition of features through *music information retrieval* and *machine listening* techniques. The retrieved information is analysed using

complex tools, e.g. *machine learning* and *cloud computing strategies*, to accomplish heterogeneous tasks, such as song recommendation systems, recognising and locating screams or gunshots in urban soundscapes and structuring complex surveillance systems that imperceptibly monitor the sounds we produce and listen to.

In this context, the *solfège* of technical objects, i.e. the wide range of processes that encompass understanding and interpreting thoughts and gestures set down in technical objects and their coupling in our sound-related activities, such as listening, performing and creating, may have theoretical and artistic reverberations relative to how we deal with sounds. It could also have political and ethical consequences for practices that refuse, borrowing Simondon's expression, 'any scheme of servitude'.

Footnotes

1. According to Simondon, the technical object is not merely an instrument or ustensile, but the end-product of a technical activity and its evolution (Simondon, 1989, p. 15; Simondon, 2009, p. 19).
2. The creation of a sound loop by making a circular groove in a recording disc (*sillon fermé*) and transforming a bell sound by removing its attack and then repeating loops of this 'cut bell' fragment to create a flute-like sound (*cloche coupée*) are considered the two inaugural experiments of the *musique concrète* (Chion, 1983, p. 18; Schaeffer, 1966, p. 417).
3. The term 'allagmatic' comes from Greek *αλλαγή*, which means 'change' or 'differentiation'.
4. The pragmatic dimension of tools [Zeuge] can be seen when Heidegger stresses the 'wozu' (what-for) and the 'um zu' (for-something) dimensions of instruments (Heidegger, 1967, p. 70). On the other hand, the fatalistic apprehension of modern technology is the guideline of *Die Frage nach der Technik* (Heidegger, 2002).

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Acknowledgements

CNPq / FAEPEX-Unicamp

Biography

José Henrique Padovani is Professor at the Music School of the Federal University of Minas Gerais. He also teaches at the Music Graduate Program of the Arts Institute of the State University of Campinas and is an associate researcher at the Interdisciplinary Nucleus of Sound Communication at the State University of Campinas. As a composer, professor, and researcher, his activities focus on the interdisciplinary practices and investigations linked to the relationship among creative processes, music analysis, computer music, technology, and sound studies.

The sound beyond hylomorphism: sonic philosophy towards aural specificity

Henrique Rocha de Souza Lima

Abstract

This paper addresses the possibility of an epistemological shift in the praxis of sonic philosophy through the transposition of the concept of sound from the speculative regime of panaurality to that of aural specificity. The discussion gravitates around a critique of theoretical assumptions automatically imported by sonic philosophies when gravitating around the notion of ‘sound itself’, either to affirm and to deny it. The discussion explores this hypothesis through the description of a conceptual and problematic framework operating in contemporary philosophies centred on issues of particularity, becoming, processes and individuation. The main point here is that the binary theoretical distribution around the notion of ‘sound itself’ is detrimental to sonic philosophy, in the extent that it submits speculation to generalist terms, which in turn prevents the analytical agency on sound to engage more deeply and accurately with issues of locality and specificity.

Keywords

listening, aurality, modelization, non-cochlear, aural turn, specificity, sonic philosophy

Introduction: towards specificity

There is a very particular trigger for equivocation among authors writing about sound from a philosophical standpoint: the use of the term ‘itself’ to qualify either ontologically or epistemologically the idea of ‘sound’. Among these discourses, some use this term to define sound as being a sort of a raw vibrational matter prior to the agency of a psychological consciousness; some others, in turn, use the same expression to refer to the very opposite, that is, to a substance formed in the consciousness of a subject.¹ In the discursive spectrum of sonic philosophies, there is a number of theoretical propositions standing as counter-narratives to both phenomenological and physicalist accounts on sound based on the idea of a ‘sound itself’ and its correlated grounding of the listening activity on the subjective sensibility as an interiorized center of being and feeling.² This paper aims to extract consequences from the fact that both those who assume and those who reject the use of the term ‘itself’ as an adequate linguistic strategy to philosophically approach sound, may constitute two sides of the same ontological coin.

The mere existence of equivocation is not the problem here. In the context of open discursive communities, equivocation works a dynamic component that forces theories to move beyond former paradigms and unquestioned assumptions.³ What I want to address here is this specific equivocation as a symptom. My hypothesis is that the equivocation around the uses of the sound ‘itself’ is symptomatic of a vicious circle in which a number of philosophical works on sound seem to be enclosed, which consists ultimately in the habit of approaching sound in general, universal and totalising terms. In its turn, the action of simply countering the ‘essentialist’ with a negative ‘non-essentialist’ stance is not enough to exit this circle.⁴ The idea here is that in order to practice an effective epistemological difference it is necessary to perform another logic, one more oriented to specificity.

In other words, there is no significant epistemological shift or criticism in sonic philosophy when it keeps using terms highly linked to the pretension of delimiting the essential attributes of a ‘thing’ in general terms. Avoiding the vicious circle of epistemological truths proper to the ontological economy of the generalist and binary-oriented discourse would ultimately require the adoption of another strategy of reasoning, one more attentive to filtering and dislocating terms that commit us to totalizing and universalist epistemological purposes.⁵ The dual alternative of defining sound as either a physical raw material or a substance formed in the perception and consciousness of a subject seem to be the major epistemological trap imprisoning philosophical thought about sound in a specific binary-based ontological economy.

Before the essentialist ontological economy, we might set the following questions: what about the process? How can a theory approach processes of transformation and consolidation without lowering them to a degraded ontological level with respect to a supposedly stable and immutable essence of being? The fixation on essentialized binary terminology and the use of ‘sound itself’ can be read as a symptom of the remnants of metaphysics of presence in philosophical discourses on sound.⁶ A step in the direction of moving from generalist discourse toward the philosophical assessment of specificity consists in the critique of the ontological model, which is technically called in philosophy by the name of “hylomorphism”⁷ in favour of an effective ontological concept of individuation.⁸

‘Hylomorphism’ has been criticized in significant philosophical works in the last five decades, among which stand out writings by Gilbert Simondon (2005), Gilles Deleuze (1968), and Félix Guattari (1980). The anthropologist Tim Ingold takes up this criticism to develop his proposal of an “ontology of making” (Ingold, 2011, pp. 210-219), highlighting the epistemological need to put the hylomorphic model in question, since, from its initial formulation on Aristotle’s Metaphysics⁹, it “became ever more deeply embedded” in Western thought (*ibid.*, p. 210) as an onto-epistemological matrix. The basic traits of the hylomorphic model consists in describing existing things in terms of a conformative relationship between a passive and inert matter (“hyle”) and a set of formal causes (“morphē”) acting over this matter as molds (*ibid.*) The problem of assuming the axioms of hylomorphism is that they prevent contemporary discussions of art and technology from theoretically engaging with existing things in terms of processes of consolidation and becoming. It configures therefore an epistemology that is incapable of assuming a “genetic perspective” (Deleuze, 1968, pp. 169-217; Lapoujade, 2015, p. 110) in which form emerges from the dynamics of an active material conceived as “matter-flow” (Ingold, 2011., p. 213). According to Ingold – following Deleuze and Guattari –, matter-flow is precisely what remains unthought in the hylomorphic model, which while assuming only the general aspect of a raw matter to be shaped by pre-existing forms, is incapable of dealing with an active “matter in movement, in flux, in variation” (Deleuze; Guattari, 1980, p. 509).

Due to the prejudices that hylomorphism causes to the possibility of advancing on a process-oriented ontology – that is, a “nomad science” (Deleuze; Guattari, 1980) –, Ingold proposes his “ontology of making” as being based on the need to “overthrow the hylomorphic] model itself, and to replace it with an ontology that assigns primacy to the processes of formation rather than to their final products, and to the flows and transformations of materials rather than to the stasis of matter” (Ingold, 2011, p. 210). Following this critique, we argue that such a theoretical proposal formulated specifically in

terms of “ontology” may inject a renewed speculative voltage into sonic philosophy, insofar as it refuses both terms of the logical alternative that philosophical works on sound use to assume, in favour of focusing on the “fields of force and currents of material wherein forms are generated” (*ibid.*, p. 211).

Beyond the hylomorphic postulates, we might consider the existence of sound within concrete and specific processes of ‘individuation’.¹⁰ From this standpoint, the existing things are not simply conceived as shaped by transcendent models, but instead as “modulated” by these models within specific relations (Simondon, 2005, p. 47). Thus, the idea of “agency” (Deleuze; Guattari, 1980) becomes crucial to a sonic philosophy, specifically in what it contributes to think sound and listening as living “things” implied in contextual, contingent, and specific “meshworks” (Ingold, 2011, p. 210-219) in which subjective and social experience are immediately intertwined. Ultimately, this paper aims to imagine a transposition of sonic philosophy, from the scope of hylomorphism to that of individuation. This transposition promotes the idea of thinking the existence of sound and listening according to the specificities of the assemblages [agencements] (Deleuze; Guattari, 1980, pp. 626-641) in which the sound is inserted, applied and lived. It goes therefore against a general concept of ‘sound’. This transposition of sonic philosophy from the regime of speculation about matter in general to an empiricist-based epistemology oriented to the survey of particularities may imply a step forward in the sense of setting sonic philosophy in tune with the epistemological demands placed into play in the context of an “aural reflexive turn” (Samuels et al., 2010, p. 300), especially when it involves issues of class, ethnicity, gender, and colonialism. This step forward would mean, therefore, remembering that politics comes along with ‘being’, and with politics comes locality and specificity.

The following discussion focuses, however, less in social data than in the critique of philosophical assumptions. The purpose of discussing this specific body of philosophical texts is to argue that the exercise of approaching sound in terms of an “expanded situation” (Kim-Cohen, 2009, p. 262) should not be reduced to addressing mental models and symbolic grids, but it should also encompass specific material assemblages and individuation processes. In order to support this idea, the expository route of the article consists of three basic steps: firstly, I present briefly some of the epistemological demands put into play in the context of an “aural turn”. Secondly, I review two texts standing explicitly against the notion of “sound itself” (Kim-Cohen, 2009; Bonnet, 2016). Finally, I approach the installation work *PLIGHT* by Joseph Beuys through the cross-reading between Gilles Deleuze’s concept of “transcendental empiricism” and François Bonnet’s comment on Beuys’ work. As we shall see, the work *PLIGHT* can be read as a concrete operation performing what Deleuze calls a “transcendental empiricism” as a particular way of operating with art. *PLIGHT* is taken here as a case study to affirm the insufficiency of approaching sound exclusively as a raw material or as mental models and symbolic grids. Thus, through the discussion about this work, we will unveil the necessity for a sonic philosophy that gets to the level of concrete processes of individuation in which both matter and models intertwine as both material and logical forces in intermodulation.

The epistemological shift from hylomorphism to individuation is a possible way to set sonic philosophy in tune with an aural reflexive turn, as well as to the process-oriented ontology of making. The following text aims to contribute towards a more politically engaged sonic philosophy based on the analysis of particular ways through which power, violence and resistance operates with regard to issues involving pragmatic context of sound and listening

performances.

1. Context: “aural turn” and politics of aurality”

In a paper arguing for a “sounded anthropology”, a collective of authors operating in the interface between anthropology, music and sound call for an “aural reflexive turn” in their disciplines, while emphasizing the critical endeavour that such an epistemological “turn” ultimately requires (Samuels et al, 2010, p. 330). Ana Maria Ochoa (2014), one of the authors of the aforementioned paper, returns to this point at the epilogue of her book *Aurality: listening and knowledge in the nineteenth century Colombia*, where she describes the consolidation of the field of sound studies in the context of “an ‘aural turn’ that acknowledges the increased presence of sound as field of theorization” (Ochoa Gautier, 2014, p. 207). As it can be seen in a number of works published in the last decade, such an epistemological orientation operates in a wide range of academic disciplines (see Sterne, 2012). However, an ‘aural turn’ must be appreciated not only as a mere increased attention to sound, but also as a means for a critical attention to the processes and forces traversing the ear as the matrix of markedly situated experiences of sound. Such an epistemological ‘turn’ would therefore imply, besides the emergence of a new object of interest (sound), a consistent change in relation to the implicit presuppositions that guide an idea of knowledge.

In this sense, the so-called ‘aural turn’ concerns a critical disposition towards the analysis and praxis of situated “politics of aurality” (Samuels et al., 2010, p. 339) in specific contexts, in order to theoretically engage the ear as being a politically and disciplined body organ working while mediated by local and specific conditions of possibility. An ‘aural turn’ is therefore where aurality becomes an epistemological issue located at the intersection between knowledge and power, and therefore not reduced to the logical economy of a totalizing and socially disengaged ‘panaurality’ in which the world itself is identified as being sonorous and potentially musical.¹¹ In this sense, it is noteworthy that a number of significant theoretical works addressing listening as being a historically and politically constituted performance have been published in the last two decades. Consider, for example, Peter Szendy’s description of the “modern regime of listening” in *Listen: a history of our ears* (2001)¹², and Jonathan Sterne’s notion of “audible techniques, or techniques of listening” (2003, p. 90) as a conceptual tool for approaching different modalities of listening training based on specific interpretative paradigms directly linked to a social sphere of political interests, including market strategies and colonialism (Sterne, 2003, p. 93-95).¹³ An effective aural turn would imply, then, the epistemology of specific auralties against panaurality. That is, the epistemological option for a historical materialism engaged with the analysis of contextual practices of power, discipline and control “modulating” (Deleuze, 1992) the ear within particular processes of individuation.¹⁴

2. Discussion

2.1 Seth Kim-Cohen: the expanded sonic field of sound-as-text

In the book *In the blink of an ear: toward a non-cochlear sound art* (2009), Seth Kim-Cohen declares himself in search of identifying “a space of praxis for a non-cochlear sound art” (Kim-Cohen, 2009, p. 157). Here, “non-cochlear” goes for a set of discursive and artistic practices concerning sound and listening, but which are not made of sound or through sound, but “about” sound (*Ibid.*, p. 107). From this perspective, the author

manages to interpret a set of selected artworks and theoretical assertions as operating within what he calls an “expanded situation of sound” (*Ibid.*, p. 42-49; 58-60; 78). This idea of an expanded situation is based on the thesis that the experience of sound is necessarily mediated by meaning (*Ibid.*, 2009, p. 81), and therefore never made through an immediate relation with sound as an object ‘in-itself’. His approach is based on the assumption that the often-replicated notion of ‘sound-in-itself’ is unthinkable:

“There is a sense among practitioners and theorists alike that sound knows what it is: sound is sound. I will try to reduce this resistance by returning attention to works and ideas stubbornly received in the untenable space of the blinking ear. The aim is to rehear them, rethink them, reexperience them starting from a nonessentialist perspective in which the thought of sound-in-itself is literally unthinkable. Against sound’s self-confidence – the confidence in the constitution of the sonic self – I propose a rethinking of definitions, a reinscription of boundaries, a reimagination of ontology: a conceptual turn toward a non-cochlear sonic art.” (*Kim-Cohen*, 2009, introduction, p. xx)

One of the major points of Kim-Cohen’s theory is this marked mistrust regarding the identification of sound as a natural sphere ‘in itself’. His mistrust is present from the introduction to the conclusion of the book, distributed in moments where the author contextualises his option for approaching conceptual art as a methodological strategy:

“A non-cochlear sonic art maintains a healthy skepticism toward the notion of sound-in-itself. When it – whatever it is – is identified without question and without remainder, we have landed on a metaphysics, a belief system, a blind (and deaf) faith. The greatest defense against such complacency is the act of questioning. Conceptual art (...) is the aesthetic mode of such questioning. In questioning how and why the sonic arts might constitute themselves, I hope to lead the ear away from the solipsism of the internal voice and into a conversation with the crosstalk of the world. Everything is a conversation.” (*Ibid.*, p. xxiii)

At the conclusion of the book, Kim-Cohen explicitly sets his approach against the idea that the experience of sound “requires no signs, no representation” (*Ibid.*, p. 259), and therefore against a lineage of authors who frame discursively the sound and the listener in continuity with phenomenological discourses formulated in the mid-twentieth century by authors like Pierre Schaeffer and John Cage. In this context, Kim-Cohen frames his theoretical option for a ‘non-cochlear’ approach in markedly philosophical terms, while vehemently refusing the idea that there can be ‘sound’ without the interference of the spheres of meaning and value, which are, in turn, his ultimate criterion for declining the idea of sound substantialized ‘in itself’:

“What I have argued for here is a rehearing and a rethinking of the recent history of the sonic arts, in which certain episodes, certain works, certain ideas, might be reconsidered as evidence of movement outward rather than inward. Such an argument rejects essentialism. Value is not inherent, but rather a process that overflows the boundaries of the thing-itself. Meaning is always contingent and temporary, dependent on the constantly shifting overlap of symbolic grids. It is never simply it.” (*Ibid.*, p. 261)

The entire book is dedicated to deploy the thesis that sound is inexorably traversed and mediated by meaning. According to the author, this perspective refuses to accept unquestionably the status of the artwork as a supposed “natural sign” (*Ibid.*, p. 79-87), in

favour of approaching art as a construct situated within the pragmatic field of both material and semiotic commerce, through a constant and differential exchange of signs and materials. In this book, Kim-Cohen is overtly less concerned with sound as a physical phenomenon than with a trace of sound. Countering the sound philosophies that “accepts sound as a kind of god, a unifying and unified sign” (*Ibid.*, p. 259), the author characterizes under the aegis of a “non-cochlear sonic art” a set of heterogeneous practices that can present themselves “in any medium: photography, books, lines on walls, mirrors, sculpture, as well as performance, speech, choreography, social practice, and so on” (*Ibid.*, p. 157).

As long as his approach is marked by a decided refusal of conceiving sound as a natural given, Kim-Cohen’s claim for “the expanded situation of sound-as-text” (*Ibid.*, p. 262) refers to the necessarily impure and non-essentialised status of sound (*Ibid.*, p. 79), which, paradoxically, requires ‘rehearing’ – “rehearing and a rethinking of the recent history of the sonic arts” (*Ibid.*, p. 262). The theoretical assertion towards a non-cochlear approach to sound ends up formulated in terms of a qualitative transformation concerning aurality. In his very last paragraph, the book concludes by stating that “in order to hear everything sound has to offer, we will have to adjust the volume of the ear” (*Ibid.*). *In the blink of an ear* puts into play, in its own terms, the idea that the ear goes far beyond the cochlea, and that a wider sense of the ear may include networks of signs, symbolic grids, practices of bodily training, discipline and control. The ear as a political organ: less manifestation of being, more mediation of meaning.

2.2.François J. Bonnet: modelizations of sound and listening

In *The Order of Sounds: a Sonorous Archipelago*, originally published in French in 2012, François Bonnet (2016) deals with a similar subject when he conceptualize the idea of “modelizations of sound” (Bonnet, 2016, p. 226-242). By ‘modelization’ Bonnet refers to different modes of codification and indexation of sound in the context of audio culture, through the continuous generation of parametric mappings, taxonomies, digital audio formats and all sorts of technologies for measuring and simulating sound. According this author, the domains of science and art features a range of different kinds of modelization of sound.

Throughout his discussion on modes of modalization between art and science, Bonnet approaches a set of different objects, among which the three following are of specific interest: 1) the project called *SemanticHIFI*, based at IRCAM in collaboration with a number of universities and music technology corporations¹⁵; 2) Christian Marclay’s poetic thought regarding phonographic media as objects for plastic intervention; and 3) the installation work *PLIGHT* by Joseph Beuys.

According to this author, although each one of these cases implies different practical, institutional and material contexts, they share the characteristic of addressing mental models concerning both sound and listening. In this sense, concerning the computational modelization of sound developed in the context of the *SemanticHiFi* project, Bonnet highlights the twofold character of modelization, in the extent that the correlated taxonomic enterprise implies what he understands as being a “paradox” which “resides in the fact that it seeks to open up a freedom of listening, but it acts upon listening in a way that channels, atomizes, and reifies the audible into sensible objects” (Bonnet, 2016, p. 229). Thus, since some modelization enterprises end up adding “another brick in the wall of total codification of the sensible” (*Ibid.*), Bonnet suggests that this subject must be approached critically.

In turn, regarding modelization in art, Bonnet addresses Christian Marclay's works on phonographic media, focusing on the idea of “plasticity of sound” in both the literal and conceptual sense (Malabou, 2000, p. 80; Bonnet, 2016, p. 233), arguing that in this work “the notion of plasticity implies a new relation to sound”, a “new relation” described in terms of an intervention on the very model of sound:

“Marclay’s work is articulated around the symbolic presence of sound, around its potentialities, (...) – in any case, not around the perception of sound itself. (...). The materiality of sound invoked through the concept of plasticity is in fact more like a virtuality (...). In this sense, one cannot manipulate sound as one would manipulate clay; it is the *model* of sound that is manipulated, interrogated, reconfigured.”
(Bonnet, 2016, p. 234)

Here, the model of sound becomes the very subject-matter of ‘plasticity’ and ‘plastic’ agency [16]. Bonnet states that the experience of sound “is no longer a question of sound, but of a *model of sound*” (Bonnet, 2012, p. 229). By emphasizing shift on perceptual agency, the author describes the experience of sound as a perceptive performance made from a basic ability of “placing-into-sign of the sonorous” (*Ibid.*, p. 232). Then, he concludes that modelization of sound implies necessarily modelization of listening: “any systematization of the object of listening is part and parcel of the process of listening itself” (*Ibid.*, p. 230). In this sense, the modelization of sound implies a qualitative and critical change on the concept of listening, in the extent that ‘to listen’ equals to articulate models of sound. In other words, *to listen* equals to articulate oneself within “coordinates that belong to a normalized referential system” (*Ibid.*, p. 239). The auditory activity has to do therefore with referential systems, normalization, belonging and coordinates. It is pictured as being driven rather than supposedly pure and immediate.

Then, the third point discussed by this author on the subject of modelization features a significant shift in focus. At this point, Bonnet criticizes sound art criticism focusing exclusively on the dimension of sound and listening models. Aiming to conceive more comprehensive possibilities for criticism, he argues for a balance between the emphasis on the dispersion of sound in taxonomies and modelization and the emphasis on the activity of listening in a concrete physical situation, even if it is a silent one. In order to make this argument more concrete, the author references Joseph Beuys' *PLIGHT*, an installation with no sound, although engaging listening as a synthetic operation. *PLIGHT* is a material assemblage characterized by its own author as a strategy for activating “an extreme position, the really transcendental position of production in general” (Beuys *apud* Bosseur, 1992, p. 80).

Since the very author describes this work in terms of ‘transcendental’ and ‘production in general’, we might approach it through the perspective of a transcendental philosophy. Before addressing directly the installation work, the following section describes the key points of the conceptual elaboration made by the philosopher Gilles Deleuze on the notion of “transcendental empiricism”. Deleuzian philosophy might be of particular interest here, for it describes a particular kind of aesthetic experience that seems to be into play in Beuys's installation.

2.3. Gilles Deleuze: Transcendental Empiricism

In his 1968 book *Difference and Repetition*, Gilles Deleuze formulates his theory of the “transcendental empiricism” through a particular textual strategy, where he performs a kind of parody of the 1781 classical philosophical text *Critique of Pure Reason* by Immanuel Kant (1998), insofar as the book features a philosophical theory on sensibility, subjectivity and reason using the three-part division of the Kantian text. Deleuze uses the very form and vocabulary of Kantian discourse, but significantly displacing its content in a way that three major parts of the book – the ‘Aesthetics’ (theory of sensibility), the ‘Analytic’ (theory of the object) and the ‘Dialectic’ (theory of the Idea) – are mobilized in order to think what the Kantian text did not: the direct link between the sensible and the ‘Ideal’, without being mediated by and grounded on the forms of subject and object (Deleuze, 1968, pp. 130-131; Lapoujade, 2015, p. 101).

This displacement is due to the fact that Deleuze’s “philosophical collage” (Deleuze, 1968, p. 4) is based on an explicit assumption with respect to his conception of what must form a transcendental philosophy: it is necessary to replace the point of view of conditioning by that of genesis – that is, a transcendental philosophy must shift the focus from *a priori forms* (as in Kant) to the genesis of the individual (as in Simondon). Here, a transcendental philosophy is supposed to think the concrete genetic conditions for a lived experience in specific situations rather than general conditions formulated exclusively through general and abstract terms. In this context, a fundamental shift is made with regard to the concept of ‘thought’. Differently from the phenomenological emphasis on thought as the product of intention and conscious intentionality, Deleuze conceives thought as the product of a set of *passive synthesis* (Deleuze, 1968) in which both the unconscious psyche and random “fundamental encounters” play a significant role, as we can read in the following passage:

“Do not count upon thought to ensure the relative necessity of what it thinks. Rather, count upon the contingency of an encounter with that which forces thought to raise up and educate the absolute necessity of an act of thought or a passion to think. The conditions of a true critique and a true creation are the same: the destruction of an image of thought which presupposes itself and the genesis of the act of thinking in thought itself. Something in the world forces us to think. This something is an object not of recognition but of a fundamental encounter.” (Deleuze, 1968, p. 182)

Thus, one of the basic assumptions of the transcendental empiricism is that thought is rather involuntary than the product of subjective decisions and intentions. The core of the Deleuzian concept of thought as it is formulated in the third chapter of *Difference and Repetition* consists in establishing the constitutive role played by a “fundamental encounter” within a transcendental philosophy. From the principle that thought is something *forced* rather than naturally given, another constitutive element of the classical transcendental philosophy is shifted: the way that faculties relate with each other. It is known that in Kant’s *Critique of Pure Reason* the basic form of the relationship between faculties is that of the organic collaboration according to the common purpose of building a coherent phenomenon. What Deleuze does is to implode this circuit to give way to a relationship in which each faculty is set to work while confronting its own limit, in a situation where they communicate with each other, not common content, but one made under the impact of “a violence which brings it [a faculty] face to face with its own element” (Deleuze, 1968, p. 184). The main point of the Deleuzian “collage” is shifting the focus from the exercise of organic collaboration to the “transcendent exercise” of each

faculty:

“The transcendental form of a faculty is indistinguishable from its disjointed, superior or transcendent exercise. Transcendent in no way means that the faculty addresses itself to objects outside the world but, on the contrary, that it grasps that in the world which concerns it exclusively and brings it into the world.” (Deleuze, 1968, p. 186)

Then, the philosopher unfolds his basic principle that thought is generated by and within a “fundamental encounter” through a description of the *genesis of each faculty* as a concrete experimentation of the “extreme point of its dissolution”:

“The transcendent exercise must not be traced from the empirical exercise precisely because it apprehends that which cannot be grasped from the point of view of common sense, that which measures the empirical operation of all the faculties according to that which pertains to each, given the form of their collaboration. That is why the transcendental is answerable to a superior empiricism, which alone is capable of exploring its domain and its regions (...). Each faculty must be borne to the extreme point of its dissolution, at which it falls prey to triple violence: the violence of that which forces it to be exercised, of that which it is forced to grasp and which it alone is able to grasp, yet also that of the ungraspable (from the point of view of its empirical exercise). Each faculty discovers at this point its own unique passion (...). We ask, for example: What forces sensibility to sense? What is it that can only be sensed, yet is imperceptible at the same time?” (Deleuze, 1968, p. 186)

In this context, the theme of the “limit” of each faculty begins to appear. In what concerns, for example, the faculty of sensibility, this genetic perspective (Deleuze, 1968, pp. 169-217) points to a performance of sensibility dealing with “what concerns it exclusively” rather than with objects unified in perception. The questions for “what forces sensibility to sense?” and “what is it that can only be sensed?” are the fundamental aesthetic questions posed by this book, in the extent that they make clear that, from Deleuzian intervention on transcendental philosophy, aesthetics does not consist of determining the *a priori forms* of sensibility, but rather of determining the intensive matter in relation to which the complex of sensibility-thought-experience come to life. This intensive matter is though as “what can only be sensed”. Deleuze calls it as being also the “*insensible*” that is, what is impossible to be perceived from the point of view of a common exercise of sensibility, but which is, at the same time, what can only be accessed through a “superior” or “transcendent exercise” (Ibid., pp. 182-184; p. 196; pp. 213-214) of this faculty. From the perspective of transcendental empiricism, aesthetics consists in a relationship in which sensibility is concretely forced by an encounter while dealing with its own limits of operation:

“The sensible is referred to an object which may not only be experienced other than by sense, but may itself be attained by other faculties. It therefore presupposes the exercise of the senses and the exercise of the other faculties in a common sense. The object of encounter, on the other hand, really gives rise to sensibility with regard to a given sense (...). It is not a quality but a sign. It is not a sensible being but the being of the sensible. It is not the given but that by which the given is given. It is therefore in a certain sense the imperceptible [insensible].” (Deleuze, 1968, p. 186)

The specificity of the aesthetic experience correspondent to this “transcendent exercise” of the sensibility resides in the fact that, while other faculties can experiment “sensible beings” in the form of qualities – as, for example, a sensible quality remembered by the Memory or

imagined by the Imagination –, only the sensibility can experiment the “being of the sensible” as a concrete individuation within a situated event. With the insertion of the concept of individuation into its transcendental scheme, Deleuze makes clear how crucial the notions of encounter and becoming are in his philosophy. According to this philosopher, there is no real experience without a process of individuation. On the contrary, it is the process triggered by a concrete encounter that is conceived as the very matrix of the real. That is the reason why in Deleuzian philosophy the transcendental analysis is a matter of approaching the genetic conditions of an experience.

Considering the particular concept of thought and aesthetic experience resulting from this philosophical “collage”, it is worth asking: what role do works of art play in this theory? Here, artworks are thought as components of individuation forcing the aesthetic dimension to the point of experiencing its own limit: “(...) the being of the sensible reveals itself in the work of art, while at the same time the work of art appears as experimentation” (Deleuze, 1968, p. 94). Such experimentation concerns the specific operation of making difference sensed, releasing the difference from the form of representation, breaking the identity of a thing with its own image represented in a concept (Ibid., p. 79). Considered as experimentation, the artwork leaves the domain of the things ‘in themselves’ to be thought as performing “transcendental empiricism”:

“Each point of view must itself be the object, or the object must belong to the point of view (...). Every object, every thing, must see its own identity swallowed up in difference, each being no more than a difference between differences. Difference must be shown differing. We know that modern art tends to realise these conditions: in this sense it becomes a veritable theatre of metamorphoses and permutations. (...). The work of art leaves the domain of representation in order to become ‘experience’, transcendental empiricism or science of the sensible.” (Deleuze, 1968, p. 79)

With this conceptualization on the relationship between sensibility and works of art in mind, the next section considers possible resonances between the use of the word “transcendental” by Beuys and Deleuze.

2.4. Joseph Beuys: the “transcendental position of production”

PLIGHT is an installation work made of 248 rolls of felt lined up at double height forming two rooms in L shape (dimensions 310 x 890 x 1813 cm), containing a piano, a black table and a thermometer. The installation was conceived in 1985 for the Anthony d'Offay Gallery in London, being presented also at the Centre Georges Pompidou in Paris in 1994. According to the Centre Pompidou's webpage dedicated to the work¹⁷, the idea for the installation is to construct a claustrophobic space in which the participant – although not being exposed to any sound – may experience a synesthetic thermal and acoustic situation. The allusion to the calorific value of the felt is underlined by the presence of a thermometer placed on the blackboard and the listening situation is confronted to a double-silence: the shut piano and the displacement of acoustical-spatial reference provoked by conflict between the wide dimensions of the physical space and the dried acoustical environment provoked by the felt's coefficient of sound absorption

Aligned with Beuys' assumption that “every man is an artist”¹⁸, Bonnet addresses *PLIGHT* as a concrete intervention within the circuit of the aural experience by means of a both material and spatial assemblage rather than a sonorous one. In other words: although being silent, the work engages the listening activity through an architectural

agency understood by Bonnet as performing a “*reassignment* of the material and spatial field” (Bonnet, 2016, p. 239) in which “perception itself *makes the work*” (*Ibid.*, p. 238). Here, the topic of modelization and its correlate “plastic approach to sound” is, according to Bonnet, made in a way that it “effectively convoke sound as sensible raw material” (*Ibid.*, p. 237).

Since the work does not offer any sound to the participant, why is it also situated within the realm of sound art? In which sense it activates “the transcendental position of production in general”? What does ‘transcendental’ means in this case? Moreover, how this “transcendental position” differs from the ones attributed to silent works like John Cage’s 4’33”? All these questions converge to the same point: *PLIGHT* is a particularly problematic (sound) artwork in the extent that it engages the ear not only as a productive agent, but as a *plastic* organ. It does not set the ear to operate in relation to sound as an external physical object, but it rather places it within a spatial situation involving a series of heterogeneous elements (heat, smell, claustrophobia), and activating a short circuit in the internal ear due to the inadequacy between the dimensions of the room and the acoustic impression of the space. It sets the listening activity in relation with its own modes of operation through an architectural and cross-modal aesthetics.

However, despite being silent, this work does not fall under the category of ‘non-cochlear’ either. Although it does not offer any sound to a listener, *PLIGHT* presupposes the cochlea as one of the targets of the spatial short-circuit. There is no sound, but that does not mean that the work is ‘non-cochlear’. *PLIGHT* is silent *and* cochlear. The “transcendental position of production in general” seems to be triggered here in convergence with the Deleuzian characterization of the “transcendental” experience in the extent that the work dismisses an object to focus on the plasticity of one’s own sensibility. Bonnet seems to capture this meaning as he considers *PLIGHT* as

“an authentically plastic thinking of sound – authentically plastic because it *materializes* sound, in a materiality that reveals itself not through a model that supposedly describes it, but through one’s sensible experience of it in the work.” (Bonnet, 2016, p. 239)

From this perspective, the plastic agency in operation consists in setting an environment in which the ear simultaneously produces and perceives audibility. Bonnet’s approach seems to converge with the Deleuzian description of transcendental empiricism, inasmuch as it positions *PLIGHT* as an experimentation engaging sensibility in a way that it is challenged to materialize the very perceptive performance as the responsible instance that materializes sound. Sound as “sensible raw material” (Bonnet, 2016, p. 237) rather than ‘in-itself’.

Through his reading on *PLIGHT*, Bonnet makes clear that his concept of listening is elaborated not only in terms of models and modelization, but also as a concrete event able to be worked plastically by means of architectural intervention. In this way, sound art concerns not only artistic assemblages involving energetic flows of sonic matter, but also operations directed to the experience of the ear as a synthetic organ traversed by different kinds of models of interpretation, and ultimately exposed to the experience of disturbance in its own usual mechanisms of operation. In so far it focuses on the performative capacity of perception rather than in an exterior material to be recognized, the notions of materiality and plasticity of sound are ultimately described as functions of the listening activity.

Finally, the “transcendental position” argued by Beuys seems to be related with the Deleuzian concept of “transcendental” in the extent that it actualises a direct link between the beginning and the end of the classical Kantian transcendental system: the sensible (Aesthetic) and the ideal (Dialectics) without being grounded on the forms of both the subject and the object (Analytics). By means of an immediate link between sensibility and ideality, the transcendental position referred by Beuys seems to be that of a transcendental empiricism in which the aesthetic experience confronts its very structural conditions within a concrete encounter which the resultant experience is not grounded on the forms of subjects and objects. Thus, in the condition of being a kind of “transcendental empiricism”, *PLIGHT* would have built a situation in which both listening and sound may be experienced *as difference*.

3. Conclusion

This paper has sought to critically appraise the craze that sound philosophers have to formulate their problems in terms of ‘sound itself’ through a critique of this notion as being ultimately a generalist and content-less linguistic artifice. We did this by pointing out the hylomorphic character of an idea widely assumed by a range of contemporary sound philosophers: the idea of an abstract form of musicality that would involve all existing sound – in other words: the idea that all sound bears intrinsically musical qualities. Through the logics of “panaurality”, the idea of “music” still works as a general and abstract idea that exerts a power over the epistemological and practical possibilities of sound philosophy and sound art. This power is hylomorphical, and for this reason we resorted to the idea of an “itinerant” (Deleuze; Guattari, 1980, p. 509-518) epistemology, whose method would be to follow materiality flows. What could such a method contribute in the sense of producing a structural transformation within both theoretical and practical imagination of sonic philosophy? The proposal to follow the traits of materiality and immateriality within a specific process of individuation requires an experimental, empirical, and ultimately itinerant or nomad thought (Deleuze; Guattari, 1980, pp. 434-527). Considered from the point of view of the mode of reasoning, it is known that an itinerant or improvisational thought is not oriented by closed algorithms, but rather by heuristic strategies.¹⁹

In this sense, the split between ‘essentialist’ and ‘nonessentialist’ stances on sound can be understood as a counterproductive mode of theoretical analysis, especially when it comes to think particularity, locality, specificity. ‘Essentialist’ and ‘nonessentialist’ are both subsectors of the hylomorphic model. The idea here is that, by refusing both of these terms, it would be possible to insert more effectively the categories of sound and listening in a dynamic of specific relationships of modulations between contextual forces. The, the content of both notions would be radically changing according to the situation, while being redistributed according to new coordinates of space and time in play within particular economic, political, ideological, colonial, and legal forces and pressures that make up specific environments. Thus, the idea of a nomad sound philosophy would imply to exit panaurality as an epistemological origin myth haunting sonic philosophy, in order to articulate sound and listening in a continuously transformative field of issues related to the local, the particular and the specific. Thus, specificity not as a new immediate ‘presence’, but as a social thing immediately linked to the local and the global.

Endnotes

1. With regard to the use of the notion of sound ‘itself’ in a physicalist sense, see Cox (2009; 2013); With regard to the use of the notion of sound ‘itself’ to refer to the phenomenon formed on a subjective consciousness, see Kane (2014, p. 134-161); with regard to the formulation of the listening activity in terms of a subjective “sonic sensibility”, see Voegelin (2014).
2. The two texts discussed in this paper – Kim-Cohen (2009) and Bonnet (2016) – are exemplary in this regard.
3. I assume here what the Brazilian anthropologist Eduardo Viveiros de Castro says about the discourse of his own discipline: “(...) equivocation is a properly transcendental category, constitutive dimension of the project of cultural translation proper to the discipline. Not all the simple negative facticity, it is a condition of possibility of anthropological discourse that justifies the latter’s existence” (Viveiros de Castro, 2014, p. 89).
4. The following discussion in this paper is dedicated to clarify this thesis. The term “nonessentialist” is used here in reference to Kim-Cohen’s (2009, introduction, p. xx) description of his own philosophical perspective. It is noteworthy that the criticism regarding an exclusively negative use of this nonessentialist position does not apply entirely to Kim-Cohen’s work, since it is interested in issues and relating to specificity. With regard to the thesis that a simply negative stance does not constitute difference, see Gilles Deleuze (1968).
5. With regard to the ontological economy of binary-oriented discourse, see Deleuze; Guattari, 1980, pp. 30-31.
6. An explicit critique of the notion of “metaphysics of presence” can be found in the first part of Jacques Derrida’s *Of Grammatology* (Derrida, 1998, pp. 1-94).
7. “Hylomorphism”: the doctrine that every existent thing is a combination between matter (*hyle*) and form (*morphe*). The Cambridge Dictionary of Philosophy presents a concise definition for the term, locating the reference text where this doctrine was first formulated: “the doctrine, first taught by Aristotle, that concrete substance consists of form in matter (*hyle*). Aristotle exposes the details of this theory in the central books his work *Metaphysics* (*Zeta*, *Eta*, and *Theta*). See Audi, 1999, p. 408.
8. “Individuation” is the key concept of the process-oriented ontology developed by the philosopher Gilbert Simondon. This theory understands every form as *an emergence from a process of pre-formal interactions between differences of potential*. Therefore, this theory postulates the concept of “individual” as being always the partial result of a process of individuation. Its formal stability is always “meta-stable”. According to this theory, there is no form in itself: every form is the partial result of a concrete agency of specific materials and forces. Therefore, for Simondon, the concept of individual needs to be referred to the *process of genesis* through which the individual is constituted. Regarding this theme, see the text “the genesis of the individual” in the following link:
[<http://www.columbia.edu/cu/arts/vad/critical_issues_on_art/Simondon.PDF>](http://www.columbia.edu/cu/arts/vad/critical_issues_on_art/Simondon.PDF).
9. See the book online at <<http://classics.mit.edu/Aristotle/metaphysics.html>> and its overall description at <<https://plato.stanford.edu/entries/aristotle-metaphysics/>>
10. Taking the concept of form as a criterion of distinction between these two ontological models, consider that in the hylomorphic model the forms exist from the beginning and they act like molds over a raw matter. In turn, the model of individuation postulates form as an emergence from a process of pre-formal interactions between differences of potential. For further information, see

- Simondon, 2005 and Deleuze; Guattari, 1980.
11. “Panaurality” refers to the assumption that sound is ubiquitous, that everything has a sounding existence, and everything sounds *all the time*. For a detailed description of the logical and ontological principles that form the notion of panaurality, as well as the problems that this ontology implies in terms of inability to think the “sociality” of sound, see Kahn, 1999, p. 158-199.
 12. In his 2001 book *Listen: a history of our ears*, Peter Szendy mapped the historical emergence of what he calls a “modern regime of listening” (Szendy, 2001, p. 24; 127; 152), highlighting the joint articulation between copyright legislation, the emergence of a musicological discourse centered on the notion of the “integrity of the work”, and the historical emergence of a “critical listener” operating according to a new paradigm of responsibilities and duties for listening. His basic assumption is that every listening practice is historically situated.
 13. In the introduction of *The Audible Past: cultural origins of sound reproduction*, Sterne presents a concise definition of “audile technique” describing it as “a set of practices of listening that were articulated to science, reason, and instrumentality that encouraged the coding and rationalization of what was heard” (Sterne, 2003, p. 23). With regard to the considerations concerning colonialism as a “vital element of the history of sound”, see Sterne, 2003, p. 183; 343.
 14. The verb “to modulate” is used here as a characteristic action of practices of control and governance of populations in reference to the way Gilles Deleuze understands the *logic* of contemporary forms of power: “enclosures are *molds*, distinct castings, but control are a *modulation*, like a self-deforming cast that will continuously change from one moment to the other, or to sieve whose mesh will transmute from point to point” (Deleuze, 1992, p.4).
 15. *SemanticHIFI* was a project carried out between 2003 and 2006 at IRCAM in partnership with companies such as Sony and Native Instruments and Universities such as Pompeu Fabra. The declared goal of the project was to “develop a new generation of HIFI systems, offering new functionality for browsing, interacting, rendering, personalizing and editing musical material”. This goal was sought through computational modelling of sound. According to the project description, “these HIFI systems will be as much open instruments as listening stations”. For detailed information, see <<http://semantichifi.ircam.fr/>>.
 16. For more information on the critical nature of Marclay’s artistic practice in relation to the normative models of musical production and appreciation in the context of the industrialized culture, see <<http://www.jca-online.com/marclay.html>> and <<http://www.tate.org.uk/context-comment/video/christian-marclay-talking-art>>.
 17. See <<https://www.centrepompidou.fr/cpv/resource/cLjdb4/rgXd7e6>>.
 18. See <https://www.centrepompidou.fr/cpv/ressource.action?param.id=FR_R-d7d163beb04373e0737ee97b497e59a¶m.idSource=FR_E-bfad985e633ed5390664561742daec0>.
 19. See <<https://www.merriam-webster.com/dictionary/heuristic>> and <<http://www.ldoceonline.com/dictionary/heuristic>>.

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Biography

Henrique Rocha de Souza Lima is a doctoral student at the Department of Music of the University of São Paulo, Brazil. His thesis *Listening Design: politics of aurality in the age of ubiquitous audio* elaborates the notion of “listening design” as a both critical and poetical category in the context of research on sound and listening. Sonic artist and writer, author of works rendered in diverse media, including pieces for solo instruments, soundtracks for short film, radio works, theatre plays, audiovisual, site-specific and public art. Member of the NuSom – Research Center on Sonology – at the University of São Paulo. Henrique holds a MA in Philosophy with a dissertation on the relationship between

Composition for temple speakers: some notes on devotional music and noise

By Sindhu Thirumalaivasamy

Abstract

Composition for Temple Speakers is part of a series of site specific sound works and associative writings that explore multiple valences of contemporary devotional practices. It was made for a Shiva/Sai Baba temple in Bangalore, India. This essay reflects on the ways in which this composition responds to a contested social and spatial context from a position of being with/in. It also reflects on the ways in which this composition relates to tacit notions about noise and listening in acoustic ecology and noise music.

Keywords

Noise, devotional, secularism, with/in, imperceptibility, desiring-listening

Introduction

Composition for Temple Speakers (CFTS) is part of an ongoing series of site specific sound works and associative writings that explore multiple valences of contemporary devotional practices. They include local sonic interventions in temple sound systems and a discursive practice that begins from listening to those interventions. In the context of rising religious fundamentalism and nationalism, it becomes easy to conflate religion and ideology, and the work of artists and intellectuals is seen as needing to remain removed from religious practices. Nevertheless, there is a vacuum in the understandings that are possible with strictly secular approaches to life and living (Nandy, 1988). *CFTS* is an attempt to find modes of engagement with/in such contested spheres. With/in here connotes a mode of relation that can flow between acting ‘with’ and ‘from inside’ something.

CFTS began as a devotional song made for a Shiva/Sai Baba temple in Bangalore. It was made in 2014 in collaboration with Prerna Bishnoi and Ishan Gupta (Banana Apparatus) and was played from the temple sound system [1] on two evenings. This essay elaborates on some of the contextual conditions in which we worked, particularly the relationship between religion and the liberal/left in India. It also reflects on the ways in which this work relates to some key ideas about noise and listening in the fields of acoustic ecology and noise music. These analyses are interspersed with anecdotes from the production process. Recordings of the work accompany this essay in the form of a specially designed audio player, to be heard and read together.[2]



Figure 1
Kere Muneshwara Sai Baba Temple, Richmond Town, Bangalore. Photo: Ishan Gupta

Perumai

It is 4:30 am in Richmond Town, Bangalore. At 4:30 am, the caretaker wakes up in his room within the compound of the Kere Muneshwara Sai Baba Temple.[3] One of his duties is to play music on the temple sound system during the prayer times around sunrise and sunset. Across the street from him, in our shared studio-residence on Rhenius street, Prerna Bishnoi and I are in deep sleep after a long night.[4] As the speakers are cranked up, the cymbals start chiming to the beat, the sitar and the voice eventually mix in. Few things (can) compete with the temple sound system at this hour, making it one of the most distinct listening experiences of our day. We are reluctantly pulled out of our sleep and, just like that, find ourselves within a sonic territory established by the temple. It is a moment that makes me sympathise with R. Murray Schafer's statement that "we have no earlids" (1994, p.11).

Stirring from our sleep, we think about the temple caretaker whose job it is to play this music every day. We wonder if he sometimes brushes his teeth as he switches on the music. On rushed mornings we run around the house, toothbrush in mouth— maybe he does this too? Does he think of the temple as home? Does he think of playing the music as work? Does he like the music he plays? Our way of coping with the sounds that meet us is to travel to their source and think about the person playing them. Somehow, we accept the temple as being our loud neighbour. Somewhere, we feel we don't have much have a choice but to accept it.

The music from the temple is certainly louder than the legal limit for residential areas in Bangalore, 55dB. In subjective terms, it is very loud. If sounding is a way of making-present, loudness is a way of creating something more than mere presence. There is a strong affinity between loudness, density and *perumai* (Tamil/Malayalam: roughly translating to “bigness”, “greatness”, “pride”) in the way things are expressed in this part of the world (Karel, 2003, p.33). The louder, the denser, the grander. This affinity becomes most prominent in moments of festivity and group religious practices, and temple loudspeaker culture can be seen as deriving from this impulse (Karel, 2003, p.33). The fact that speakers are placed facing the street rather than inwards towards temple visitors says something about their function. They are there to call out to potential listeners with pride and *perumai*.

Multiple listenings

Our relationship to the temple was not overtly antagonistic. But we had quite a few neighbours who did object to it. Richmond Town is a multi-religious neighbourhood that has historically been home to several minority communities. Its diversity is inscribed in its many names: Ismail Pasha Nagar, Shanthi Nagar and Richmond Town. In such a context the sounds from the temple can and do produce a number of sonic and spatial relations depending on who is listening. While many people may hear temple broadcasts as sacred sounds that create a sacred environment in the home, others, regardless of religious identity, have expressed experiencing them as an intrusion of privacy, as noise (and thereby, pollution).[5]

There are multiple (sometimes overlapping) listenings and meanings that are made in relation to these sounds. Nevertheless, the cultural tensions that are amplified by religious broadcasts in public spaces are hard to ignore. Coeval with the many surges in Hindu nationalism since the colonial era, public displays of devotion in India have become entangled with displays of religious and political superiority. When we began listening to the temple in 2014, the BJP (a political party known for its right-wing Hindu ideology) had not yet won the national elections. But it was gaining popularity amongst several groups, partly through the promise of a Hindu nation. Given this political climate in which religion and politics were, and increasingly are, overtly conflated, the temple could be heard as a hegemonic presence. The loudness of the music could be heard as producing a spatial and temporal ordering that prioritises Hindu ritual practices.

If space is produced in part through social relations and interactions (Lefebvre, 1991), it remains open to be transformed through new interactions (Massey, 2005). Whilst working in our studio, on walks in the adjoining park and our daily crossings of Rhenius street for autos, idlis and watermelons, Prerna and I continued to listen to our neighborhood. Every morning and evening we would hear temple music. We became interested in composing something for this sound system and for the plurality of listening experiences that met it. The possibility to work with/in our daily sonic environment excited us. On a sunny afternoon, we approached the temple caretakers to ask if we could play some of our music from the speakers. In the cool shade of the temple, much to our surprise, they agreed with a nod and a condition: “Any song is fine with us as long as it is devotional. We don’t discriminate between gods. We play all devotional songs.” Devotional music

It is possible to think about devotion as an inclusive category. Devotion, as approached through several philosophies, is a notion inspired by love.[6] It is about attractions to gods, ideas, places or people. By extension, devotional music has the potential to be a very inclusive genre. Regional movements such as Bhakti and Sufi have famously vocalised for the removal of religious barriers that get in the way of love for the divine.[7] Saints born into Muslim families have sung for Hindu gods, and vice versa.[8] Such hybrid expressions are testimonies to the openness of devotional practices over centuries. Over time, devotional music in India has come to include a range of production styles from studio recordings of professional classical musicians, to Bollywood film songs, to a cappella home recordings (Manuel, 1993, p.106-110). It is thus through the supple vibrancy of devotional music that we recognise the potential openness of the word devotion. However, today the word *bhakt* (Sanskrit: “devotee”), has come to have a singular connotation—right-wing Hindu nationalist. Despite its conceptual openness, devotion has come to represent ideology for many left leaning, liberal and secular people (even though the very idea of secular tolerance in India is modeled on Hindu pluralist ideals). This warns that there is lack of imagination (from both the right and left) about what devotion can

be.

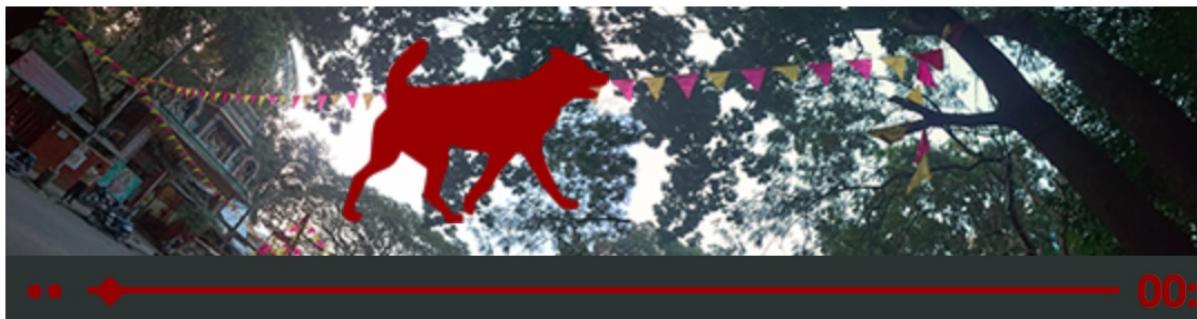


Figure 2
Living, working and playing at the temple. Photo: Tara Kelton

Returning to the requirement of the temple caretakers: “Any song is fine as long as it is
Interference Journal February 2018

ISSN: 2009-3578

devotional". It was hard to say what exactly they meant by the word devotional. Perhaps their openness was backed by Sai Baba's trans-religious philosophies. Whatever the case, we were met with trust and given an opportunity we didn't fully expect to receive. We wanted to respond to it by gesturing towards devotion's inclusive potentialities rather than its exclusive ones.



Note: [Full size audio player here](#)

Listening to CFTS, 2017, Sindhu Thirumalaisamy with John Burnett and Ashwin Kulkarni, multi-track audio player with recordings of *Composition for Temple Speakers*. Move the dog to listen to the composition from different parts of the neighbourhood.

Sacred/Secular

"The idea of secularism, an import from 19th-century Europe into South Asia, has acquired immense potency in the middle-class cultures and 'state sectors' of South Asia, thanks to its connection with and response to religion-as-ideology. Secularism has little to say about cultures— it is definitionally ethnophobic and frequently ethnocidal, unless of course cultures and those living by cultures are willing to show total subservience to the modern nation-state and become ornaments or adjuncts to modern living— and the orthodox secularists have no clue to the way a religion can link up different faiths or ways of life according to its own configurative principles" (Nandy, 1988, p.179).

One of the things that *CFTS* calls into question is the belief that sacred and secular expressions are mutually exclusive. For example, the form of secularism that is championed by the Indian state aligns with ideals of religious pluralism in that it claims equal rights for people of all religions. However, of late, the opposition to Hindu fundamentalism has become a form of secularism that calls for the removal, rather than equal participation, of religious sentiment from politics and public life. The reasoning, which is iterated endlessly on social media, is that religion must carefully be contained in the private realm because it is too dangerous to circulate in the public sphere; a refusal to distinguish between faith and ideology (Nandy, 1988). One of the problems with this kind of exclusionary secularism is that it is too easily mapped to the sovereignty of private property. It fits conveniently with a liberal politics that renders ever more spaces privatised and homogenised in the hope of a zero-conflict society. Is this kind of demand for secularism even viable in a deeply multi-religious society? What alternatives exist from the "religious means intolerant / secularism is tolerant" mode of thinking?

The problem is partly in the way religion is conceptualised. Religion, as Nandy notes, has been expected to remain frozen in a status quo, while modernity is allowed to change over time. We

often compare the ideals of modernity with the worst in religion and vice versa (Nandy, 1989, p.38). These kinds of sedimented logics make a convenient divide between the sacred and the secular. While the liberal secular is fashionably aligned with notions of progress and development, the issues that religion makes us confront can be seen as ancient, dogmatic or in need of total (impossible) removal. But this kind of segregation “only ensures that religion enters politics by a different route” (Nandy, 1989, p.39): fundamentalism. The liberal flight towards secularism strengthens the right’s power to claim religion for its own agendas. If we do not enter into the discussion of what the devotional could mean today, we concede to the idea that religion has a ‘pure’ form which is neither worth engaging nor negotiating and re-interpreting.

Undoing these false divides involves re-negotiating a lot of Enlightenment and colonial thought that has remained bound to Christian frameworks (Balagangadhara, 2013). Perhaps this is why much contemporary art in India remains aloof from engaging the subject of religion even as right-wing fundamentalists continue to reconceptualise it to suit their political goals. Institutions of art borrow so much from Enlightenment and post-Enlightenment thought in which certain untranslatable concepts, like ‘religion’ and the ‘sacred’, persist as taboo subjects. For example, in a 2014 volume of the contemporary art magazine *TAKE on Art* titled *Sacred*,[9] the editor admits that, “addressing the sacred, has probably been the most challenging task TAKE has been faced within the last five years of its trajectory” (Kakar, 2014). In the same volume of the magazine, art historian Nancy Adajania notes that,

“In liberal circles, and especially in the art field, the sacred is looked upon with a measure of healthy scepticism and bracketed within forbidding connotations. Often, it is relegated to the domain of ancient or traditional art or Indological research, where it can be domesticated within a tradition of pedagogy and interpretation” (Adajania, 2014).

Most contemporary art bypasses an empathetic engagement with religious practices by either moving towards a critique of their ideological manifestations, or approaching them as symbols that can be “tamed within the discourse of a self-reflexive modernism” (Adajania, 2014). Rarely do artists work with/in religious spaces or practices in modes that are based on dialogue or negotiation. Devotional musical practices like Bhakti and Sufi remain some of the few spaces that connect art and religion in this way.

The term ‘sacredsecular’ expresses the inseparability of sacred and secular experiences (Mani, 2009, pp.1-2). It affirms that one need not think of the two frameworks as self-contained or incompatible. *CFTS* is an attempt to test the sacred/secular divide, to see what these intimacies do to art and vice versa.



Figure 3
Documentation still from the 2014 performance of CFTS. Photo: Ishan Gupta

Composition for Temple Speakers

Burnt onto a generic audio CD, we took our music to the caretaker to play on the temple sound system. He did not ask us many questions and we did not give him any disclaimers. In order to acknowledge and invite temple-goers to listen as they regularly would, the composition begins with that which is recognizable. We appropriate a popular Sai Baba *bhajan* (a style of devotional song; Sanskrit: “sharing”), keeping the rhythmic and melodic structures of the original song. We layer on top the sounds of digitally rendered bird calls, and electronic instruments. Within the first few minutes of the piece, wafting hints of traffic sounds start to appear, beginning to blur distinctions between the ‘natural’ and the constructed.

Sounds from the surrounding street gradually make up more and more of the composition. The song slows down in tempo, unravelling the layered instruments. Eventually, the chanting becomes less rhythmic and only the cymbals continue to chime faintly as shrieking modulations take over. The second part of the composition (starting at around 5 minutes) includes the sounds from sewers, drainpipes and basement architectures. The harmonium peaks with screeches that resemble the traffic on the streets, that resemble the calls of the birds above. Moving slowly from the recognizable sounds of Hindu devotional chanting, slipping in mud, wandering down drains, through kitchens and balconies, this section has the effect of slowing down the passing of time, of inviting the birds to respond to it (which they did), and eventually becoming barely perceptible from all that surrounds it.

The last section of the composition (after 10 minutes) consists of more or less untreated field recordings from the street and park adjacent to the temple. As the temple played back the sounds of the street it was unclear which sounds were coming from where. This created a sonic

camouflage [10] that momentarily collapsed the sonic territories that the temple was establishing.

Through the process of making *CFTS* it became clear that the term composition not only referred to the music that we produced and burnt onto a CD. It also included the sonic system and environment with/in which they played. Together, these sonic and spatial relations formed the composition, allowing it to be recognizable as both noise music and a work of acoustic ecology. The music on the CD can be quite loud and noisy when heard in isolation. But when played from the temple sound system, it had the opposite effect—of quietly collapsing sonic territories. I will now focus on some ways in which this composition relates to some tacit notions about noise and listening from both acoustic ecology and noise music, fields that have deeply informed this work.

Kakaphony

“In the hi-fi soundscape, sounds overlap less frequently; there is perspective—foreground and background ... In a low-fi soundscape individual acoustic signals are obscured in an overdense population of sounds ... Perspective is lost ... there is no distance; only presence. There is cross-talk on all the channels, and in order for the most ordinary sounds to be heard they have to be increasingly amplified” (Schafer, 1994, p.43).

Bangalore is noisy.[11] It is noisy because of the two-wheelers, three-wheelers, four-wheelers, six-wheelers (not so many eight-wheelers yet) on its uneven roads, the honking of hurry, the rattling of breaking down buses, the crisscrossing of jet planes... It is also noisy because azan is called five times a day, the Church bells ring to tell the time, and the temples have new CDs to play. We love watching TV, pressure cookers cook rice faster, some children are just learning the drums and we all live so close to each other. The white-cheeked barbets refuse to be drowned out by the traffic and the rain falls hard on tin roofs. It is noisy because this plurality of sounds is freely made and listened to. Here, noise is heterogenous. What Schafer hears as the lack of perspective can be heard as multiple perspectives. What he laments as a lack of (critical) distance can also be a space of intense intimacies. Loudness is more than mere presence, especially when we consider *perumai* (“pride”, “greatness”). What the lo-fi soundscape of Richmond Town allows for is an understanding that we live with/in everyone’s world all at once.

Schafer calls noisy cities *sonic sewers* (1969)—sewers that contain this impure material that has nowhere to go and is everywhere at once. Seen as a form of excess, it is no coincidence that noise has affinity to the word pollution, or that it has its roots in nausea, alluding to the urge to vomit. Cacophony (from Greek: *kakos* ‘bad’ + *phōnē* ‘sound’) is *kakaphony* (*kaka* translates to “feces” in Hindi). That which is internal exceeds, threatens, to spill outwards. It is too much to handle. When considered in this way, noise threatens the neat division of seemingly self-contained worlds. Seen within a set of social and spatial relations, the excluded become noise (“The rest is noise...”). When the voices of slaves and women were ignored as noise (Rancière, 2001), or when religious sounds are deemed an intrusion of privacy, they are socially categorised as unwanted even as they are perceived as noise.

Acoustic ecology’s descriptions of ‘clean’ soundscapes and the secular liberal demands to remove religion from the public sphere have an uncanny similarity. This is why, though we recognised that both the temple and the city are loud, and sometimes unbearably so, we were not interested in silencing them. But the opposite approach, a futurist celebration of the loud and noisy that is characteristic of much noise music, was also untenable. What could it mean to

make noise music in Bangalore, where everything is already noisy? Surely, it is not about being louder. And disruption is hardly possible. Instead, we wanted to think about affective ways of approaching the *kaka* in cacophony—about noise as that which is banished from contemplation (Attali, 1985). We wanted to see whether the sonic sewer could be an acceptable part of a devotional song [12] by replaying the sounds of the city through the temple speakers.

Noise music and acoustic ecology often presuppose a listener who is willing to be in a state of heightened receptivity. Both fields have an investment in proposing that listening has the emancipatory power to decode and make new sense of the world (Goodman, 2010). Though they diverge in their response to noise, they both ask/teach audiences to be aware of themselves, to be rapt in their attention to details, to be ever more open and virtuosic in their listening. In *CFTS*, such demands were not made. We felt that conflicting desires that are woven in dense physical intimacy cannot be resolved through heightened receptivity. Rather, in this ‘lo-fi soundscape’, listening remained distracted from this or that auratic presence (Benjamin, 1968).[13]

Lo-fi listening and desiring-listening

At this point, I would like to make some notes on the physical parts of the sound system. It consists of an amplifier connected to PA speakers through a number of patched up cables. The system sounds similar to the way it looks: boxy, old, tinny, cheap. The speakers are aimed at the street. They seem worn out from years of use and exposure to sun, dust and heat. To compete with the loudness of the street, the sounds that they play are amplified beyond the point of distortion. Their sounding abilities affect the kinds of listening that are possible around them. For temple-goers, this is a kind of listening that cannot be too concerned with high fidelity (it would be too frustrating an experience if it were). In order to enjoy the available sound system, their listening has to be suffused with remembrance and familiarity— an associative, devotional listening that is, in a way, forgiving and inclusive.

In some ways this lo-fi sound system protected us from getting into trouble. The priests and temple caretakers did not seem to mind our devotional noise music. They shrugged off the loud shrieks and gurgles as coming from a scratched CD. Only those who came specifically to listen to our work, a handful friends walking in the park, were trying to listen carefully. Ironically for them, the wiring for the speakers was loose at certain points in the performance bringing even more uncertainty to a composition that was already becoming imperceptible.

In a way this was what he had hoped for. Our confidence that this gesture would be able to wedge into the sonic protocols of the temple came from knowing that this is not a work *about* the devotional; it *is* a devotional song. It also came from understanding the power of that desiring-listening (Bonnet, 2016) that takes place in and around the temple. As Bonnet puts it, “desiring-listening is the listening that perceives in the object that it targets a certain promise” (2016, p.135). If one is listening for the devotional, devotional sounds find them. If one listens for noise, the noise will find a way to surface to the top. Bonnet claims that, ultimately, discourse cannot fully explain what listening does (2016). We neither asked the temple goers what they heard, nor did they question why we made a song the way we did. They simply asked if we could give them a copy of the CD to play later.

“There can be no doubt: the listening that understands, reads, hears, the listening that explains itself and explains the world, has had its day... Listening must no longer exclusively provide solace, read, and decode” (Bonnet, 2016, pp.331-332).

“By definition, listening was applied; today we ask listening to release” (Barthes, 1985,

p.258).

Conclusion

In the years after our interactions with the Kere Muneshwara temple, religious tensions and exclusionary politics have gotten worse in the region. We could not predict the sharpness of the rise of private religious organizations, religious fanaticism and violence against minority groups. At present, the ‘sickular anti-national’ has become the self-appointed title of the vanguard figure who opposes the *bhakt* (“devotee” of the Hindu nation). As such antagonisms become ever stronger, there seems to be little room for inclusive gestures and sacredsecular exchanges that question these seemingly stable subject positions. *CFTS* offered the possibility to be with/in multiple territories at once. We now listen to it as recordings of possible devotional music.

Footnotes

1 I approach the term sound system in the way that Steve Goodman uses it in *Sonic Warfare: Sound, Affect, and the Ecology of Fear*: “sound systems (consisting of bodies, technologies, and acoustic vibrations, all in rhythmic sympathy)” (Goodman, 2010, p.5).

2 This paper draws from a zine co-produced with Prerna Bishnoi in 2016, also titled *Composition For Temple Speakers*.

3 The temple is devoted to or built around an idol of Kere Muneshwara, an avatar of Shiva and a deity associated with an erstwhile *kere* (Kannada: “tank, lake”). The *kere* has been filled up and built over but the temple still remains. The temple is also devoted to Satya Sai Baba (died 2011), a guru who started a global trans-religious faith movement. Satya Sai Baba has claimed that he was a reincarnation of Sai Baba of Shirdi (died 1918), as well Shiva.

4 Between 2013-14, Prerna Bishnoi and I were residents at Taj Residency and SKE Projects. We shared a studio/living space for two months in Richmond Town, Bangalore.

5 On social media forums one can hear the distress of citizens who venture into making noise pollution complaints against temples. They are often met with the impasse of corrupt bureaucracy.

6 Bhakti, which translates from Sanskrit to mean “devotion”, is understood as a path of love and sharing. Bhakti may refer to an inner devotional impulse or to a social movement in India.

7 For example, Sant Tukaram; Bulleh Shah’s poetry often undermines temples and mosques as places to seek enlightenment.

8 For example, Kabir and Shirdi Sai Baba are said to be born to Muslims but raised by Hindus.

9 *Take on art* is a contemporary art magazine that is primarily based in India with international contributions. The magazine publishes work by prominent artists, art historians, critics and theorists. Each edition considers a specific theme. This was one of the few widely circulated art publications to address the sacred/secular divide in the Modi era.

10 The cinematic trope of the invisibility cloak is a good metaphor for the effect of sonic camouflage. The work of the invisibility cloak (or the invisible car) is not to make something totally imperceptible. Rather, the cloaked object remains partially traceable, especially for members of the audience who know to look out for it. For other characters (in the film), cloaked objects become totally invisible.

11 One of the most vivid first impressions of Richmond Town's noises came from a previous resident of the studio, Nate Heiges: "Ranging from Hello-Kitty-hallooing-through-a-trumpet-mute-cute moped buzzers to augmented truck horns set to 'Deafen', the auto calls match the birds in range and vigor." Available at: <http://theselectioncommittee.blogspot.no/2013/09/>

12 One of the historically documented uses of temple music was to warn those marked as lower castes to stay away from the festivities reserved for higher castes (Karel, 2003, p.63) in 'fear' that they may 'contaminate' the site of celebration. The affinities between caste hierarchies, waste work and notions of the impure have been maintained for too long.

13 "Distraction and concentration form polar opposites which may be stated as follows: A man who concentrates before a work of art is absorbed by it. He enters into this work of art the way legend tells of the Chinese painter when he viewed his finished painting. In contrast, the distracted mass absorbs the work of art. This is most obvious with regard to buildings. Architecture has always represented the prototype of a work of art the reception of which is consummated by a collectivity in a state of distraction. The laws of its reception are most instructive" (Benjamin, 1968, p.239).

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Acknowledgements

Many thanks to John Burnett and Ashwin Kulkarni for building the audio player; Sarah Hankins, Hilde Pytkowski and Vineeta Singh for their editing advice; Ishan Gupta, Tara Kelton and Nikhil Narendra for documentation images; and Prerna Bishnoi for being a collaborator and interlocutor through the various stages of this project.

Bio

Following the ways in which sound challenges scopic regimes, Sindhu’s work engages a poetics of uncontainability across different sites, cultures, and borders. She regularly works with other artists and activists, taking on roles of researcher, recordist, editor, and performer. Sindhu is currently an MFA student at the University of California, San Diego. Some recent exhibitions/screenings include programs at Artists’ Television Access (San Francisco), SOMA Summer (Mexico City), University of Oslo, Los Angeles Asian Pacific Film Festival, Edinburgh Festival of Art, Kunsthause Langenthal, Khoj International Artists’ Association (New Delhi), and Dharamshala International Film Festival.

The Sound of ACT UP! AIDS Activism as Sound(e)scape and Sound-Escapade

By Katrin Köppert

Abstract

In this paper, I would like to provide initial thoughts on the unattended dimension of sound within the visual culture of the early and current HIV/AIDS activism, investigating the queer-affective potential of sound as well as its unintended impediments for past and present protest-mobilization strategies.

Sound constitutes an escapade — a wilful departure from mainstream debates about the western video-art and activism of ACT UP! I would like to relate the transgressive politics of ACT UP! to both the movement's wilful tones, screams and noises (i.e. Sound Escapade), as well as to the queer political nature of its silences (Sound-Escape). Through a selection of activist and artistic works this paper seeks to analyse the possible role the soundscape of ACT UP! might have played during the early AIDS Crisis, and the subsequent for the current imagination and diverging cultures of remembrance.

Keywords

AIDS activism, soundscape, noise, sonic protest, silence, queer atonality

1 Introduction

“Fight Back, Fight AIDS. Fight Back, Fight AIDS”

“Healthcare is a right. Healthcare is a right!”

“Act UP! We'll never be silent again”

These are some of the chants that left a lasting impression as I sat in the quietness of The Manuscripts and Archives Division of the New York Public Library. Born in the remoteness of the GDR in the same year AIDS became known in the United States [1], I was suddenly confronted by feelings of pain, fear, loss, as well as anger and despair during my first visit to the archive to watch AIDS-activist videos. Since this visit was conducted in the realm of a research project [2] that dealt with queer vernacular media, such as everyday photography, scrapbooks or home videos, I primarily focused on the imagery and the visual cultures of AIDS and what I term ‘AIDS activism from bed.’ My interest led me to the films *Silverlake Life* (Tom Joslin, Peter Friedman, 1993), *Fast Trip, Long Drop* (Gregg Bordowitz, 1993) and to the photography of Jürgen Baldiga and Mark Morrisroe. Simultaneously, the audio captivated my interest, particularly as I watched the last few documentaries, which centered on the question of honouring and remembrance in the context of past and contemporary AIDS Activism. Once again, I became aware of the significance of the auditory for protest mobilisation and community formation. Furthermore, I realised the directors' urgency — mostly attributed to a fear that AIDS and AIDS activism might be forgotten — in using sound as a way to effectively impact contemporary audiences. Sound seems to be reworked for a form of memory activism — an activism in the fight for remembrance. Yet, what are sound characteristics of this particular memory activism? How do such sounds reflect the present moment instead of the past? Are there sounds in the past, or perhaps in the present that counter or even queer those current ones? Where can we locate queer sounds in regard to AIDS activism, and how do these

sounds produce new configurations and definitions of political protest as well as political art in a contemporary context?

I would like to address these questions in four sections: I will begin with a short introduction on the relation of sound and memory in three documentaries, which were each released in the last five years Thereafter, I will theorize about the relationship between noise and queerness[7] in the construction of the urban soundscape of AIDS activism. Hoping to rethink this relationship, I would like to proceed with initial thoughts on sound-escapade — a concept aligned with my metaphorical approach to willful sounds. With the terminology of willfulness I refer to Sara Ahmed who wrote about the stubborn moments within articulations of the will (Ahmed, 2016). Sound-escapade will serve as a stubborn, willful alternative to previously claimed ‘noisy’ memorials of AIDS activism. The sound of the ballroom and so-called camp sounds are my concrete angles for discussing sound-escapade as a conceptual example for a queer theoretical analysis of sound activism and art. Lastly, in the final section, I will discuss the role of sound-escape — the escape from sound or silence.

2 Sounding memory

“Remembering... the past might be anarchically wounded by forgetting,” writes Ricky Varghese (2016), editor of the current Drain Magazine on AIDS and Memory. Forgetting seems to be the anarchic wound of AIDS memory, and thus, of filmic attempts to capture HIV/AIDS. Remembering is therefore supposed to symbolise the practice of healing the wound. Yet, Varghese writes: “Remembering exists in the time it takes to write a history, it exists within the very temporality that informs historicity” (*ibid.*). What are the temporalities, rhythms, and sounds of cinematically remembering HIV/AIDS? To address this issue, I refer to three documentaries in which the international direct-action advocacy group AIDS Coalition to Unleash Power (*ACT UP!*) is remembered by noise and the temporality of instancy.

The documentary *We were here* [3] (David Weissman, 2011) deals with the AIDS crisis in San Francisco and displays interviews of five important protagonists during these days. To “evoke an epic history [...] of the personal and community issues raised by the AIDS epidemic” [4] one can hear burbling sounds along with plucked strings, gentle percussion and the harmless harmony of minimalist electronic music. Both the narrative and reflection of the US-American AIDS movement, as well as relevant self-organised structures of support that emerged in San Francisco, represent a radical transition during the moment when *ACT UP!* is introduced to and visualised on the screen. This shift is not simply characterised by the rather iconic representation of “carried images” (Holert, 2008) and graphics — denoted by Douglas Crimp as *Demo Graphics* (1990) and by Gregg Bordowitz as “Imagevirus” (2010) — but it also signifies the sudden and noisy introduction to the emergence of sound from the discreet cascade of piano and strings. In short, the noise of AIDS activism represented by *ACT UP!* operates in an opposing conjunction with the ambient sound system of the documentary.

United in Anger [5] (Jim Hubbard, 2012) is a documentary about the history of *ACT UP!* in general. Based on oral histories of members and archival footage it illuminates the efforts of *ACT UP!* as it challenges governmental neglect, pharmaceutical industry, and social indifference. Without the “disruptive cacophony that ran counter to the official silence of government policy” — to quote Beauchamp (2015) — the soundscape of the documentary predominantly transports the viewer to the setting of an elevator or shopping mall. With their evocation of pureness and even transcendence, the ambient sounds of new-age or meditation music provide the framework for the dramatic outcry of activists calling upon the government to intervene. How might we interpret the meaning of this sound? I posit that the film sound urges us to learn about *ACT UP!* as the only radical form of protest against governmental as well societal homophobia, racism, and the stigmatisation of drugs during the AIDS crisis of the 80s and 90s. Simultaneously, the viewer is encouraged to connect noise with protest, and more specifically, with the achievements of a certain form of political agency — particularly,

presence, street interventional protest, and public collectivity. Thus, auditory distortion and noise function as prolongations of the anti-authoritarian statements during the liberation movements of the 60s and 70s.⁷ (Collins, 2015)

In contrast, David France's 2012 Oscar-nominated documentary *How to survive a plague*[6] takes a slightly different, more unusual approach in exploring the relationship between the sound of resistance and noise. Here, the audience listens to a Hollywood-like orchestration, which is typical in the context of the aestheticization of violence, death, and loss (Kutschke, 2012). The overwhelming, sublime mode of expression through the sound of drums and lashing violins makes the suffering almost disappear by simultaneously connoting the AIDS epidemic as an action movie in which predominately white male activists are identified as heroes.

Does the placement of the white male and heroic activist in noisy and/or sublime soundscapes reflect the reality of the past or the fiction of the present? Are we supposed to remember ACT UP! by its rantingly white heroism because we live in both a time of a political impasse and of “activism exhaustion” (Juhasz, 2016)? Yet, by both replaying the noise, chants, clapping, and having our feelings manipulated through drum-driven violin-walls do we not risk losing contact to the silence of mourning and the sonic introspection of the black, female, queer “domesticity in proximity to HIV” (Juhasz, 2016)? Furthermore, do we then forget how to listen to the silent protests and ambient contemporary politics when we are trained to perceive noise and action-movie cascades as the primarily auditory medium of political and aesthetic participation? Might we neglect that the „rhythms of our loss have changed” (Woubshet, 2015)? Could an acknowledgement of such changes represent an attempt to reconnect with the beat of a politics of the personal of AIDS” (Juhasz, 2016) at the time of early AIDS crisis?

In order to discuss the political soundscape of sound-escapade and sound-escape, a contextualization of the interdependency between noise and political categories such as masculinity, Western ideology, whiteness, and Avant-gardism is necessary. My use of the term “soundscape” originates from the perspective of queer ecology critique.

3. Soundscape

R. Murray Schafer, who coined the term soundscape as “a way of describing the relationship between sound and place,” contextualized noise as the typical outcome of an urban environment (Kelman, 2012, p.163). In a noisy soundscape, “individual acoustic signals are obscured in an overly dense population of sounds” (Schafer, 2013, p.64). In contrast, the rural environment, the pasture, the village, and the farm represent soundscapes in which “discrete sounds can be clearly perceived because of the low ambient noise level” (*ibid.*) Additionally, Schafer discusses the idealistic imagination of pureness, as well the transparency and the possibility to have access to a “total appreciation of the acoustic environment” through listening (Schafer, 2012, p.96). Thus, we are instructed to think and to hear in Western terms of immediacy and objectivity, and more specifically, a heteronormativity that is “a performance that erases the trace of [its] performance” (Morton, 2010, p.279). Suggesting to have immediate access to the rural environment by listening can be understood as the attempt to erase cultural and gendered constructions of rural sounds. Subsequently, it seems less surprising that the city in Schafer’s opinion delivers the “schizophonic” sounds instead, the obscured, the synthetic, as well as the unnatural soundscape (Schafer, 1977, p.91). In short, the city produces an atonality that Schafer would have termed queer in a derogatory way.

By bringing up noise in the rural soundscape he insightfully refers to war and religion. By describing the “noise of clashing metal” (Schafer, 2012, p.71) during a battle or the sacred noise of the church bell, as well as the “clamorous urge of chanting and rattling” (*ibid.*, p.73) during religious procession, he implicitly discusses noise in two inherently masculine and therefore accepted modes of power. Moreover, by claiming the “aberrational noise of war” (*ibid.*, p.72) and religion as the punctuation of rural quietness, Schafer attributes the

intelligibility of noise to masculinity. Thus, masculinity is discursively implemented as the gateway for what has become a tolerated sort of noise within music as well as politics. In addition to its devalued ambiguousness with regard to its “schizophonic” and queer vagueness, noise thus became intelligible within a martial set of masculinity.⁷

Considering sound’s intersection with gender/sexuality and power, I would now like to return to the sound of ACT UP! produced in the previously mentioned filmic memorials. According to Schafer’s theory, one might interpret the chanting, rattling, clapping as a restaging of activist noises that belong both to the urban environment and to implicitly articulated and devalued forces of queer longing and belonging. The filmic reduction to the affective and mobilising qualities of noise risks reproducing the cultural dominant model of queer urbanity. While AIDS activism is interlaced with metronormativity, a term that “reveals the conflation of ‘urban’ and ‘visible’ in many normalising narratives of gay/lesbian subjectivities” (Halberstam, 2005, p.36), noise can also be understood in its construction as a masculine intrusion and powerful articulation. Here, ACT UP!’s sounds would produce the same structure against which it was fighting.

However, is it as simple as it seems? Should we, perhaps, try to listen to the queer potential of noise, interrogation or curiosity? What might be of importance in addition to rehabilitating noise? Where do we locate the sounds that do not distance themselves from the urban environment or metropolitan influences, but which still enable a queer tonality that marks another way of political agency within the spectrum of AIDS activism? Simultaneously, my research interest examines the possibility of locating a queer tonality of AIDS activism that is not affiliated to the street or the city, and which still does not produce the deterministic romanticism of the rural soundscape for which Schafer — at least from my point of view — can be criticised (see also Goodman, 2010). This analysis, thus, requires a subsequent analysis of two self-created terms — sound-escapade and sound-escape.

4 Sound-Escapade

Listening with the expectation to gain fully and immediate access to the melody of nature — as Schafer states — ties into the normative imaginations of the will-like sovereignty and autonomy of liberal subjectivity, a subjectivity that autonomously determines of what it listens to. Reference to the notion of escapade instead is not about “asking to replace a notion of cognitive will with a notion of involuntary or unconscious activity” (Berlant, 2011, p.116). Rather, it is about responding to the “episodic intermission from personality, the burden of whose reproduction is part of the drag of practical sovereignty” (*ibid*). Looking for the “small vacations from the will itself” (*ibid*) means to inhabit agency differently and to simultaneously respond to sound formulas that are the circumvention of practical sovereignty, which thus enables the queering of the burden of personhood. I would now like to introduce two examples that invest in the queering of sovereignty: the sound of the ballroom and camp sounds.

4.1 Sound of the Ballroom

The sound of the ballroom is affiliated with the aesthetics and culture of vogue — a drag dance culture that is deeply embedded in Black queer communities, whose members are disproportionately affected by the HIV/AIDS epidemic. In vogue, drag and repetitive dance moves play a central role in unravelling the codifications of gestures that determine gender and sexuality. Through imitating and quoting societal constructions of masculinity and femininity, vogue participants deconstruct gender.[8]

Ultra-red’s collective listening procedure [9], which served as the foundation of their exhibition *Vogue’ology* in 2009/10, serves an intriguing example to highlight the political quality of vogue by focusing on the lateral and ordinary aspects of deconstructing gender. Those aspects were

examined by a procedure of listening as a means of political organizing as well as of establishing an archive of the Ballroom community which has been hit by AIDS greatly. The Ultra-red sound art collective was founded 20 years ago by two AIDS-activists who worked on the margins of society with drug-users, women, undocumented people. In order to confront not only the memory of a past activist moment, but also its absence “the collective reconnects the art world and AIDS activism with memories of when the arts served as a crucial arena for open discussions about the pandemic.” (Vera List Center, 2010) They reinitiated those discussions with an emphasis on the acceptance of art and AIDS activism as spaces in which one both learns and listens, as well as learns to listen. Vogue’s performative explorations of gender and of understanding performance itself served as their model by which to re-evaluate listening without the expectation of orchestration, but rather with responding. The orchestrated setting of listening is transformed into an invocation of “affective responses other than rage as constitutive of collective action” (Vera List Center, 2010). Ultra-red thus shifts ACT UP!‘s politico-aesthetic strategy of orchestrated sounds of anger to a tableau of listening and of being affected, instead of being the conductor of political action. Contemplating the sound to be unstable yet durational, repetitive, and looped, Ultra-red embraces the affective, tacitly, and palpable dimensions of listening (Radford, 2014). Those laterally deconstruct political agency that is based on personhood. Through the affective mode of listening experience political collectivity is created differently and reshapes public places. For example, as Berlant’s commentary on Ultra-red illustrates: “[I]t becomes slowly apparent that to cast the political as a feedback loop is another way to understand the ambiance of the classic public sphere” (Berlant, 2011, p.248). Ultimately, the public sphere becomes a place to practice collective listening, and listening becomes political in the sense of collectively making a change while being able to hear your own breath (*ibid*). Such participatory pedagogies of listening have almost unperceivably informed practices of current activism like Occupy. Here I would especially like to refer to the participatory practices of echoing that became known as human microphone. Hereby I mean the amplification of a one-person-speech by a crowd, which requires a good listening.

By practices of listening as those of tacitly responding instead of acting and outcry, I think we are enabled to become aware of sounds and rhythms in the past that — in the heyday of street activism — went missing. Hence, I would now like to turn to a source that might have been underestimated in those times, but represents a form of sound activism that counteracts the nostalgia towards the kind of ACT UP! activism that the aforementioned documentaries bring to the foreground. I term this form camp sound.

4.2 Camp Sounds

Central to my analysis is the independent filmmaker John Canalli’s video *Divine is dead*[10]. Canalli, who became known as the producer of a number of video documentaries about Wigstock — a popular annual drag performance party in New York — directed the video in 1988 — around the same time when the American actor, singer, John-Water-muse and drag queen Divine died from complications of obesity and four years before Canalli himself died from complications of AIDS. The video depicts a public funeral, which could be interpreted to be the one of Divine but simultaneously represent one of the many videos that ultimately shaped the political aesthetics of ACT UP! In actuality, however, the video stages the parody of a political funeral. The audience is confronted with a somewhat queer funeral — one without a real body and one resembling a performance or parody. Most striking, however are the campness and gross exaggeration of the sounds of mourning, the moaning as shrieking, the sobbing as orgasmic, the speech as campy voicing. Though the emphasis on the intersections of queerness and artificiality, as well as queer parody and noise of urbanity may be obvious, I would like to take a different analytical approach to camp.

Shifting away from Susan Sontag’s understanding of camp, Juliane Rebentisch (2013) references Jack Smiths aesthetics of the natural (*kreatürlich*) dimensions of the Diva and

subsequently argues for a conceptualization that remains connected to nature. For Rebentisch, camp secures nature as a moment of queer history.

The video portrays this dimension of nature through laments that transform into tribal sounds. The dynamic of laments blending into tribal sounds, as well as the tribal sounds becoming campy voices of mourning, makes the border between nature and culture almost indistinguishable. As a result, the video envisions the materialist site of camp just as the camp site of nature soundscape. The “false dichotomy of Nature and history on which... homophobia depends” is revised by the interrelatedness of cultural and natural notions of camp (Morton, 2010, p.273).

In a broader context, the question of the deployment of political agency is thus reframed. Through the sonic interference of queer noise and ‘natural’ sounds, political agency must be located in the instability and non-essentialism of nature-culture. Such an instability makes nostalgia and the conservative politics of the sound of resistance impossible.

Oftentimes, the idea of nostalgia has been met with criticism for controlling the past and inhibiting future imaginations. Thus, AIDS and AIDS activism became contained in a limited set of images and, as I posit, sounds.

In their poster *Your Nostalgia is Killing Me* (2013), AIDS activists Ian Bradley-Perrin and Vincent Chevalier address the question of remembrance and the cultural ownership of the history of AIDS. Furthermore, considering that AIDS is brought to public consciousness by a small group of affected individuals (predominately white gay males) Bradley-Perrin and Chevalier portray those who fall victim to by nostalgia. In the process of memorializing some (white gays), many lives (i.e., black mothers, drug-users, transgendered sex workers) risk erasure. Furthermore, the visibility of death produces the invisibility of the ill health. Despite changing narratives, as well as altering sounds and the corresponding images that shape how society remembers the history of AIDS and AIDS activism, individuals with AIDS who report undetectable viral loads and a non-infectious virus eventually become neglected (Köppert/Sekuler, 2016). Though from the perspective of the ill health, we learn about the political dimensions of silence and retreat today, which helps to perceive the rhythms of the past differently and to become aware of the silence in AIDS history. Next, I would like to posit how sound-escape may function as an alternative to the normativity of urban activist noise and to the romanticism of rural quietness.

5 Sound-Escape

The opening sequence of Joaquim Pinto’s film *E Agora? Lembra-me / What now? Remind me*[11] (2013) unfolds a soundscape of slowness and the perception of AIDS and chronic Hepatitis C as a long and arduous process. Totalling approximately 170 minutes, the film resembles a journal-like, notebook documentation of a year of clinical trials. Duration symbolised by the slug in the first take of the film sounds like silence. However, does silence here represent the same death propagated by ACT UP’s well-known slogan “SILENCE=DEATH”? Since the viewer learns that Pinto lives with his partner Nuno Leonel in the rural landscape of Portugal, one might feel reminded of Schafer’s analysis of sound in rural landscapes. Schafer discussed the silence and quietness of the rural soundscape as a way of healing and an escape from noise pollution. As a result, Schafer reproduced the bipolarity of nature and culture, village and city, rurality and urbanism, masculinity and queerness.[12]

With a different approach, Pinto’s film undermines the simplistic division and aesthetic moralism. Not only does the audience listen to silence while watching a slug whose gender identity is hybrid and unidentifiable within heteronormative sexual standards, but the viewer also becomes confronted with remarks that blend the drug-induced confusion of Pinto’s mind

with the obfuscation of the proper meaning of his words (since the treatment destroyed his teeth and with it the capability to express himself articulately). Life in the remoteness of a Portuguese village thus does not sound like the pureness and straightforwardness of rural landscape; rather, it sounds like the combination of silence and clouded meaning, as well as of classical music and electro-clash. While watching the X-ray of his set of teeth, the audience hears the song “The Plot” (2009) by WhoMadeWho — a band known for refusing classical popish and rock-ish elements such as the solo instrumental. Later on, one hears the motor of a tractor, the sowing of seed, and the humming of a bee; nature sounds being wrapped into the polyphonic structure of electronically mixed sounds, a “potential soundtrack[...] coming from a mixing table” (Ferreira, 2013).

Moreover, audiences listen to the mundane procedures of life with HIV in a highly capitalised and bureaucratic system of health service. Ambient sounds of the transit zones of the health care system (e.g. waiting room, hospital dispensaries) in the middle of the financial crisis of Spain — from where he purchases the non-approved drugs — enable an understanding of the political dimension of this seemingly melancholic and personal logbook.

Indeed, Pinto’s documentary represents a sort of filmic activism that is neither a shouting message nor “the empty authority and authoritarianism of so much communication, a long linguistic and historical flood of AIDS activist propaganda, ... preaching, and the movement of public intervention.” (Latimer et al. 2016) Rather, Pinto’s film subtly and silently shatters the hopes of living in a post-AIDS time, while simultaneously emphasising the importance of political connectivity beyond personal sovereignty.

Silence, or what I call sound-escape, should not be misinterpreted as the total disavowal of the auditory. Instead, to put it in Stathis Gourgouris’ words, “silence is its in-between. It begs us to listen,” (2016). Like Quinn Latimer and Adam Szymczyk (2016), I survey silence as a necessary aspect of language, one less concerned with modernist compression, the aesthetics of the white page, and artistic withdrawal than as a means by which to propose the political act of listening and a kind of radical reception and responsivity. Within this political act and radical reception, we move away from individual creation and pave the way for collective action (Barrett, 2016).

6 Conclusion

Ultra-red’s *Vogue’ology. Organized Listening* and Joaquim Pinto’s *E Agora? Lembra-me?* quiets down ACT UP!’s famous chant „We’ll never be silent again!“ without staging silence as a withdrawal from the political. Sound-escapade and sound-escape represent auditory approaches that form another understanding of what political activism and art could be in a contemporary context. Moreover, they inspire to rediscover the archival sources of AIDS activism and political art, which were muted by the dominant slogan “SILENCE=DEATH” and by the connotation of silence as a marker of homophobia. Since a video such as John Canalli’s *Divine is dead* is sonically unconventional than the infuriated activism of ACT UP! they likely were overlooked.

In times where, traditional audio-aesthetics of the political no longer impact the political future, and in which politicians yet again occupy the post-public sphere of communicating ‘true’ feelings through seducing elements of noise, we need to create silence in order to listen each other. We need “affective responses other than rage as constitutive of collective action” (Ultra-red, 2017).

Footnotes

[1] Studies that were released in October of this year addressed the prejudice that HIV/AIDS

was brought to the US by Patient Zero in 1981. Apparently, the HI-Virus had already existed in the 1970s (McNeil, 2016).

[2] Research project *Media Amateurs in Queer Cultures*, funded by the German Research Foundation, at the University of Siegen 2010-2013.

[3] Available at: <https://wewereherefilm.com/> (Accessed: 28 October 2017)

[4] Available at: <https://wewereherefilm.com/> (Accessed: 28 October 2017)

[5] Available at: <http://www.unitedinanger.com/> (Accessed: 28 October 2017)

[6] Available at: <http://surviveaplague.com/> (Accessed: 28 October 2017)

[7] Within Queer Theory and Affect Studies noise started to be presented as a productive and transformative force due to its qualitative variability. Thus, the inaudible came into focus as well (Thompson, 2017).

[8] G Douglas Barrett (2016) examines the relation of appropriation art and AIDS activism in more detail. Particularly with reference to Ultra-red, Barrett points to appropriation as a practice of critically engaging with the modern concept of *Werktreue* and all the associations, which primarily include autonomy and authorship.

[9] Available at: <https://www.youtube.com/watch?v=GZiJPrzCYKg> (Accessed: 28 October 2017)

[10] [Item VDD0709] John Canalli Photographs and Video Recordings, Coll2009-007, ONE National Gay & Lesbian Archives, USC Libraries, University of Southern California.

[11] Available at: <http://www.imdb.com/title/tt3102356/> (Accessed: 28 October 2017)

[12] Treating the rural as the ecological site of sound is readopted by today's approaches to field recording-based sound artworks with their side effects of projections the male artist's own image on the site (LaBelle, 2006).

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Acknowledgements

All my thanks go to Jarred Kennedy-Loving who profoundly proofread this paper. My thanks also go to the reviewers and editors of the journal.

Biography

Katrin Köppert holds an MA in Gender Studies and German Literature from Humboldt-University in Berlin. Her Ph.D deals with queer pain in vernacular photography postwar and pre-stonewall. She was a doctoral scholarship holder from the DFG-research program “Gender as a Category of Knowledge” of the Humboldt-University Berlin. Köppert was research assistant at the Institute for Media and Media Theory at the University of Arts and Industrial Design Linz/Austria. She is currently the research assistant of the department of History and Theory of Visual Culture at the Berlin University of the Arts.

The experience of sonority: the dangers of a journey into the unknown

Valéria Bonafé

Abstract

In this article, I discuss the notion of *sonority* from the perspective of musical composition. I place the notion of *sonority*, not as a concept circumscribed in analysis and composition theories that take sound as a *thing* and handle it from its parameterisation, but rather as an idea of a more dynamic and holistic nature. Thus, sonority is repositioned from listening: not a reduced one, but instead an enlarged listening; not purely cochlear, nor tympanic, but sensitive, affective, and imaginative. *Sonority* is understood, thus, from the notion of *experience*. To build upon this reflection, I engage, in particular, with the work of three Brazilian researchers/composers: Denise Garcia, Rodolfo Caesar and Silvio Ferraz. Throughout the article, the notion of *sonority* is reflected upon through comments on my piece for orchestra, *A menina que virou chuva* [The girl who became rain] (2013).

Keywords

composition, listening, sonority, sound image, imagination, experience

Introduction

This article is constructed from the articulation of two distinct textual layers. In one of them (sections labelled using Arabic numerals, e.g. 1, 2, 3...) I discuss the notion of sonority from the perspective of musical composition. To build upon this reflection, I engage, in particular, with the work of three Brazilian researchers/composers: Denise Garcia, Rodolfo Caesar and Silvio Ferraz. In the other layer (i, ii, iii...) I make some analytical comments on my piece *A menina que virou chuva* [The girl who became rain], a composition for orchestra created in 2013. Listening to this piece is required in order to understand this article.

While the layer dedicated to the discussion of the notion of sonority presents a more extensively theoretical approach, the other one (dedicated to the piece) has a more literary character and evokes a large number of elements generally considered to be exterior to music, such as metaphors, aspects borrowed from other arts and a whole imagistic and multisensorial universe that permeates the sonority field within my creative process. Each of these layers can be read independently, but the text was designed to a linear reading, thus provoking a sense of alternation between the two layers.

It is important to emphasise that the purpose of the article is not to use *A menina que virou chuva* as illustration of a theoretical debate about the notion of sonority, but rather to make the notion of sonority itself emerge and expose its contours from of a singular sound experience.

i. *A menina que virou chuva* [The girl who became rain]

A menina que virou chuva may be listened to as the continuous chaining of three particular atmospheres, which I call here sonorities: *Evaporação* [Evaporation], *Condensação* [Condensation] and *Depois da chuva* [After rain].¹

***A menina que virou chuva* (2013), for orchestra, by Valéria Bonafé – Orquestra Sinfônica do Paraná and Marcio Steuernagel (conductor)**



1. Sonority as experience

In recent years, the term *sonority*² has gained prominence in academic research, resulting in an extensive bibliographical *corpus*. Part of this bibliography is committed to legitimising *sonority* as the compositional paradigm of a “new era”, but, for this purpose, it reproduces a *modus operandi* similar or identical to that which was used in the past. With this in mind, if one wants sonority to be understood as a new compositional paradigm, and not only as a surface element, it is necessary to understand how it can be thought within the perspective of *musical structuration*, i.e., how it can articulate *material* and *form* at the core of composition. In this case, it is necessary to subject sonority to the laws of valuation already established in the canonical discourse of music theory and composition, guided by laws of *logic*, *coherence* and *comprehensibility* – just to maintain some of Schoenberg's emblematic expressions. Therefore, it is necessary that *sonority* attests its capacity to operate as an objective element of formal organisation, a task formerly assigned to pitch, as demonstrated by the many statements about *overcoming the paradigm of the note* by means of what is conventionally called the *paradigm of sound*. This kind of discourse is not about a breach of the hierarchic logic of the elements in the compositional context; far from it, it is only about the exchange of the “monarch”. Composition – and also listening – continues to be understood as a space of dispute and of power games, in which certain elements subject others and others are subjected. From a parameterised, quantified, and fragmented listening, the sonority is instrumentalised: it becomes an abstract and operational entity, closing itself to the *experience*.³

In *A espessura da sonoridade: entre o som e a imagem* (2013), Rodolfo Caesar considers the following question: “what would be the limits of sonority's tessitura?” Caesar's questioning is more of a provocation than an actual query. Going against part of the current bibliography on the subject, Caesar does not pursue possible answers that can establish the limits of such tessitura. What Caesar suggests in his text is, in reality, the widening, if not the complete dilution of any limit of tessitura.⁴

“A large number of composers prefer to circumscribe the sonorous field to a space of determined thickness, known as “sonority” – as if this word could not be expanded to its

most extensive range. It is appropriate to problematize this expression, which, increasingly – for common sense and for the specialist – points towards a single direction, to an “internal” “core” of the sound. Thus, this listening – by diverse injunctions – is confined to an experience, whose gravity centre comes down to the “intrinsic” features, or in the “interiority” of the sound (Caesar, *The composition of electroacoustic music*, 1992). Thus, the amplitude – that is perhaps the richest feature of the sonorous field conquered by Western music in the mid-twentieth Century – ends up being rejected due to filtering (Caesar, 2013, p. 2).⁵

In dialogue with Caesar's approach, as well as with several authors mentioned throughout the present text, I see the notion of sonority not as a concept circumscribed in analysis and composition theories that take sound as a thing and handle it from its parameterisation, but rather as an idea of a more dynamic and holistic nature. Thus, sonority is repositioned from listening: not a reduced one, but an enlarged listening; not purely cochlear, nor tympanic, but sensitive, affective and imaginative. Sonority combined with a *radial* conception of listening.

“The aim is neither to deny, at this late point, the instrumental possibility nor the aesthetic fruition of a “structuring” listening, typo-morphological, etc. Yet, it is simply to try to stimulate the return of the radial vocation of the enlarged listening – as well as all the perception modalities are enlarged. In other words: it is reasonable to accept the possibility of a cohabitation of the two opposing, yet complementary forces: the sound would have – together with its centripetal interiority – a centrifugal radiation pointing towards all directions. From the “core” object of the sound, an omnidirectional radiation emanates and, during its course, reaches and transforms us.” (Caesar, 2013, p. 3)

Caesar's approach is, in many aspects, aligned with Silvio Ferraz' notion of *sonority* developed in his book *Livro das sonoridades* (2005). In this book, Ferraz also made an effort to encompass the notion of *sonority* on the basis of an enlarged listening, centred neither on the capture of form nor the interiority of sound matter.⁶ The notion of *sonority*, therefore, would necessarily comprehend a listening, which is also configured as a journey into the unknown, as an *experience*.

“Neither the sound matter nor the form leads the listening. [...] At the risk of misconceiving it, I say that: what we hear, and what leads our listening is not so much in the materiality or the form, but exactly in what it would be in the in-betweens of the form; thus listening to music would be simply to let oneself go to places that are created, by moments that turn matter into expressive material, and whose forces help us make connections (I'm talking about any connections: remembering a place, imagining an image, listening to a sonority, connecting a sound with another one, listening to a drawing, a ratio, any meaning at all) and, from time to time, to be shaken by one cut, a change of place [...]” (Ferraz, 2005, pp. 41-42)

ii. *Evaporação* [Evaporation]

Evaporação, the first among the three sonorities that compose *A menina que virou chuva*, begins with a frictional movement of a mallet on a tam-tam (a percussion instrument from the family of gongs made of a heavy metal). In the score, I have requested a *superball mallet* (a specific mallet used to drag on gongs and other instruments) with a small head in order to stimulate the production of very high frequencies. With a minimal movement of the arm, an

impactful effect can be produced when rubbing a tam-tam of great dimensions. The sound richness of the rubbed tam-tam is the outcome of the combination of pressure variation and mallet speed on its surface, making it possible to obtain powerful sounds with a sufficiently restrained corporal movement. The sound produced rubbing the tam-tam is very unstable and its radiation is extremely diffuse, spreading widely in all directions. In this sense, I was very intrigued by the scenic effect that could derive from the contrast between viewing an entirely still orchestra and listening to a sound, whose source would not be so easily recognisable. The intention was to initiate the piece with a sonority that would refer to a psychic condition of hallucination, delirium, unreality.

The treatment given to the strings during the *Evaporation* sonority – especially in the initial measures – was derived from a more mimetic *sound imagination* than the one implied when using the tam-tam. For the strings, I imagined a rarefied texture of very light, nearly minimal, breathing (of inhaling, to be more specific). The technical performance indications – *alto sul ponticello* (bow positioned exactly above the bridge) combined with *arco flautato*, *molto soffio* (always maintaining very fast bowing, without pressure oscillation, barely with no adherence of the bow hair on the string, in order to produce a flute-like sound) – that are found just at the beginning of the score were aimed to extract from the strings an absolutely aerated sonority (close to a delicate white noise), the unison on the pitch *A5* being merely a focal point. The limit of intensity for the *crescendi* should be a sufficiently audible air sound, without losing its *flautato* quality and without becoming a clear pitch. The successive rests in these initial measures should frame this aerated sonority, helping to simulate the intermittence of a blow of very thin air. These set of technical solutions aimed to build a sound image that I have heard-formed-imagined: the last gasp; the accurate point of death.

The first sonority is still composed of three other musical gestures – *tremolo veloce*, *tutto l'arco* and the *glissandi*. They contribute to model the texture, which tends to become gradually denser. The *glissandi* (a continuous and smooth glide from one pitch to another), in particular, collaborate with the widening of the spectrum of frequencies, diluting the initial focal point on the pitch *A5*. In these narrow range *glissandi*, the ancestral sonority of lament is implied, calling to mind the sonority of *carpideiras* (professional female mourners) crying, during their performance at funeral ceremonies (see media example below).



2. Listening as experience

In the article *Composição por metáforas* (2007), Denise Garcia delivers a retrospective of her path as a composer, making remarks on all of her work, from her early pieces to the most recent ones. From the beginning of the text, she indicates an underlying trait of her creative process: the use of metaphors.

“I write this text in order to establish my statement, or more accurately some examples of how my creative process often takes place through processes of simulation, transposition, translation, imitation of sound, visions, and other types of images that occur to me, and I would like to and intend to call them metaphors. Metaphor in a wide sense, but with an opposite intent, which I believe is so ordinary in many composers: the music or the sound not being a substitute or a reference or a representation of any other sign [...]. The images or models can be starting points, but not necessarily the meaning of music – the music does not stand for that specific image or another one, and every time that this was intended, what really is the piece was hugely reduced: an open box that allows each listener to have their own individual experience, but above all musical.” (Garcia, 2007, p. 54)

Therefore, one has the possibility of working with different sensory systems: visual, auditory, tactile, proprioceptive, etc. From this perspective, the creative process is essentially multiple, omnidirectional, in the sense of imagination. The idea of metaphor is designed not in the sense of representation, that is, of a thing in place of another one. Instead, metaphors – images or models – are understood as triggers and stimuli of the creative process.

I notice a certain convergence between Denise Garcia's and Kaija Saariaho's approaches. In interviews and program notes, Kaija Saariaho's comments on her own compositions are always full of visual elements such as shapes, colours, lights, shadows, etc. According to Pirkko Moisala, her biographer, Saariaho has always sought to work in a continuity between the experience of the eye and the ear. Moisala's remark could also be extended to touch, taste and smell, as it is not unusual to find comments from the composer herself on the importance of perfumes and fragrances for the construction of determined sonorities. The work of Saariaho could, thus, be understood in the continuity between the experience of hearing and all other senses, in a complex field, where listening is always multisensory.

“I cannot separate these things [musical and visual dimensions] from each other and, in my opinion, one should not even attempt to do so. This differentiation is based on the traditional view, but I am quite convinced that, in addition to the eye and the ear, there are close relationships between the other senses. The senses must not be firmly delineated. Although music is what interests me most and my ways of expression are musical, I do not think of these things as separate categories. (...) Different senses, shades of colour, or textures and tones of light, even fragrances and sounds, of course, blend in my mind. They form a complete world in itself, which calls me to enter into it, and where I can then focus on some details. They are the source from which I draw.” (Saariaho *apud* Moisala, 2009, pp. 53-55)

The works of Denise Garcia and Kaija Saariaho seem to point towards a type of reception, which does not presuppose listening as an act of capturing sound *per se*. There is no

addressing whatsoever of a listening that is established as a filtering, a cleaning process, or a pure sound analysis. Either in the process of elaborating the pieces, or at the moment of enjoying, the body would be open and the imagination would establish itself as a space of interlaced images of diverse natures. There is indeed an idea of a *multimodal listening*.

“The body of the listener is open, there is no lack of entrances nor exits, points in contact with the outside of the body. And these places intertwine themselves, sound is not the ear's priority. Low sounds resonate all over the body, very high-pitched and high energy sounds make the teeth grit. This is how sound goes through almost all the senses; through sight, when I say that a sound is bright, when I talk about a line; through touch, when I talk about its roughness; through my proprioception, when I say that it is heavy, that it is light, that it floats or that it is deep. Sound perception is multimodal. There is no ear privilege.” (Ferraz, 2016, p. 41)

There is no privilege, but neither is there a disadvantage to the ear. This discussion does not intend to hierarchically rank the different sensory systems involved in the action of listening. Instead, this discussion focuses on trying to understand how the *mental images* that we get from listening sprout necessarily from the interaction between these different sensory systems. And, furthermore, it is also important to consider that such mental images are the result of the interaction between what emerges from the different sensory systems and what is constructed in our imagination based on previous references, memories, expectations etc. Listening is thus understood as *experience*.

“The change generated by technological mediation concerning musical listening was not only contextual, but has significantly modified the relation that listeners establish with music. To listen is an exercise, it means to pay attention to something, it is an attitude towards a sonorous content. [...] Though, of course, one can also listen with the body, with the eyes and even more, with memories, with sensations. Although the concert hall boosts an attention focused on the audible, there's much more than sound in the experience of listening.” (Iazzetta, 2009, pp. 37-38)

iv. Condensação [Condensation]

Regarding instrumentation, the *Condensação* sonority is still branded by the presence of the strings, however with the addition of wind instruments and the subtraction of the tam-tam. Different from the *Evaporação* sonority – characterised by a more rarefied texture – this sonority is built through multiple layers, and proposes a slightly more complex and turbulent listening. From the global point of view, one can segment this sonority in two strata: a more dynamic sound mass, which is carried out by the wind instruments; and a more static sound mass, carried out by the strings.

The sound mass carried out by the wind instruments is composed of fourteen voices (flute, oboe, clarinet, bass clarinet, 2 bassoons, 4 french horns, trumpet, 2 trombones, and bass trombone) and it has a variable density. Over time, it goes gradually from a minimum density (two overlapping voices) to a maximum density (ten overlapping voices). Inside this sound mass, each one of the voices presents very wavy and unstable profiles, marked by melodic zigzag contours, rhythmic *acelerandi* and *ritardandi*, and flexible dynamic curves. Here the sound image was one of a gradual accumulation of incessant and confused murmurs, which are intertwined in a kind of complex texture (through the employment of *micropolyphonic* resources). At first, these murmurs exhibit relative stability, consistently

having some specific pitch that operates as centre of attraction and, around which melodic undulations befall. Further on, when this sound mass reaches its maximum density, these murmurs start to suddenly let go of their respective centres and to head towards the extreme low register of each instrument, causing a global effect of texture draining, which climax with the total silence of all wind instruments.

Opposed to the dynamism and directionality, which constitute the sound mass constructed by the wind instruments, the sound mass carried out by the strings depicts a steadier global profile. This sound mass has a constant density (it is composed of a permanent group of ten voices: violin I, violin II, viola, violoncello, and double bass, all with *divisi a 2*) and it is characterised by sustained long notes. In a certain sense, it can be understood as a harmonic texture that works as background for the sound mass performed by the wind instruments. However, the presence of an almost uninterrupted movement of *glissandi* (increased by variations in dynamic) guarantees a certain degree of richness for this static sound mass. The game of *glissandi* in the strings is very simple: it is only about a process of playing with sound colours, carried out through a permutation of the instruments in a context of a fixed harmonic set.

This permutation process, through a game of continuous *glissandi* between fixed points of a frozen harmony, aims to guarantee a sensation of perpetual movement to this layer composed by the strings, without allowing, however, that it clearly trace any path of directional harmonic displacement. The image that worked in constructing this sound mass carried out by the strings was one of a continuous movement of a gear spinning aimlessly: the anguish created by the conflict between the perception of a time that passes by and the spirit that continues to be a prisoner of memories.

3. To listen is to form images; to compose is to think through images

Traditionally, the term *image* is associated with the sense of sight, therefore it has been restricted to activities that exclusively require the eyes and all the corporal mechanism involved in the act of seeing. This is what Google Images, for instance, tells us. When searching for the word “cicada” on the *images* tab, the Google search platform does not return any audio files with sounds of cicadas.⁷ It provides a set of figures, drawings, engravings, etc.; images captured by photography or some that were even digitally generated. The cicada is depicted in a library of visual images, being exclusively perceived by the eyes. The curious thing is how uncommon it is to see a cicada and how ordinary is it to listen to one. At a very young age one learns what is a cicada through sound and not through visual images. It seems indeed to be of great challenge to distinguish a cicada in a set of visual images of several insects. On the other hand, it would possibly be the first insect to be identified if this exact set had been of sound images. After all, what is the *image* of a cicada?

In recent texts⁸, Rodolfo Caesar has discussed the idea of *sound* as *image* aiming to dilute the apparent dichotomy between these two terms. He highlights that, although the notion of image appears in some authors as an attribute of either the visual and sonorous field (Paul Valéry's and Walter Benjamin's fragments are referenced by Caesar), usually the word still “continues to refer to direct or indirect experiences of visuality, whereas sound belongs to an obscure region of perception” (Caesar, 2013, p. 4).

Perhaps the total identification between *image* and *sight* is also related to the fact that the

association between the words *image* and *imagination* is not necessarily immediate. In general, the term *image* tends to be used to indicate what is *outside* the subject, what is liable to be apprehended by the apparatus of vision, and not something that occurs *in* our minds, in an operation that relies on the interaction between subject and object. The idea of *image* emerges as an object, as a *thing*. A photograph or a drawing, i.e., the stimulation sources for the creation of mental images are already taken as image themselves. Image is then understood as a category conceived externally to the subject: the notions of *image* and *imagination* do not appear to be implied in one another.

Coming back to Caesar's texts, what can be observed is not only the defence of the dilution of the sound/image dichotomy, but also an effort to recover the exact sense of *imagination* inside the notion of *image*. Thus, Caesar alludes not only to the visual and sound *image*, but also to the visual and sound *imagination*.

"In my proposition the sound is already an image, even when the only available supports are the air and the brain, and when its transmission is from mouth to ear, or from things that are sonorous to the ear. Just as the mental visual image is a mental image, the sound image is also such, and it should not be mistaken for a "visualization", or visual synesthesia through the hearing sense. As is seeing, listening is always to form images." (Caesar, 2013, p. 5)

In a paper developed for the *Charles Eliot Norton Lectures*⁹, Italo Calvino warned about the dangers of a crisis of *visibility* – and therefore of *imagination* – in the XXI century. For this paper, Calvino had a key question in mind: "Will the literature of the fantastic be possible in the twenty-first century, with the growing inflation of prefabricated images?" (Calvino, 1988: 95). After mapping out the value of visibility in the history of literature, he suggests a possible crisis of *visibility*, especially on account of the increasing visual bombardment offered by communication media, thus warning about the danger of the total dissolution of such a value.

"If I have included visibility in my list of values to be saved, it is to give warning of the danger we run in losing a basic human faculty: the power of bringing visions into focus with our eyes shut, of bringing forth forms and colors from the line of black letters on a white page, and in fact of *thinking* in terms of images." (Calvino, 1988, p. 92)

Calvino's forecasts and possible solutions concerning the maintenance of visibility as a literary value, it is important to observe the way he articulates this notion in his creative process. In his work consisting of stories, novels, and short text series, Calvino prioritised fictional narratives inherent to the fantasy literary genre. When describing the way he worked, Calvino identifies *image* as a trigger of his creative process.

"In devising a story, therefore, the first thing that comes to my mind is an image that for some reason strikes me as charged with meaning, even if I cannot formulate this meaning in discursive or conceptual terms. As soon as the image has become sufficiently clear in my mind, I set about developing it into a story; or better yet, it is the images themselves that develop their own implicit potentialities, the story they carry within them." (Calvino, 1988, pp. 88-89)

Even with Calvino working in the key of fictional narratives, it is not from the definition of discursive scripts – that is, a story going on over time – that he makes images emerge in his

creative process. In contrast, it is from a determined image that a story – that will unfold in time and acquire a specific form – is constructed. For Calvino, writing is not a way of thinking through concepts, but rather it is thinking through images.

iv. *Depois da chuva* [After rain]

The third and last sonority of the piece – *Depois da chuva* – is marked by the presence of strings, wind instruments and tam-tam. This last sonority has been structured on an idea of choral texture, considering a more vertical listening. Different from the sonority *Condensação*, the sound mass shaped here is not marked by an internal multiplicity of voices, but by a more welded, solid and homogeneous sonority, thought of as a moving mountain. In spite of this, the wind instruments play a different role compared to the strings. Whereas an instrumental grouping sonority is actually meant to the strings, that is, a timbre fusing sonority, the wind instruments act in a little more autonomised way. Individually or in small combinations, the wind instruments execute short fragments that highlight some of the melodic movements embedded in the transitions between the different harmonic sets played by the strings. These short fragments are either completely synchronised with the transitions between the sets, or anticipate/delay certain melodic movements between them. By rupturing the mountain-massive sonority built by the strings, these fragments executed by the wind instruments contribute to the delineation of different topographies inside the essentially homophonic texture.

As a whole, *Depois da chuva* is a more lyrical and serene sonority. This sonority can be associated with the image of quietness after rain: an energy fall and the reduction of the flow-activity. However, different from the previous sonorities, *Depois da chuva* hosts highly accentuated conflicts. Marked by sudden contrasts (of dynamics, orchestration, and especially of register), from a lyric and serene sonority, at certain moments acidic and violent gestures break in, which end up characterising it as a spasmodic sonority.

Evaporação, Condensação e Depois da chuva: three sonorities that form *A menina que virou chuva*. The sound image of rain itself, of water falling from the sky – that is, the *precipitation* phase –, would act in the piece in the strongest possible way: for a *present absence*. Framing this climactic point of the rain cycle with images that precede it and follow it, I preferred to not make the rain itself sonorous. For me this is the great power of cutting/filtering that happens over the transition from *Condensação* to the *Depois da chuva* sonority. It is possible to perceive the abrupt conversion from an extremely dense sonority to a sudden calmness. At this point, a kind of gap is established right after cutting/filtering, since it takes a certain amount of time until the oboes can be heard, rupturing the texture with a short melodic fragment, which set off the *Depois da chuva* sonority. Between the abrupt cut of *Condensação* and the gradual beginning of the *Depois da chuva* sonority, only an *Eb2* pitch can be heard, accompanied by some other frequencies in the medium/low register that are provided by the rubbed tam-tam (now with a superball mallet with large head). This *Eb2* pitch, at first, is played by the double basses, but subsequently gains other colourful sounds, moving through the bass clarinet and the bass trombone. This sonority composed by the amalgam of the *Eb2* pitch with rubbed tam-tam sounds can be understood as a possibility of *silence sonification*. From the point of view of the form, I projected these “quiet” measures as a kind of “inside out climax.” From the point of view of sonority, they had been imagined as a black hole inside of the piece, where time and space would cease to exist. Poetically, at this moment, there would be a possible experience of eternity: the overwhelming image of *forever*, of *nevermore*.

4. Where musical thoughts are originated

In the works of Saariaho, besides a complex multisensory field – where listening is modulated by a powerful multimodal perception – it is also possible to realise the importance of incorporating *narratives*. In her creative process, Saariaho recurrently takes literature as a starting point, film stories or even her own personal life situations, i.e., of her own life experience. In any case, it is important to observe that the narratives are also used as spaces filled with imagetic content, and not exactly stories or scripts to be developed over time.

“Unlike many other composers who emphasize the abstract autonomy of musical works, Saariaho does not try to avoid drawing connections. In the program notes, she often describes the literary or visual impulse that led her to compose the work and may have provided both the title and the focal point for the composition. She also sees the connections between her own life and her works: “everything I experience and live, I absorb into myself and there my musical thoughts also originate”.”

(Moisala, 2009, p. 54)

Some might think that musical composition should be completely free from the affection zone, feelings, references, subjectivities, and everything that is conventionally called *extramusical*. From my experience, it is truly complicated, if not impossible, to separate these things. My projects are often initiated by “non-musical” images and it takes a long time until I decide how to spread them in a musical manner. Most of the time, these images are complex multisensory constructions: the image of a liquid piano (*Tátil*, 2007), the image of a lagoon (*Lagoa*, 2008), the images of some imaginary beings (*Do livro dos seres imaginários*, 2010), the image of a spinning top (*LAN*, 2011), the image of a city that grows in concentric circles (*Olinda*, 2012), the images of the different states of matter (*Estudo sobre os estados da matéria*, 2012), the image of death (*A menina que virou chuva*, 2013), the image of the trajectory of a small rock launched with a slingshot (*Forquilha, couro e tripa de mico*, 2013), the modulated images of the “temporality of life” and “temporality of the river” (*A terceira margem do rio*, 2014).¹⁰ What sprouts from experience turns into sonority; sonority itself is also considered experience.

v. A sound image for *A menina que virou chuva*

The death of my niece – Heloísa, to whom the piece is dedicated – was deafening to me. My sound memory of that moment always seemed like the sensation of a clogged ear, as if one goes downward through the hills towards the seacoast, or when one listens to the exterior underwater: some sparse, hazy sounds, barely outlined. The images that I still retain from that day are much more visual. On the other hand, my sister, Heloísa's mother, has always explicated in our talks a very lucid sound memory of everything that she went through that day. Thinking these differences through, I have reached an interesting reasoning: she experienced the loss of her child firstly through listening. The mental images that she produced throughout the 40 minutes of Heloísa's life were essentially stimulated by sounds, since the situation was a C-section surgery and there was a cloth that is usually hung vertically between the belly button and the breasts of the woman. My sister could not see it, only listen to it. On the other hand, on the other side of the glass, I had a global view of the surgery centre, but I could not hear. I have experienced the birth and the death of Heloísa in silence, just with the eyes. Yet my sister experienced it with the ears.

My experience was purely visual. Hers was essentially acousmatic.

I don't sleep.
 I still hear the sounds:
 Of my hands beating against the dopamine;
 Of the aspirator suctioning my inside;
 Of the buzzing of the never used incubator;
 Of the weeping from of who loved as I;
 Of the silence in which you came in and remained
 Of the pain to only see you once.
 The sound of emptiness.

(*7 Dias Depois* [7 Days Later], by Daniela Bonafé, 2012 - <http://www.danielabonafe.com>)

In *A menina que virou chuva* I freely linked three phases of mourning to the three stages of the cycle of rain. And for each phase/stage I imagined a sonority. In the first sonority I associated the phase of *Evaporation* to an initial stage of mourning: the loss, an immense suction and dispersion of energy, the rarefaction, the emptiness, silence. In the second sonority, *Condensation*, I dealt with the concentration of densities, the accumulation, the image of despair, the upheaval. And then, finally, the image of precipitation, the rain, would follow. But the piece does not allow for this positive outcome: the closing of a cycle that culminates in a rain that washes. So I chose one cut in this cycle, an empty space ("the sound of emptiness"). And what brings the piece to an end after this emptiness is a sonority that I have called *Depois da chuva*. This sonority even evokes some lyricism, something that could sprout from resignation, from an after-loss serenity. But it necessarily admits the irruption of screams, spasms and memories; three distinct sonorities that would orchestrate together a slightly more complex sound image: the image of death.

Endnotes

1. Full score available at: <http://www.valeriabonafe.com/a-menina-que-virou-chuva>. A comprehensive, thorough and illustrated analysis of the piece *A menina que virou chuva* can be found in my PhD dissertation entitled *A casa e a represa, a sorte e o corte: ou a composição musical enquanto imaginação de formas, sonoridades, tempos [e espaços]* (2016).
2. The concept of sonority is grounded and widely discussed by Makis Solomos (2013). According to him, "this notion designates a global entity integrally constructed and composed from the interior, resulting from the dissolution of the classical sound dimensions (pitch, rhythm, timbre...), that is, from the loss of their autonomy. The recomposition and fusion of these dimensions generate sonority as surplus, as emerging quality. It also stems from the fusion of form and material. The choice of the term sonority indicates that we are close to the notion of 'sound', but of a compound, articulated, and constructed sound, that is to say, an artefact and not a natural sound (...)" (p. 331).
3. In this article I use the Benjaminian concept of experience (*Erfahrung*), according to the perspective of the Brazilian philosopher Olgária Matos. "What does experience mean? Etymologically, the word that Walter Benjamin uses is *Erfahrung*. *Erfahrung* in German, it means experience and the radical is *fahr*, which originates *fahren*, which means to travel. In Old German, *fahr* means to cross a region during a trip through unknown places. And the Latin word for experience has as a radical *per*: to leave a

perimeter, to leave the condition of the already known and already lived to expand 'lived experiences', circumstances and repercussions of these new circumstances over our lives. And from *per* also comes the word *periculum*: to cross a region during a trip, in which dangers can strike. And for such danger, there is the word that relates to *periculum*, which is *oportunus* which is *portus* which means exit. Thus, the experiences that happened to us during a journey into the unknown, over a trip, are experiences that widen our identity, our knowledge, our sensitivity and our conditions in the world" ('Tempo sem experiência - Olgária Matos', 2009).

3. Full score available at: <http://www.valeriabonafe.com/a-menina-que-virou-chuva>. A comprehensive, thorough and illustrated analysis of the piece *A menina que virou chuva* can be found in my PhD dissertation entitled *A casa e a represa, a sorte e o corte: ou a composição musical enquanto imaginação de formas, sonoridades, tempos [e espaços]* (2016).
4. In Caesar's text the musical term *tessitura* is used metaphorically as a synonym for *thickness*. His argument in favour of the widening (or the complete dilution) of any limit of *tessitura* implies, therefore, in the broadening of the comprehensiveness of the concept of *sonority*.
5. As Caesar points out, in this conception of *sonority* – understood as a space of definite thickness – there is something of a Hanslickian, formalistic nature. He also remarks that within this same perspective, such approaches as those of Schaeffer and Smalley, were, in certain contexts, converted into a translated version of *structural listening*, regardless of their authors.
6. I recollect the article *Som e sonoridade: as imagens do tempo na escuta musical* (2007), of Rodrigo Fonseca and Rodrigues, in which the author carries through a synthesis of the notion of *sonority* displayed by Silvio Ferraz in *Livro das sonoridades* (2005): "It is at this final moment that we fall back on what Ferraz tells us about what defines *sonority*, and on why this is the concept that expresses what the insufficient concepts of sound, of sound object, of sound or music form and matter, would not reach. The suffix of the word 'sonority' denotes, generically, qualitative and adjective timbre aspects of the sound. The concept of *sonority* describes firstly the process, the totality of the unfoldings implied in the listening, and not the sonorous thing. The issue is neither about listening to the sound, nor to what is in the sound, but to what is *within* the listening, in the powers that affect us and that move around, that are created by the listening" (Rodrigues, 2007: 82).
7. In March 2016, Google added animal sounds to its search features. Typing "lion sound", for example, directly on the tab "All", one can listen to a roar and find some other sounds of different animals. Since then, the feature has not been expanded.
8. Here I especially refer to the texts *O som como imagem* (2012) and *A espessura da sonoridade: entre o som e a imagem* (2013), but also *As grandes orelhas da escuta* (2007) and the book *Círculos Ceifados* (2008).
9. These lectures were to be delivered during the 1985–6 academic year at Harvard University, but the author died just before his departure to the United States. They were posthumously published in 1988 under the title *Lezioni americane: Sei proposte per Il prossimo millennio* (*Six memos for the next millennium*).
10. Scores and recordings of my works are available on the website <http://www.valeriabonafe.com>.

Acknowledgements

This article originated in my PhD dissertation entitled *A casa e a represa, a sorte e o corte: ou a composição musical enquanto imaginação de formas, sonoridades, tempos (e espaços)* [The house and the dam, the fortune and the cut: or the composition while imagination of forms, sonorities, times (and spaces)] conducted at the University of São Paulo between 2012 and 2016 under the supervision of Marcos Branda Lacerda and financially supported by FAPESP - São Paulo Research Foundation. During the development of the research I also had support from *Grupo de Pesquisa Escritas e Invenção Musicais* (CNPq), of *Nusom - Núcleo de Pesquisas em Sonologia*, and of *Sonora - Músicas e Feminismos*.

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Biography

I am a composer, researcher and music teacher. I was born in São Paulo, Brazil, in 1984. I studied composition with Aylton Escobar and Silvio Ferraz. I received my academic education – Bachelor, Master and PhD (Marcos Branda Lacerda as supervisor) – at the University of São Paulo (2002-16). I also studied at Musikhochschule Stuttgart (2013-14), with Marco Stroppa. My works have been performed in concerts and festivals in Brazil and in other countries (Canada, England, France, Germany, Italy, and USA). Currently I am a teacher at the São Paulo State School of Music, a member of Sonora - Musics and Feminisms, and a researcher at NuSom - Research Center on Sonology. My works are available at <http://www.valeriabonafe.com>.

Some considerations towards a more critical practice in Mobile Music

By André Damião

Abstract

This paper proposes to reflect on the production of experimental electronic music mediated by mobile devices. The definition of Mobile Music is somewhat vague; among different classifications – which could be considered more open or closed characterizations of the genre – we can find something in common: the significance of movement, or the willingness of displacement. The release of corporate mobile devices at the end of the last decade, such as smartphones and tablets, caused a drastic change in the perspectives within the genre: artists and researchers started to give much more attention to objects of consumption, rather than situations in which mobile sound could be experienced. Having this turning point in mind we could consider that Mobile Music started working much closer to the market logic and became more dependent on it, due to the adoption of commercial devices as well as researchers interested in developing new products. Thus, in this text we speculate about other alternatives to practices of Mobile Music, which could be somehow considered more critical.

Keywords: Mobile Music, Mobile Music Market, Controlled Consumption, i-Ensembles, Critical Mobile Music

Mobile Music as a Genre

The term Mobile Music in experimental music refers to a small niche in art production mediated by electronic media. Its boundaries are diffuse and often contradictory as the definitions made by the community of musicians, programmers and musicologists are conflicting.

The first attempt to define Mobile Music as a genre came from a group that created the *Mobile Music Workshop* (MMW), a series of events that took place in Europe and North America between 2004 and 2008¹. The event was organized by researchers connected to British institutions, mainly Atau Tanaka, Frauke Behrendt and Lalya Gaye, and has become a key point for the establishment of this practice in the field in experimental music. Perhaps we should consider the work developed at MMW as a first phase of Mobile Music as a genre, because there is a drastic change in the research with portable media in the late 2000s, and some reflections proposed by this group of researchers also covers part of the sound art production of the 80s and 90s, such as the works by Christina Kubisch, Janet Cardiff and Benoit Maubrey, which could be considered Mobile Music². In the article *Mobile Music Technology: Report on an Emerging Community*, by Lalya Gaye, the group defines Mobile Music as a new field that discusses issues of interactive music in mobile situations, using portable technology, as GPS for example. According to the authors, the term covers any musical activity using portable devices that are not fixed in a specific location, thus making interactions more dynamic, and creating new participatory possibilities in mobile scenarios. The devices could have sensors that would allow distributed networking, knowing which would be the context of the interaction, detect the user's location, and all could be combined with technologies incorporated in the environment (GAYE et al., 2006). Some examples of types of work which were developed in MMW in that period are: sonification wireless network signals, music remixing between users in remote places and exchanging of sound files between users connected by LANs. An example of this type of work is *Sonic City* from Lalya Gaye, Ramia Interference Journal February 2018

Mazé and Lars-Erik Holmqvist³. This work, presented in 2003 in Gothenburg, aims to create a personal soundscape which produces a dialogue between the participant headphones and the environment. The participants would manipulate an electronic sound synthesis through their movement and the data captured from their surroundings. This first definition – besides being quite fetishist in relation to the means of production, since it emphasizes the potential 'magical' elements of wireless networks, mobile devices and surveillance systems – does not cover the production shown at MMW as a whole. Many artworks, for example, kept the Italian stage format and used mobile devices as musical instruments in fixed situations, we could cite the work *Handydandy* by Bauch Bernhard, Gross Luc, Kirisits Nicolaj, Savicic Gordan, Waldner Florian, presented at the MMW in 2006, as an example⁴.

Other mobile music theorists propose more open definitions, such as Gopinath and Stanyek (2014), who in search for another definition of Mobile Music first look at how and why mobile devices are used, and how they shape and influence our sensible experience, and thus seek the elements that would form an aesthetics of mobility. The authors assume that the mediated experience of sound in motion occurs through commodities. In their approach, these goods are treated in the mobile listening paradigm not only as social and economic aspects, but also linked to our senses and creative sensitivity. These elements establish different relations between subject, object and infrastructure, and add to the construction of an aesthetics of mobility. Therefore, Mobile Music linked to experimental music practices could be viewed in this wider perspective. This point of view brings more complex situations for analysis, because it goes far beyond the field of artistic production.

Perhaps the most relevant theoretical result developed by the MMW group would be the classifications proposed by Behrendt (2010), which determines three areas of operation in Mobile Music: technological, social and geographical. The author considers that these three aspects are deeply intertwined in complex situations wherein this first generation of artworks occurred. In her view these three points were connected and present in works of Mobile Music assuming that: technology would be a way to create new types of listening and interaction through sensors embedded in mobile devices; social implications would consider that it would be possible to engage viewers with different types of interaction in performance or installation situations which would be more participative; there would also be activities related to geolocation that would be based on analysis of how urban space influences the process of musical creation, either by objective means, such as capturing data via sensors, as *Sonic City* described above, or subjective means such as observing how it would be possible to propose approaches that would interfere in the daily routine of participants, resulting in new aesthetic experiences.

These areas of operation mentioned by Behrendt are some of the indicators that led us to observe a turning point in the production of Mobile Music at the end of the last decade, more specifically after 2007, when more sophisticated mobile devices produced by major corporations began to circulate in the market.

Through powerful new hardware, more versatile operating systems and an oligopolistic market structure, the field of Mobile Music has become more attractive to the software market for mobile media. New applications and musical gadgets have multiplied since 2007. If we look at the software virtual stores, we will see a long list of items: virtual instruments; effects processors; sequencers; musical games; samplers; generative music apps; musical toys; tuners; tape recorders; workstations (DAW), etc. This market directly affected the artistic and academic production. Techno-positivists discourses proliferated in academia, and the language of academic research and marketing became seriously intertwined:

The mobile music evolution has been catalyzed by the advancement and proliferation of the smartphone, portable and compact computing devices with built-in physical sensors, persistent connectivity, and location awareness. In particular, the iPhone brought about an inflection point in mobile devices, and transformed the notion of mobile device into a general computing platform. Looking back only five short years (to 2008), we might attribute the success of the iPhone to several reasons. First reason: "killer hardware" (...).(WANG, 2014, p.487)

In this article excerpt, Ge Wang uses very similar terms to the ones introduced by Steve Jobs at the release of the iPhone⁵. The context in which Wang uses the word "evolution" seems quite out of place, because the author does not refer to a practice that depends solely on technological development but a use of electronic media applied to artistic actions. Therefore, thinking of an "evolution" of the genre, there should be seen, above all, an artistic evolution, regardless of the development of technology. This discourse may be viewed as a symptom that shows a change of artistic interest and academic community of Mobile Music, which started to produce more commodities, rather than artwork.

Soon, several groups specialized in performances with tablets and smartphones appeared. The *i-Ensembles*, many of which demonstrate a high level of virtuosity in interpreting orchestral pieces of the Baroque and classical period⁶. Moreover, it was not long before we could see the first concertos for large orchestra, with tablet as a soloist⁷. Witnessing such a level of virtuosity, if we choose to forget for a moment the existence of the capitalism maintenance mechanisms, we could believe in the possibility of the beginning of a new tradition of virtuoso musicians, specializing in touch-screens and gyroscopes. However, firmware updates, Digital Right Management (DRM) issues, many restrictions on use, and software/hardware obsolescence do not let us forget that these 'new instruments' cannot be treated like any other instrument. These devices are a surface of a controlled consumption market model. Søren Pold and Christian Andersen (2014) summarize the concept of "Controlled Consumption", developed by Ted Striphias, in three key points: 1 - A cyber industrial structure that integrates and manages the production, distribution, exchange and consumption which is developed around a product; 2 - consumption is controlled by algorithms that monitor closely the behaviour of users and the effects of advertising strategies through tracking and surveillance; 3 - The product is designed with a maximum length time, which limits its functionality (planned obsolescence). This model privileges the monopoly of large corporations, and restricts its users to quite a few options and many conditions. These constraints determine a system with asymmetric aspects of production and consumption, and therefore these devices fundamentally become, vehicles of acquisition. As Pold and Andersen observe, even artists and developers who contribute to these platforms with cultural content have to accept so many conditions that turn them into a kind of "specialist consumer", requiring licenses to develop their products, and who, in addition to sharing profits with the platform, must go through a series of algorithmic filters which determine whether their production would be suitable for digital platforms or not. In the case of the relationship between musicians and apps, we can not think of corporate mobile interfaces in the same manner that we treat other electronic instruments - *Theremins*, modular synthesizer, *Ondes Martenot*, effect pedals, etc. - because they are fundamentally based on the logics of planned obsolescence and consumer platforms. They are ephemeral media. Excessive control over copyright also affects creation, by limiting or banning, practices of appropriation and reinterpretation of cultural content. The musician is subsumed by the system of which the mobile devices are a part of. He becomes a victim of a capitalist Stockholm Syndrome, and even while suffering the consequences of a market ruled by planned obsolescence, continues to use and consume devices, and thus becomes a form of advertisement for these technologies. It appears to be a dead end.

Production and reproduction of mobile sound

At first glance, the idea of a mobile experimental music, could have brought something much more poetic and revolutionary. It is no coincidence that authors related to the International Situationists, specially Guy Debord, are recurrent references in articles, work descriptions and titles of Mobile Music artwork. The idea of inhabiting public space, exiting the terrain of artistic institutions, exploring playful aspects in situations of everyday life as well as promoting collaborative creative processes, makes up a large part of the imagination of the Mobile Music community. In 1984 Shuhei Hosokawa, with his definition of "Musica Mobilis" is already trying to see the walkman as a trigger of types of urban "Gesamtkunstwerks", in which the listener can hear and interact theatrically with different sound layers that are in urban space that would leak by the headphones⁸. The listener through a polyphonic perception of the environment would be responsible for a kind of spontaneous musical composition.

It is interesting to observe that Hosokawa associates a device defect to highlight a possibility of re-signifying the aural public space. If the user had headphones that would completely isolate the external sound, and thus work perfectly, it would be an impediment for the realization of polyphonic listening proposed by the author. Hence, Hosokawa explores the precarious materiality of the media to develop his theory, unlike the texts of researchers associated with the MMW and Ge Wang, cited above, that accentuate the qualities of the devices, which are many times idealized due to a marketing discourse.

In our perspective, to work with sound and mobility is itself to make an apology to the precariousness of mobile audio reproduction, in regards to fidelity⁹. Until today, sound fidelity and portability are inversely proportional. Thus, defending a precarious sound fidelity reproduction is to promote not only the mobility of sound, but the mobility of listeners and producers. The materiality of sound mediated by portable devices is poor. These are compositions of trebly soundscapes, distorted and with low definition; something very divergent from the visual design of the products that are sold. After all, the 'bass' is heavy and dependent on large speakers, and hard drive capacity is small if we consider the multitude of tasks that have converged in the form of applications on these devices. To speculate on the possibility of a more critical practice of Mobile Music – as opposed to Mobile Music that depends entirely on the means of production provided by large corporations – it is necessary to hear the reality of the ubiquitous sounds of everyday life, the proletariat of sound reproduction, and observe the interface of cultural developments and the economics of digital content in different social contexts.

The ubiquity of mobile sound implies social situations and forms of listening in which the interface becomes a means of aesthetic expression, and often political expression. The opposition between high-fidelity and portability makes the issues of mobile listening an integral part of an economy of precarious sound: "The MP3 is the most common form in which recorded sound is available today" (STERNE, 2012, p.1). The success of this type of compression occurred mainly because of two elements: small size of the files, allowing users to store more songs in less space and facilitate the exchange of data via the network, and of course, the form in which we listen to music. As pointed by Fernando Iazzetta, MP3 encoded music is heard in cars, mobile phones and laptops. Often these devices promote types of disinterested listening, composing a soundtrack for other activities. This posture makes the failures of compression practically unnoticeable, after all other noises external to the recordings, such as the urban space, and the limited spectral range of speakers, transform by itself this kind of listening into a low fidelity experience between original source and its representation.

The technique of removing redundant data in a file is called compression. The technique of using a model of a listener to remove additional data is a special kind of “lossy” compression called perceptual coding. Because it uses both kinds of compression, the MP3 carries within it practical and philosophical understandings of what it means to communicate, what it means to listen or speak, how the mind’s ear works, and what it means to make music. Encoded in every MP3 are whole worlds of possible and impossible sound and whole histories of sonic practices. (...) The MP3 encoder works so well because it guesses that its imagined auditor is an imperfect listener, in less-than-ideal conditions. It often guesses right. (STERNE, 2012, p.2)

These less-than-ideal situations presupposed by the MP3 inventors are constantly present in everyday life: street vendors, cars stereos, boomboxes and loudspeakers of laptops and mobile phones. This range of devices that distort the original recordings and add noises to urban space, in general, do not reproduce low frequencies. According to Wayne Marshall, these are elements that define the current “Treble Culture” (MARSHALL, 2014, p.43). In this context, mobile phones have become one of the main interfaces to consume and play music.

Mobile listening directly influences our sound environment. Devices become a type of acoustic demarcation in space. One of the recurring terms in experimental Mobile Music artistic practices is to create ‘spatial awareness’ usually done through sensors - such as a GPS - that scan data from places where the work occurs. However, the simple practice of public listening could also be a way to propose a “cultural space awareness”. For example, to see people listening to music without headphones in public transport is a common scene. In some cities, such as São Paulo, it became an illegal activity:

Law No. 15.937, 23rd OF DECEMBER, 2013

Art. 1 In order to preserve the acoustic comfort of users and combat noise pollution, the use of musical or audio equipment, except through the employment of headphones, is prohibited inside all collective transport vehicles, both public and private, operating within the municipality, regardless of the agency or entity responsible for the administration of said vehicle.

In England, a particular word has been created for this type of activity, called *Sodcasting*. The word is a neologism joining “sod” and “broadcasting”, so we could understand what it would mean literally. However, if we have look at the Urban Dictionary, it gives a much more specific meaning to it: “Verb - The act of playing music through the speaker on a mobile phone, usually on public transport. Commonly practiced by young people wearing polyester, branded sportswear with dubious musical taste” (Chris and Roj, 2007), exemplified as “Delia was exposed to hip hop for the first time last Wednesday, when, on the 75 bus to Catford, a youth was sodcasting from the back seat” (*ibid.*).

I'm the man with a box that can rock the crowd
 Walkin' down the street, to the hardcore beat / While my JVC vibrates the concrete
 I'm sorry if you can't understand / But I need a radio inside my hand
 Don't mean to offend other citizens / But I kick my volume way past ten

(...)

Get fresh batteries if it won't rewind / Cos I play everyday, even on the subway
 So get off the wall, become involved / All your radio problems have now been solved"

(LL Coll J, 1985)

This excerpt from the lyrics of *I can't live without my radio* represents one of the strongest cultural aspects of the boombox in the 80s. One can observe an appropriation of public space, including public transport, something very similar to sodcasting situations. The journalist Dan Hancox (Hancox cited by Marshall, 2014, p.43) considers interventions with mobile devices a form of politicized resocialisation of public culture through collective listening. To think about this resocialisation of a sound culture through mobile listening is also a way to prioritise portability in relation to sound representation fidelity. In this type of precarious reproduction, listening would not be restricted to hear the complete spectrum of a recording, but, rather, perceive a hue of a musical genre and its social values, which might provoke an "awareness of a space" in conflict. The hue of musical genres continues to invade the daily lives of those who use public transportation even after the prohibition of sodcasting in São Paulo. Its cultural significance remains regardless of the precarious sound fidelity. The means of sound reproduction are a fundamental sign of cultural identification.

The forms of reproduction influence directly the production processes of sound. According to Greg Milner, since portable radios became popular, musicians started to think about how they could create content that would sound better in that context, which at the time took the form of AM radio broadcasts played through small speakers. This movement caused the development of a specific type of sonority, that sounded much better on portable radios than other devices, that could reproduce audio with higher fidelity. Due to this aspect, when we hear some of the mixes made by producers such as Phil Spector and the Motown label in "ideal" conditions, the recordings may appear to have a reduced sound spectrum. They are mixes designed for specific media. The same phenomenon occurs in the current "Treble Culture".

In the economy of precarious sound there is a continuous feedback between production and reproduction, turning defects and mediated listening situations into artefacts of creative processes. In the same context of sodcasting, Marshall notes that part of the popular genre in the UK, Grime, uses the reiteration of MP3 compression as a process to create sonic textures that work perfectly in speakers of laptops and mobile phones. For example, the track *R U Double F*, by Ruff Sqwad, which is composed of beats compressed several times and made available to download only in a very low definition format MP3 (64 kbps)¹⁰. In this case, the process becomes a stylistic signature of the genre, incorporating the compression artefact as a technique. This process inverts the idea of digital audio fidelity. After all, the low definition file is the most faithful representation of the piece.

A recent development in Brazilian Funk music makes use of similar techniques¹¹. A tendency rooted in producers working in Belo Horizonte, is to transpose the bass beats to much higher pitches, enabling any mobile device to reproduce their songs with much more accuracy, maintaining and developing the style's most important characteristics¹². Perhaps in a wider Interference Journal February 2018

view another Brazilian genre, Tecnobrega, could also be a clear example of an economy sustained by the constant flow of production, exchange and re-utilisation of sound material. The compositional process, as described in a superficial way in the documentary *Good Copy Bad Copy*, is directed by a music producer and is based on downloading music in MP3 quality, treating the material and adding the bass line and sounds which characterize Tecnobrega. The same material returns to the network and often the process is repeated; the beats are remixed again, compressed and reused.

The sound is gradually dematerialised. The use of sound degradation as a procedure does not stop in itself; it is not just an audio effect, but a way of showing part of the infrastructure of production and reproduction. The form in which the content is manipulated and presented shows the system in which the artwork is inserted: from the MP3 downloads to sodcasting on buses.

Critical Mobile Music

In principle, making Critical Mobile Music would be to engage in creative processes that reflect mass mobile media, and to create artwork that does not depend exclusively on the means of production regulated by a controlled consumption market model, as defined above. Throughout the research, between 2012 and 2015, we developed some artistic projects highlighting aspects observed in this text, such as sound fidelity, programmed obsolescence and low fidelity file exchange. The works Narva and Bloco Ruído, developed throughout the research, were not thought of as a solution or response to the Mobile Music paradigm which we criticise, but as an extension of the questions and observations we are making.

The Narva series consists of two performance objects¹³. *Narva 1* focuses on a discussion of the fidelity of sound reproduction mediated by technology. The work was made with vinyl records, piezos, nails and a microcomputer. We produced two different LPs: the first record contains a solo piano recorded in studio and captured with quality microphones in 192khz and 32 bits, and therefore made with high fidelity. In the post-production process, we compressed the recording into a MP3 format repeatedly and changed some parts of the source code of the digital file to create compression errors which became audible. Then I remixed the material with parts of the original recording, creating a collage between low-fi and hi-fi and unbalanced textures. The second record contains silent recordings that have gone through the same process of compression and file corruption¹⁴.

The records are played with one or more nails spiked through contact microphones in different positions. This way it is possible to listen to multiple grooves at the same time, and each 'needle' has its own characteristic. During the performance, the nails as resonators destroy the grooves of the record, and in a first phase generates different kinds of closed loops on the vinyl, and then the groove is degraded until only the sound of the nail friction against the vinyl remains. Soon, the sound is unevenly spread between new and worn-out grooves. The microcomputer is controlled by motion sensors and buttons, and it overlays and distorts in real time samples recorded during performance.



Figure 1
Narva 1 by André Damião. Picture by Marília Furman

In this precarious system, the sound path overshadows the original source and highlights the materiality of the involved devices: the sound of compression, the noise of vinyl scratched by the nails, and the digitization process. The system itself becomes an artefact with its own sonic and instrumental characteristics. In this case, there is no loss of sound fidelity, as this is the desired result, and it defines the limits of the work.



Figure 2
Narva 2 by André Damião. Picture by Marília Furman

The second object of the series, *Narva 2*, is an audio-visual instrument, made from a portable tube television fabricated in the late 80s¹⁵. We have added an exoskeleton with sensors and micro-controllers, which digitize the performer's movements and emit an analogue signal that generates audio and video. The original function of TV had lost its meaning years ago, and so we had to go through a stage of analysis to rediscover and recreate what could be its new functions. The specificities of the electronic components determined many of the changes that could be made. The TV could break down at any time and there would be no replacement parts. Developing new functions for old media would be a reverse process to that which we have observed in most Mobile Music groups that use smartphones and tablets as their primary device. The process of working with old does not involve considering the future and what could be done with new media, but rather rethinking the past and analysing its impact on the present. To work with this kind of precarious media proposes a reflection on the notion of progress, and the linearity of this process, and its connection with the mass production of technological devices. To search for the logic of precariousness would be to oppose the ephemerality of new media. The precariousness would represent persistence, a rebuttal of obsolescence, while the ephemeral would only follow the logic of capitalistic production, which depends on discarding. The precarious device is a form of resistance.



Finally, based on these reflections, in the context of itinerant Mobile Music in public spaces, we created the *Bloco Ruido (Noise Crowd)*¹⁶. The sense of precariousness in the *Bloco Ruido* takes another form, which is not restricted to the objects, but would be relative to personal relationships. It is a Carnival group which crosses the centre of São Paulo on Ash Wednesday. The action is not limited to performance, but extends throughout the process of organization and manufacture of performance objects, which are made by most of its 30 members. The devices which we build are simple and produce only noise with high-pitched sounds. However, the need to build many instruments, amplifiers and accessories to produce noise in open space is laborious, and it becomes essential to collaborate with each participant, with whom a bond of mutual dependence is created from the beginning of production to the end of presentation. By creating some form of dependency bonds between the members of the group, in the act of manufacturing and performance, we encounter a series of expectations that are transformed along our path. This is an uncommon condition for electronic music, which highlights a sense of community. The form demands an active presence of all those involved.



Figure 3
Bloco Ruído workshop. Picture by André Damião

One of the objectives of the group in its course, is to traverse different architectural spaces, so that the noises resonate and reflect in different ways. The groups walk actively builds a mobile aural space, which is altered by the architecture and sounds of the city. The continuous walking makes the modulation of sound through space perceptible. The echoes of the block sound radically different when passing through open areas or the underground passages of the subway, thus providing an acoustic perception of the architectural structures of the city.



Figure 4
Bloco Ruido performance. Picture by André Damião

Conclusion

This economy of Music in motion seems to be much richer if compared to the artistic community restrictions and definitions of Mobile Music. Perhaps Mobile Music, in the way it appeared as a genre and was perpetuated in conferences and festivals of art and technology, is not something in itself, but only a convergence of many practices of experimental electronic music that already existed. The compositional approaches are a result from the same process of convergence that mobile media went through in the last century. In the case of academic Mobile Music, experimental music and sound art practices such as experimental instrument building, network music, sound walks, circuit bending, multi-channel diffusion, hardware hacking, live coding and others are simply transferred to mobile devices. The same aesthetic proposals and methodologies are transferred directly to a new media, and when they are integrated into an artwork with some success, the inherited process is reframed due to the mobility provided by, or for, the instrument and form of listening.

However, it does not seem comparable to the cultural and economic complexity of which these devices are a fundamental part. So perhaps this lack of definition of genre, or limitation, is not a problem in itself. The real discussion that permeates this issue is the need for building a macroscopic awareness of a system in which the interfaces are inserted, and which suggests that the community working with art mediated by electronic technologies, could establish, considering the situations of consumption and production, music beyond the concert halls and galleries. While working in the key of innovation which often transpires in the experimental music field as an exchange of the search for the "new sound" pursued by the vanguards of the twentieth century in the quest for "new technology", without considering the specificities of each medium and what is its real social impact, we will continue doing more of the same, regardless of the media we use.

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Footnotes

¹ <http://www.attayaprojects.com/work/mobile-music-workshop>

² Such as Electrical Walks by Kubisch, Audio Walks by Cardiff and Audio Ballerinas by Maubrey

³ <https://vimeo.com/39001483>

⁴ <http://www.yugo.at/handydandy/>

⁵ See transcription of the iPhone release talk by Steve Jobs [0:49:02]. Available at:

<http://www.european-rhetoric.com/analyses/ikeynote-analysis-iphone/transcript-2007/>

⁶ Examples:

Mobile Phone Orchestra (MoPho) – <http://mopho.stanford.edu/>

Michigan Mobile Phone Ensemble – <http://mopho.eecs.umich.edu/>

DigiEnsemble Berlin – <http://www.digiensemble.com/>

⁷ Concerto for iPad Orchestra by Ned McGowan, performed by Keiko Shichijo on the iPad with the Sinfonia Rotterdam, conducted by Conrad van Alphen. Available at:

<https://youtu.be/eRYkC6fY190>

⁸ "music whose source voluntarily or involuntarily moves from one point to another, coordinated by the corporal transportation of the source owner(s)" (HOSOKAWA, 1984:166)

⁹ By precariousness in this article we do not mean only "unstable" or "badly done", but we appeal to a wider discussion in the field of art, held by artists and authors such as Hito Steyerl, Thomas Hirschhorn and Hal Foster. In this paradigm what might sound as an apology of precariousness could also be interpreted as forms of resistance and problematization of the *status-quo*.

¹⁰ <https://www.youtube.com/watch?v=Q3C5NMEek-E&feature=youtu.be>

¹¹ For informations on brazilian funk check *Un funk trop bruyant* written by Carlos Palombini. Accessible at:

https://www.academia.edu/17249492/Carlos_Palombini_et_Paula_Salnot_Un_funk_trop_bruyant

¹² Some examples can be listened at: <http://www.ovolumemorto.com/single-post/2017/02/15/inestan-subaco-e-os-bailes-de-bh-um-ambient-space-funk>, listed by GG Albuquerque.

¹³ The series title refers to the East German Narva factory, which was the only lamp factories which rejected the Phoebus Cartel determinations, which was the first multinational action of planned obsolescence, in which the participants set an arbitrary maximum limit for the duration of their products.

¹⁴ <http://andredamiao.hotglue.me/narva1>

¹⁵ <http://andredamiao.hotglue.me/narva2>

¹⁶ <https://www.facebook.com/blocoruido/>, <https://www.youtube.com/watch?v=m2ivZ0ftvrc>

Biography

André Damião is an artist who works transversally between the fields of music and electronic art. He graduated in Composition at the State University of São paulo (UNESP), and is a PhD student in Sonology at hte University of São Paulo (USP). He has presented his works in galleries and concert halls in 18 countries. <http://andredamiao.hotglue.me>

From Control to the Non-Cochlear – Evolving Strategies of Sound Art Curation

By Jason van Eyk

Abstract

Over the last fifty years, Sound Art has found a growing prominence among artists, interest among curators and importance in the contemporary art world. Despite this situation, the category continues to sit uncomfortably within the space of Western art galleries and museums. Ongoing attempts to remediate official art histories, the visual logic of exhibition spaces and institutional practices toward Sound Art on the whole have been lacking. Therefore, the need for a productive method of Sound Art curation remains. This paper makes a first attempt toward describing such a method. It approaches the topic through a critical examination of selected Sound Art survey exhibitions and group shows staged within Western arts institutions over the last twenty years. The resulting analysis gives definition to the territory within which curatorial strategies can claim potentially productive practices, thereby arriving at a set of notes to the curator toward a gallerisation of Sound Art.

Keywords

Contemporary art, Curation, Conceptualism, Galleries, Materiality, Museums, Sound.

Convergences and Contradictions in the Exhibition of Sound Art: An Introduction

“Today more than ever, sound participates in the writing of a contemporaneity that produces new signs and relinquishes the predominance of vision” (Lavinge, 2016, p. 9).

Over the last fifty years, an increasing number of sound-based works have filtered up through artist-run spaces and site-specific locations to occupy a greater share of the collections and exhibition schedules of Western art galleries and museums. This development has come about through the concurrence of social, political, conceptual and technological advances that have enabled the emergence of a “sonic turn,” asserting sound’s significance as a site for analysis, a model for theorization, and a medium for artistic engagement (Drobnick, 2004, p. 10).

The path to the point where sound can be conceived as a legitimate artistic **gesture** is further marked by a well-documented and far-spanning breadth of hybrid experimentations incorporating sound into art and art into sound. It is a path that in many ways follows the 20th Century progression towards a more fulsome *Gesamtkunstwerk*, simultaneously shifting the place of presentation for such all-arts alliances from the concert stage to the white cube. Despite past attempts of art historians to keep sound and vision as separate territories (i.e. in the concert hall and in the gallery), the fact is that the substantial history of intermediality and multidisciplinarity brings these two materials together:¹

“One could easily argue that sound art, as a discrete practice, is merely the remainder created by music closing off its borders to the extramusical...Sound art is art that posits meaning or value in registers not accounted for by musical systems. Unlike sculpture, and to a lesser extent, cinema, music failed to recognize itself in its expanded situation. Instead, it judged the territory adopted by expansion as alien and excluded it...The term “sound art” suggests the route of escape from music, the path of least resistance available to this errant practice. The gallery-art world, having already learned the tricks of expansion and the assimilation of once-excluded modes, proved a more hospitable homeland for the sound practice of the late-1980s, the 1990s, and the 2000s.” (Kim-Cohen, 2010, p. 3)

An art world in which sound exists as a discrete artistic material, medium and form of expression undoubtedly offers exhilarating new potentials for artists. But it also presents an equally perplexing set of challenges for gallery-based curators. This is the case simply because the demands of an expanded contemporary curatorial practice that can adequately account for Sound Art often press up against the vestiges of official histories and their expression within institutional traditions. For example, if a gallery’s primary objective remains to help arrange, partition and fix art objects in space in ways that optimize their visibility and contemplation with minimum interference, then art-world structures remain unready for sound. Sound does not submit to the gallery’s rectilinear logic nor to its sealing, aesthetic glaze. Rather, sound has the habit of spreading, leaking and bending around corners (Connor, 2011, p. 129). Fundamentally, it is in sound’s nature to be free, diffractive and uncontrollable, to go places where it’s not supposed to go.

As a result, Sound Art does not wait for the curator to catch up. As artists’ experiments continue to dismantle the audio-visual litany that has maintained a privileged divide between the sonic and the visual, they invite Sound Art to resonate beyond expected borders into a myriad of new futures.²

This then begs the question: How do we address Sound Art and its curatorial complexities within the expanded field of contemporary art practices and within gallery spaces? How do we welcome the category to exist equitably and with integrity, whether on its own or alongside other media, and in manners that successfully meets its public? With this paper, I make a preliminary approach toward some possible answers to this question.

As is often the case, the future is accessed through the past. I will give a fair bit of space to the critical examination of a selection of important group shows of Sound Art staged within Western arts institutions over the last twenty years. I’ve selected these exhibitions – curated by Germano Celant, Jesper Jorgensen and Christine van Assche, as well as by artist-curators Christian Marclay, Christof Migone and David Toop – for the methods in which they operate at different levels of scale of scope, intent and organization; but even more so for the way in which they altogether demonstrate an ongoing shift in curatorial strategies in response to exhibiting Sound Art within the ubiquitous white cube of the contemporary art museum. My hope is that this analysis gives some definition to the territory within which such strategies might claim potentially productive practices. With them, I pursue an answer to the questions above as well as to ‘How far have we come in creating a hospitable homeland for sound practice?’ This work arrives at a set of notes to the curator for the possible gallerisation of Sound Art.

But we need to push this thinking further to address recent theory and remaining discrepancies in curatorial thinking about sound. I extend the conversation by examining a personal curatorial project that points to emerging practices that counterpoint a perpetuation of institutional traditions within recent Sound Art survey shows.

Case Studies: Methods of Exhibiting Sound as Art

The 1970s witnessed the presentation of twenty-one sound exhibitions in museums worldwide. By the 1980s this number had grown to sixty-two (Cluett, 2013, pp. 122-128). The sonic turn of the mid-90s fueled this growth pattern further such that, by the turn of the millennium, Sound Art group exhibitions began to appear in major art institutions under the curation of leading practitioners in the field. Lending such space, talent and resources to the category, and in such a focused manner, has invited the possibility of developing more substantial curatorial thinking concerning Sound Art. The results of these exhibition experiments point us toward two predominant strategies.

Containment / Control

Registered attempts at staging Sound Art exhibitions in the early 2000s demonstrate a curatorial preoccupation with contextualising the presentation of sound-based works as much as with how to address the material and spatial conditions of sound itself.³ Sound is unlike other artistic materials. It has the additional ability to be simultaneously detailed and diffuse, penetrating and permeating, immersive yet focused. As such, sound has the capacity to envelop and form space in manners that not only give a sense of its outlines, contours and surfaces, but also can define its qualities and relations. Furthermore, we know that the human ear is always open. As a result, one cannot listen away from sound in the same way one can look away from a painting. Therefore, whatever audience is present in the gallery to perceive Sound Art has no choice but to be receptive and engaged with it. For these very reasons, when sound is invited into the sealed-off and static space of the gallery, it offers thrilling possibilities that, if not properly handled, can be equally calamitous from a curatorial perspective (Connor, 2011, pp. 129-134).

These concerns were present when David Toop assembled *Sonic Boom* (2000), one of the first-ever surveys of Sound Art in Britain. Billing himself as the exhibition's 'Selector', Toop's primary objective was to feature artists who had made a commitment to working with sound to articulate physical space.⁴ When asked how the works by the selected twenty-three artists would mix successfully within the Hayward Gallery, Toop answered:

"I chose artists and musicians who I imagined and hoped would be flexible and compatible...I decided not to select artists who I thought would suffer badly if their work was infiltrated and swamped by external sounds, or who might insist on imposing oppressive sound levels on everybody else." (Toop, 2000, p. 15)

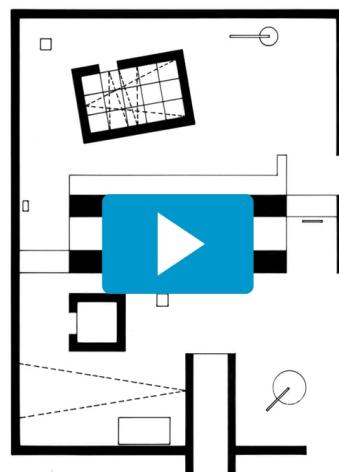
The represented artists were no doubt pleased to be included in such a groundbreaking show but also wary of the potential for sonic interference generated by the proposed exhibition sequencing. In fact, critical reviews were quite open about the resulting cacophony of Toop's display (Martin, 2000, p. 1), as were the recorded accounts of participating artists protesting their 'noisy neighbours' in the Gallery (Connor, 2011, p. 131). Nonetheless, Toop defended his approach:

"Firstly, it wasn't a problem, and secondly, I didn't want to keep them separate ...the character of music in the present time is that it all overlaps. We are saturated by sound now. We walk around and we move through constantly changing soundscapes, different types of music, different genres of music overlap all the time...you are almost walking through an environment where one sound overlaps and then you walk away from that sound and it fades and you walk into a new sound. So the gallery is the total, immersed experience and hopefully that transforms the gallery from what we think of as being a rather sterile space for showing art to something which is more alive and human." (Toop as cited in Martin, 2000, p. 1)

This statement certainly rings true with those reasons for why sound has been brought into art and the art world. Yet, I can't help but feel that it also smacks of justification instead of curatorial intent. Even in the most radical of displays, the curator bears responsibility for establishing links, correspondences and dialogues between works in a manner that respects the integrity of each artist's contribution while simultaneously enhancing the audience experience of each individual work and the exhibition as a whole. Despite 20th Century art movements like Dada and Fluxus that establish precedents for melding art, music and everyday life inside the gallery, an exhibition like *Sonic Boom* offered a unique opportunity to present a wholly different perspective and perception of the art of sound; one vastly different than the cacophony its audience no doubt experience everyday within London's urban soundscape.

I doubt that Max Eastley's *Architecture* (2000) sounds sculptures, their fine wires designed to produce delicate and ethereal sounds, succeeded within Toop's strategy. But Eastley was not alone. As a result, Toop was forced to resort to a standard response to exhibiting Sound Art: works were placed outside of gallery walls (Christina Kubisch's *Oasis* (2000) in particular) while others were partitioned by extra walls and yet others were placed within their own sound-insulated rooms (Connor, 2011, p. 131). Exhibition designer Ian Ritchie's floor plans show exactly how heavily divided the exhibition space had become as a result (Ritchie, 2000, p. 1).

Sonic Boom (2000)



R. Murray Schafer reminds us that such practices exist beyond gallery politics into the history of music performance. Music has long been housed within special architectural

containers intended to enhance its ‘proper presentation.’ Such efforts simultaneously lead such art form’s evolution towards more refined expressions but also away from everyday experience (Schafer, 1992, p. 35). This impulse to spatially contain and control sound remains difficult to escape.

But I truly think the root curatorial issue with *Sonic Boom* is not with these display remediations, but rather with Toop’s curatorial concept in itself. It is too firmly rooted in his particular views of sound as an extension of music and not nearly close enough to the intermediality of Sound Art itself. Reading his catalogue essay reveals a problematically pervasive situation of the category within Western classical music traditions, sustaining a terminological divide between the two sides of sound and art. This position is further complicated by what I consider a misreading of soundscape theory by which Toop characterizes the last century of music as a “feeling of immersion...a field, a landscape, an environment...an ocean” (Toop, 2000, p. 113). He describes *Sonic Boom* in these same terms, offering “a landscape of the imagination...a total environment for all of the senses.” (Toop, 2000, p. 121). But his landscape is one envisioned as some sort of emulsified liquid state in which works “linked at a profound level of sonic disturbance” are blended and suspended into a lo-fi acoustic field that inevitably lacks the soundmarkers and hi-fi elements of a rich soundscape composition. As a consequence, *Sonic Boom* as an exhibition experiment runs counter to both avant-garde musical theory and common curatorial sense. It fails at the conceptual level, and to such a degree, that containment remains as the only available mode of redress.

Curator Christine van Assche positioned her 2002 exhibition *Sonic Process* as a further attempt in the direction of successfully exhibiting sound work – in this particular case, exploring the electronic music explosion of the 1990s and its intersections with the visual arts. As she rightfully and astutely recognised, the exhibition of sound works runs against the grain of standard museology and therefore requires additional thought towards acoustic parameters. Her particular response was twofold: first, to adopt a different architectural model (the sound studio) to produce optimal listening conditions; and second, to use a set of sound data banks accessible through headphones to broaden the range of available sound works. Ultimately, each invited artist was provided with their own ‘sound studio’ in which to present their work. Within these spaces, van Assche encouraged the artists to embrace the performative and mutable character of sound that renders the work “at the risk of...losing its limits” (van Assche, 2003, p. 12). However, such sonic liberation could only take place within the confines of the assigned space. In her exhibition essay, she readily admitted that the overall presentation concept reduced the placement of work and circulation among them to purely functional parameters: “Under such circumstances, it was not conceivable to imagine a conceptual trajectory the way curators are accustomed to doing” (van Assche, 2003, p. 11).

In my opinion, *Sonic Process* presents an opposite problem to *Sonic Boom* in addressing the sonic in art. All of these headphones, data banks and listening-privileged ‘sound studios’ ironically disempowered Sound Art to deliver the mixing and intermingling’s that are part of its very potential; a potential that Brandon Labelle helps us recognize for its capacity to generate a coherent sense of community:

“Sound supports meaningful exchanges by locating us within a greater social and energetic weave. From my perspective, sound operates as an *emergent community* by linking together bodies that do not necessarily search for each other and bringing them into proximity for a moment, or longer. This dynamic

establishes a spatiality that coheres temporarily, as a space to dwell, while also being immediately divergent and diffuse." (Labelle, 2017, p. 2)

Held fast in their pods, no community could emerge in van Assche's exhibition. But if we can push Labelle's thought further, I would say that sound interweaves not only across bodies but across aesthetics, ideas and politics as well. From this perspective, a more fundamental criticism was leveled against *Sonic Process* by one of its own artists. In the foreword to a reprinted version of his catalogue essay, Mike Kelley noted that the exhibition leveraged the rhetoric of appropriation, fracturing and collage derived from avant-garde sources to lend legitimacy to exhibiting popular forms of electronic music. Yet, the constrained and commercial nature within which most of this music is produced is wrongly linked to the radical intentions of modernist innovators:

"The art institution's recent embrace of such popular forms of music, which are diluted versions of more complex and radical sources, is, I believe, a tactic designed not to re-evoke historical precedents but to neuter them, to depoliticize them by presenting them as harmless fun..." (Kelley, 2003, p. 23)

Taken altogether, these analyses render van Assche's exhibition as a diluted attempt at perpetuating neo-modernist movements that pay little attention to sound's inherent entanglements. Consequently, the end result of this curatorial experiment remains in many ways as flawed and unresolved as *Sonic Boom*.

One example from this same period can be credited with an advanced appreciation for Sound Art: Jesper Jorgensen's *Frequencies [HZ]* (2002) for Frankfurt's Schirn Kunsthalle threw out the idea of producing the typical survey show to focus on a selection of artists whose work explored the interrelations between art, sound, space, technology and society in ways that expressed the permeability between these boundaries (Jorgensen, 2002, p. 13). His catalogue essay articulates a refreshingly reflexive and self-aware curatorial thinking not witnessed elsewhere and I think that the results bear out well in the exhibition itself.

While Jorgensen recognizes that bringing together a group of artists who work in one medium runs the risk of being perceived as an 'old-school' format (much like a painting exhibition can be bound by its formal focus), he is explicit in his intention for *Frequencies [HZ]* to suspend its audiences' experience somewhere between the formal, the scientific, the architectural and the social-relational (Jorgensen, 2002, p. 85). Jorgensen is also keenly aware of the intermedial and intertextual frameworks of sound art practice and how these relate to the manipulation of the temporal and spatial economies of audiovisual media designed to grasp an audience's attention and subvert their perceptions (Jorgensen, 2002, p. 78). As he astutely summarizes:

"Sounds has the ability to diffuse as well as to inform; it is limited by physical obstacles at the same time as it can dissolve architectural limitations. It deals with time, duration and distance via its constant presence and its construction. It is political, both as a means of communicating information and of interfering in the flow of communication. The artists all relate to...the use of sound in creating or intervening in architectural environments and society." (Jorgensen, 2002, p. 85)

What was equally refreshing with *Frequencies [HZ]* was its Meander model of exhibition design – a sequenced series of variably-sized and acoustically prepared

exhibition halls “conceived to accommodate various sound objects such that they retain their autonomy but together form a continuous space” (Diederichsen, 2002, p. 181). In asking the fundamental question “can audio objects be put on view?” the *Frequencies [HZ]* design team directly contended with the constant conflicts found between the autonomy of sound works and the heteronomy of their exhibition within museum space. It did so by honestly pointing out those blind spots that limit the equal privileging of sound and vision. The solution in this case was to embrace the blind spot directly within the Meander prototype to develop an innovative “cube hypothesis” where each gallery operated somewhere between a non-white-cube and a non-black-box (Diederichsen, 2002, p. 187). Fundamentally, the Meander was the solution *Sonic Process* should have delivered, an assembly of customized sonic cubes equipped as both sound studios and display spaces to accommodate the unique conditions of each exhibited art work while retaining a clear conceptual trajectory.

By inviting audiences to perceive Sound Art in these new ways, *Frequencies [HZ]* offered an exhibition experience that was noted as being less prescriptive and predictable (Kraut, 2012, p. 372). Austrian artist Franz Pomasll fashioned one stage of the Meander as a completely darkened space navigable solely by low-frequency emissions from an array of loudspeakers, while Ryoji Ikeda’s 30-metre long corridor heightened the anxiety of its narrow confines with high sine tone diffusion and intermittent strobe light flashes that lit the way (Fricke, 2002, p. 1). Many of the other works exhibited in *Frequencies [HZ]* extended this interactive dialogue between sound, architectural surroundings and social experience in ways that, even if only conceptually, overturned the control relationship between sonic practice and institutional space. Carl Michael von Hausswolff transformed the building’s electrical grid into something audible with his *Parasitic Electronic Seance* (1997-2002), while Grönlund and Nilsen’s parabolic mirrors (*Ultrasonic*, 1996-2002) oscillated across emitted frequencies dependent upon localized readings of environmental radiation.

Unfortunately, where *Frequencies [HZ]* failed was in grasping the imagination of the audience toward sound serving as an art form in itself. Critics suggested that the exhibition amounted to little more than a series of scientific experiments with the feel of a physics laboratory (Fricke, 2002, p. 2). Often the complexities of the artworks lacked enough visual interpretation to hold interest, veering toward little more than illustration (Heiser, 2002: p. 2). In retrospect, I would argue that we can interpret such criticism as being based in an inherent bias toward the visual, which is far from unusual. As one critic noted, the coloured light boxes of Angela Bulloch’s *Geometric Audio Merge* (2002) “felt like a welcome figurative intrusion into the arctic sparseness of the abstract soundscapes” (Fricke, 2002, p. 2). The exhibition’s audiences, entrenched in long-formed habits of experiencing strictly visual art exhibitions, were clearly not yet ready to receive what was a well-considered and coherent curatorial experiment that truly understood and treated sound as art.

Correspondence / Co-Existence

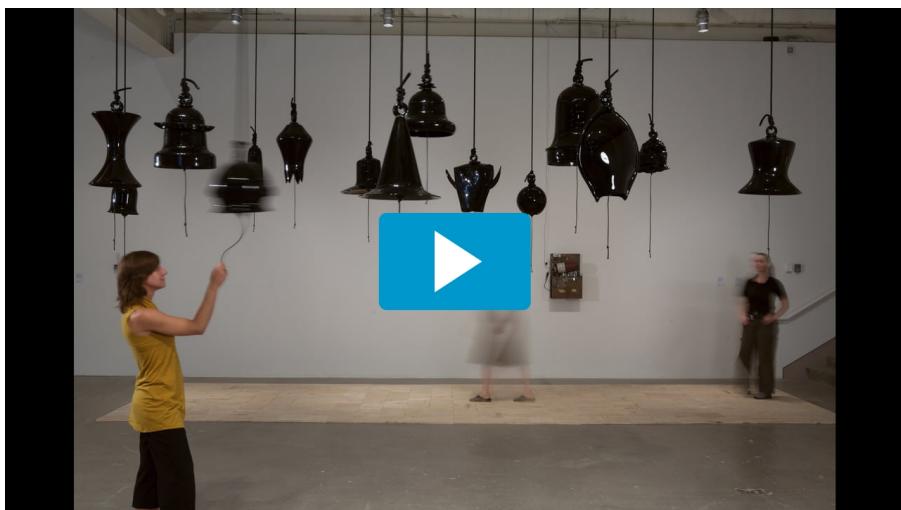
Sound Art exhibitions of the last five to seven years have moved beyond these reliances on audiovisual and spatial divides. Since the mid-2000s, we have begun to receive shows that have involved a much more critically-minded approach to curation, opening onto new territory. They have embraced the unique power of Sound Art to turn the gallery inside out, exposing it to its other(s). In fact, it is in embracing the opposition of the white cube to sound that its architectural, spatial and socio-cultural tropes can be simultaneously engaged as an excellent conceptual frame for Sound Art (Connor, 2011,

p. 137). And it is within this situation that the capacity to both critically and reflexively advance discourse beyond other forms of art is amplified. Consequently, curators have been embracing the productive contradictions within the gallerisation of Sound Art to create new strategies and approaches to their work.

Christian Marclay's *Ensemble* (2007) exhibition for the Philadelphia Institute of Contemporary Art remains one of the best early examples I can find of this new approach to Sound Art curation. As he asserts in his exhibition essay, the desire for curators to isolate, contain or control demonstrates a lack of understanding of sound itself. Instead of explaining away disruptive acoustic overlays, sounds should be enhanced in exhibition through links, correspondences and associative play in the same manner that any other series of artworks would be treated.

In approaching his exhibition with the ears of a composer, rather than solely with the eyes of a curator, Marclay assembled twenty-seven mechanical, kinetic, interactive yet always acoustic works with a considered sense of how they might mix and play together, much like a musical ensemble might. In so doing, he also embraced the existing room tone of the ICA's open gallery space as a display condition. Within such a spatial situation, Marclay's ensemble – ranging the subtlest of sounds (Céleste Boursier-Mougenot's meditative *Climamen* (2013)) to the most aggressive (the shrieking sirens of Yoshi Wada's *The Alarming Trash Can* (1990)) – ebbed and flowed organically over time to generate a wide range of new sonic events resonating across a shifting aural landscape.

Ensemble (2007)



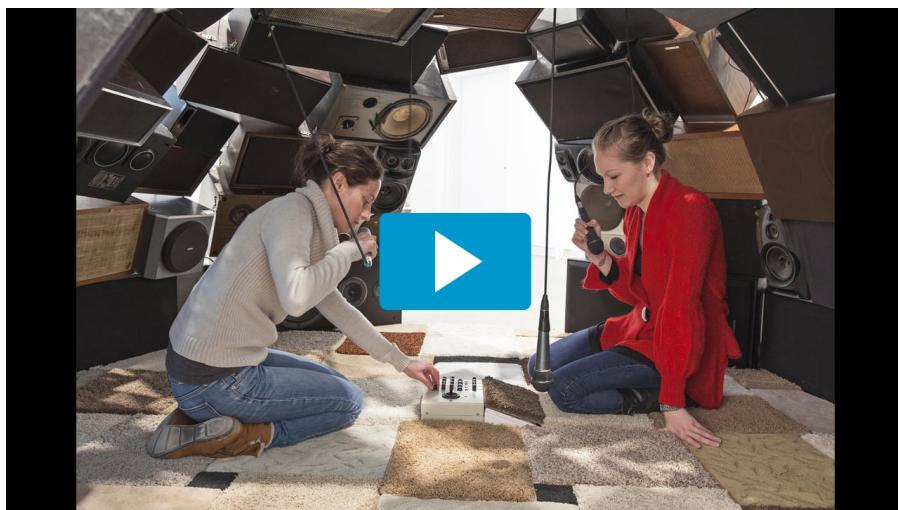
Marclay extended the notion of 'ensemble' further by inviting musicians and other sounds artists (Marina Rosenfeld, Alan Licht and Alison Knowles, among others) to activate the exhibition through the creation of their own soundscapes, whether these took advantage of the assembled sound sculptures or not. More importantly, the audience was invited to interact with the exhibition from a variety of positions – as listeners, composers, performers or deejays – depending on what level they cared to participate. In this manner, the curatorial concept and strategies behind *Ensemble* created a sonic commoning, mixing and intermingling sound experiences within a space of fluid co-existence; where notions of authority and autonomy were cast aside to encourage various roles and voices to merge and emerge, resound and dissipate over an extended time frame. Within *Ensemble*, the ontological notions of sound as becoming

were free to resonate on many registers, echoing Labelle's emergent community in an environment where it could be put fully into force (Labelle, 2017, p. 2).

By contrast, curator, theorist and sound artist Christof Migone offers a much more vexing sense of creative association. The twenty-four works he assembled for *Volume: Hear Here* (2013) formed what at first seemed like a confounding collection that he could barely contain within the Blackwood and Justina M. Barnicke galleries of the University of Toronto.

By example: John Oswald's asynchronous *Whisperfields* (2004) soundtrack was diffused without its video. Alexis O'Hara's *SQUEEEQUEE! The Improbable Igloo* (2009) speaker fort-igloo was equal parts cozy space for communal sound-making and ear-threatening feedback trap. Dave Dyment's *Untitled (Headset)* (2007) offered earphones that would only perform when unworn; his nearly imperceptible ultrasonic tone-cluster sculpture *Nothing (for Robert Barry)* (2007) was as unnervingly inaudible as it was almost innocuous. Ian Skedd's video piece displayed a choir signing what they should have been singing. Neil Klassen's tar-encased trumpet was rendered forever unplayable. Ryan Park's silenced copy of John Cage's *Silence* rubbed out the whole book in a buffed graphite; Chiyoko Szlavnics' moiré line drawings emerged from a series that might possibly become musical compositions but were defiantly not scores in themselves; and John Wynne's box of old hearing aids played bewildering feedback in accompaniment to an intimately projected photo of the Atlantic Ocean. And this was just half of what Migone had put on display.

SQUEEEQUEE! The Improbable Igloo (2009)



What was the audience to take away from all this slippery sonic stuff? In searching for clues, I had to return to the exhibition title, which Migone had very carefully crafted. His essay "Volume (of Confinement and Infinity): A History of Unsound Art" gives us an initial sense of what is conceptually at play here:

"Volume: a measure of a space, and volume: amplitude of sound. Consider volume as the variability of that space in sound. Consider volume as something within but wholly separate. Consider volume as the invisible and unmarked presence of sound. Consider volume as the intertwine of the spatial and the sonic. Now, consider sound as lost in space, more intent to illimit than delimit. The volume of sound art is immeasurable, deafening. It can overwhelm with

silence just as well as it can blast with noise. By playing with the volume dial here we shall consider the *place* of sound art...Even prior to an intentional sound entering the equation, every space has its own soundtrack, its room tone. Every space is sonorous, every space has a breath... we shall weigh the propensity for sound to displace, multiply, heterogenize the *topos*, place, site. We shall also pay attention to volume of the unheard, the volume that activates the synaptic, the insidious volume of grey matter, the realm of the unsound." (Migone, 2003, p. 81)

If this multivalent view of volume problematises the gallerisation of Sound Art, then the arising questions of 'here' (the essential presence or absence of the listener in the space where Sound Art is sounding or not) and of 'hear' (the nature of reception and presentness of the listener in the space where Sound Art is) only further complicate the relationship. That is to say, if the very nature of Sound Art exhibitions is already problematic, then why shouldn't the work itself challenge these same notions in its very intent and content? At least, this is what I sense Migone might be asking us to consider. Although, like sound itself, the fixity of his curatorial concept slides along slick lines between silence, sounding and sonic interruption – indirect, unframed, oblique paths to meaning. His curatorial volume is set at destabilizing levels that create resonances of some pluralized truth that takes shape and reverberates as quickly as it diffracts, escapes and dissipates.

Germano Celant's approach to bringing sound into the gallery shares affinities with both Marclay and Migone, but extends it to his characteristically encyclopedic scale. His *Art or Sound* (2014) for the Prada Foundation mirrored the aforementioned ideas of range, interaction and interplay, pursuing them further in search of an overall release from the gallery's sensory repression toward a more democratic experience. He achieved this goal through an augmented exhibition practice that engaged many artworks geared toward generating a greater whole-body, multi-sensory audience involvement, all positioned alongside a dizzying array objects that explored the gamut of representations, perceptions, intersections and inversions that can and have been expressed between art and sound over the last five hundred years.

Taking the musical instrument as a touchstone – exploring how it exists as both a sculptural entity and a sounding body – *Art or Sound* proceeded to unfold chronologically throughout the two main floors of the Ca' Corner della Regina in Venice, but not without extensive cross-referencing of human creative preoccupations that have spanned across centuries. Nearly any and every form of audiovisual creation was on offer: musical instruments both old and new, scores, automata, synthaesthetic experiments, painting, sculpture, kinetic artworks, interactive pieces, digital tools and computer-based works all found their home here. As Celant explained in his exhibition essay, this strategy of stimulating a broad sensory presentation invited a new schematic for both the display and contemplation of art: one where the fullest range of aurality could be experienced, much of it as it was intended by their creators to be encountered. Such intent included access to numerous artworks that are expected to be 'played' by the public, such as Laurie Anderson's body-sound conductive *Handphone Table* (1978), Doug Aitken's marimba-like *Marble Sonic Table* (2011) or Bernard Leitner's *Ton-liege* (1975) sound chair. Excuses of economic value or material fragility were ignored to make such works available as part of cultivating a deeper sonic understanding.

Art or Sound (2014)



As Celant conceived it, this overarching sonic experience encouraged a more dynamic and complex relationship to art, specifically designed to further intensify the audience's relationship to their own bodies and the things that surround them. For this brief moment in the history of exhibitions, Celant empowered art to do what I believe it is fundamentally intended to do: to create new awareness of the self, of the other, and of our sense of reality. In privileging sound as the vehicle through which to experience oneself anew, Celant helped broaden our relationship with the world and the things and people who inhabit it, including ourselves (Celant, 2014, pp. 18-20). He situated us within a "particularly vital form of multiplicity" where we can encounter "more than meets the eye, and often in tandem with the unidentifiable, the invisible, the overlooked, the coming and going of events, of frictions" (Labelle, 2017, p. 2).

Notes to the Curator – Successful Strategies for Sound Art Curation

The foregoing historical, conditional, experimental and experiential explorations offer a set of notes for contemporary art curators like me, from which we may extract and scaffold productive methods for the conception and execution of Sound Art exhibitions. Chief among these notes would be the one that foregrounds the complex relationship between sound and space. It appears in the case of gallery-based Sound Art exhibitions that too often space is treated as a poorly considered given; a condition within which the already-conceived exhibition and its selected works must be contained, controlled or possibly even expelled. Rather, it seems clear that space must be treated as a primary precondition of the exhibition's concept. Here, I call on Marclay's assertion that Sound Art requires different architectures and technologies for its presentation. I also recall Migone's caveat that every space is already sonorous even before sound enters it. The case studies above highlight attempts at creating more productive conditions, whether they be to accept sound for the real, messy and immersive material it is (Toop) or to privilege pristine listening conditions (van Assche). Nonetheless, such strategies have revealed their respective receptive and museological challenges, where their failures were rooted in the very conceptual framework from which the exhibition was born. Rather, it is those exhibitions that start from the place of understanding the relationship between sound and space that appear to be more successful – Marclay's *Ensemble* as a case in point, but just as much so Jorgensen's *Frequencies [HZ]* and its Meander

exhibition design – with the caveat that considering such relations as the core element of the curatorial concept can render the exhibition disconnected from its intended public. Other recent attempts to create customised conditions that privilege sound over vision, such as Jin Wang's *Big Can* are laudable (Wang, 2016, p. 63). Nonetheless, I find them troubled in the sense that they only further hinder the curator's control of conceptual trajectories and risk re-ghettoizing Sound Art into a state of precarity. To create a bigger black box exclusive to sound simply creates space for a larger blind spot than the one to which Diedrichsen has already drawn our attention. Rather, we should listen to the advice of sound designer Colin Griffiths, who has worked with high profile artists such as Rodney Graham and Stan Douglas to install their sound-based projects. He advises curators to use an ear keenly attuned to space; to consider the conditions that will create a coherent intelligibility for sound to live in the gallery; to remain mindful of how the audience will first encounter an artwork (how their attention will be drawn to it and then transitioned away); and, above all, to be open to experimentation (Griffiths, 2003, pp. 107-112). The Meander model is a good example of this approach. However, by introducing the audience's role as a triangulating point between sound and space, Griffith helps us expand curatorial strategy toward an inclusion of experiential attributes that positions the listener within an intelligible listening space that is *within* the artwork itself (Griffith, 2003, p. 113).

This leads us to the next note, which concerns the relationship of sound to sound. As curator Okui Enwezor reminds us, to create an exhibition is to make a thinking machine; one that produces a forum for processing and responding to the current state of things as much as to address the discourse of art's potential to renew our vision of reality (Enwezor, 2015). Given the diffuse, permeable, immersive and impermanent qualities of sound, any machine that seeks to actively engage and enable its productive and responsive powers is one that must embrace the inevitable sonic mixing that will result. Composition in contemporary practice has moved forward in this direction of mixing, which also extends back through a long lineage of avant-garde artistic and musical practices (Connor, 2011, p. 132). To effectively and successfully mix and relate sounds within the intermedial frame of Sound Art requires the curator to use the ear of a composer alongside the eye of an artist. But we must do so responsibly, with a mind to Griffith's call for approach, coherency and intelligibility. We want to set the volume dial at Jorgensen's levels, where sound can inform and communicate as much as it can diffuse and disturb. We also want the capacity to dial the volume up to amplify Migone's unheard *unsound*. Celant describes in succinct yet suitable complexity this relationship between the eye and the ear (each at their own interrelated volumes) and how it impacts the role the curator must play as a sound-mixer:

“The creation of an equivalence between ear and eye, visible and invisible, limited and unlimited establishes an echo of reciprocity that, in many cases, produces connections between one room and another, between a nearby object and a distant one, even when the visitor is not standing directly in front of the exhibit. A significant effect of interaction that is defined today as ‘interference,’ but is in fact a multi-modal and multisensory manner of appreciating art, as well as its contingent surroundings” (Celant, 2014, p. 21)

The final note applies to the role of sound beyond itself. While much of the concern about curating Sound Art has lain – in fact continues to lie – with sound's material, spatial and temporal properties, and how these properties relate to the conception, display and trajectories of an exhibition, there are also the undeniable social, cultural, political and philosophical issues that sound embodies and that beg to be addressed.

From the Fluxus movement forward, artists have embraced sound for its ability to ignite open-ended and engaged relationships between audiences and art; for its capacity to stimulate new somatic sensations that intensify the awareness of self and to the surrounding world; and for its power to ignite new criticality within conceptualism. Sound has the unique property of being able to move between discourses such that it can open up onto new meanings...fundamentally to do the difficult, vigilant, active and informed work of art that the visual alone cannot (Kim-Cohen, 2016, p. 68). From this perspective, the curator must be prepared to move beyond the entrapments of the audiovisual litany and neo-modernist tendencies to engage sound and unsound in their fullest sense.

The Call for Non-Cochlear

That last curatorial note might seem out of place, where my discussion of Sound Art has been limited in regards to its social, political and cultural properties, including its capacity to do critical work. While examples have filtered through in certain ways, overall the case studies show a bias toward the materialist discourse of sound; one that has been used to illustrate and perpetuate a specific modernist theoretical trajectory of abstraction, perceptual effects, technological processes and self-referentiality (Drobnick, 2004, p. 10). It's what artist-theorist Seth Kim-Cohen helps expand with his definition of ambient conceptualism – a flow toward immersion and ineffability, those inexplicable oceans of sound we've experienced in art institutions for over twenty years now (Kim-Cohen, 2016, p. 12).

But if sound is so good at escaping boundaries, then why hasn't it slipped past such theoretical traps to take up its fuller potential within boundary-crossing criticality? The primary reason remains with Sound Art's enchainment to Western classical music history, as its avant-garde offshoot, rather than within its multidisciplinary reality. Kim-Cohen has proposed a correction with his 'non-cochlear sound art' [5] – an art that seeks to release sound from the confines of music by realigning it with visual art's Conceptual turn (a turn that music didn't take), thereby (re)connecting it to a broader set of human concerns (Kim-Cohen, 2009, p. xix).

At the level of the art work, it's possible to conceive of how sound and its extremes might occupy a non-cochlear space – or what Christof Migone has referred to as synapse-activating *unsound* – to voice a more reflexive and self-aware relation with the current state of things. Sound undoubtedly has the capacity to tread "between interpretative domains, as a murmur of meanings produced between unexpected shifts..." (Kim-Cohen, 2016, p. 68). Since coining the term in 2009, Kim-Cohen has sought to exemplify what exactly a non-cochlear artwork can be. He identified at least 160 such possibilities in 2010 through an open call to artists and went on to select nineteen of them for a 2011 exhibition at the Diapason Gallery in New York City. [6] The exhibition itself received a mixed reception: Christoph Cox's *Artforum* review called it noisy, overly text-based and bearing a tendency to make "grand claims on behalf of works that could neither support nor provoke them on their own" (Cox, 2011, p. 224).

This has caused me to question: What does it mean to engage with the non-cochlear at the level of curation? From his own experience, Kim-Cohen advises that such a shift requires us to think more carefully about how works interact with the specifics of their situation, with the conventions of their presentation and with the world outside the white cube (Kim-Cohen, 2016, p. 70). Therefore, to think the exhibition as non-cochlear is to

start from a position that is acutely aware yet functioning beyond concern for the materialist conditions of sound-to-space or sound-to-sound to arrive at broadly yet rigorously contextualized zone in which sound *is* art and art *is* sound. It is to shift privilege away from any one sense, any one material, or any one medium to open both conceptual and content channels to resonate on many wavelengths, to amplify an experience of what is truly at stake. It is to engage with curation as an entangled, interactive and intertextual practice that gives voice to discovery and discourse, that renews reverberations of social, cultural and political realities and that satisfies a hunger for meaning through the power of Sound Art.

It was this experiment with non-cochlear curation that September Collective [7] set out to explore with its ambitious project *Symphony of Hunger: Digesting Fluxus in Four Movements* for A plus A Gallery in 2015, unaware that there was a name for the emerging practice. Rather, we were simply following our desire to work with sound as vital material within post-WWII artistic practice, for how it gives expression to some critical concerns of our times – hunger, consumption, accumulation and loss within the politics of bodily presence at a time of massive human migration – and to do so with a curatorial model that was informed by the precedents and consequences of the art works that we were exploring together. In the end, *Symphony of Hunger* connected sonics and somatics from Fluxus to today through themes of desire, taste, digestion, and waste, all orchestrated as an organic exploration of corporal, sociopolitical and aesthetic hungers. This was accomplished through a dialogic composition of twenty-one artworks from both established and emerging artists from across five decades. The bass of the composition was formed by nine historical works from renowned Fluxus artists (Joseph Beuys, Robert Filiou, George Maciunas, Claes Oldenburg, among others), all found in the Bonotto Foundation collection. These were harmonised with an international assemblage of twelve more contemporary works by Tizian Baldinger, Graham Dunning, Christof Migone, Mano Penalva, Davide Sgambaro, Christian Skjodt and others, all of whom exhibited a fluid continuity with their Fluxus precursors.

In the manner of a symphony, the exhibition followed an experimental presentation model by unfolding over four days in a succession of curatorial movements. Following the physical process of digestion in the conjectural path of a musical score, each day unveiled a new grouping of works punctuated by a live performance. As the score of the show progressed, each movement built on the last to create a consonance of nuanced connections. This conceptual symphony reached its climax as the exhibition completed on the fourth day. Although the display of the show became fixed at that point, the works did not remain static. Rather, the exhibition was planned such that many of the pieces continuously shifted. By example, each performer was asked to leave an archival trace of their work in the space – sound artist Graham Dunning left four metabolized vinyl records behind for display, Tizian Baldinger built an artist's shelter from scavenged goods that included a broken television hissing white noise – thereby challenging us curators to respond in real time to incorporate these artifacts.

Beyond how the principled organization of sound influenced the curatorial model itself, sonics entered the exhibition in the shape of artworks. The most present of these was Christian Skjodt's *Vibrant Disturbance* (2015), what we described as an inorganic organism whose (sonic) output was effected by the ingestion of light and shadow within the local environment. The darker the space became, the louder (and hungrier) the creature sounded; as each day progressed, the disturbances became more pervasive throughout the gallery space. This organism, comprised of many exposed suspended speakers, wires and sensors, was paired with Maciunas' *Stomach Anatomy Apron*

(1975). Much like *Vibrant Disturbance* wore its ‘guts’ on the outside, Maciunas’ visualization of the human digestive track emphasized the metabolistic relationships at play.



Figure 1

Installation view of Christian Skjodt’s *Vibrant Disturbance* (2015) by Jason van Eyk. Part of *Symphony of Hunger: Digesting Fluxus in Four Movements* (2015) at A plus A Gallery.

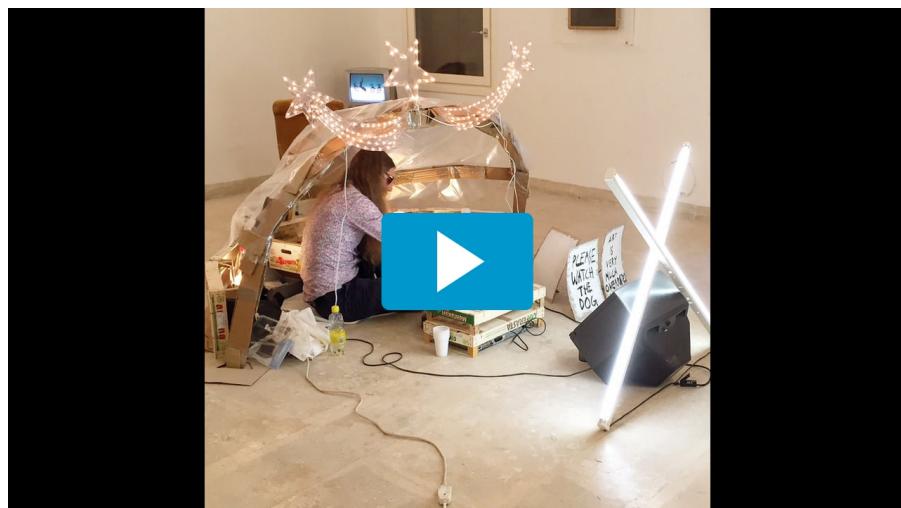


Figure 2

Installation view of Georg Maciunas’ *Stomach Anatomy Apron* (1975) by Sandro Pignotti. Part of *Symphony of Hunger: Digesting Fluxus in Four Movements* (2015) at A plus A Gallery.

These types of non-cochlear interplays were emphasised throughout *Symphony of Hunger*. An inedible plastic pear from Oldenburg's *False Food* (1968) sat within arm's reach of Migone's video *The Release Into Motion, or how to leak inarticulacy out of your mouth* (2000), in which a mouth holds an ice-blocked tomato until one or the other falls off. Its sonic somatics – sucking, spitting, smacking, wheezing – amplified an uneasy relationship between 'processed' food and persistent hunger. Elsewhere, Walter Marchetti's *Poemetti Popolare Allegorico* (2002) orchestrated the digestive process in a very direct yet poetically playful manner. "Butt trumpet, health of the body. If I didn't have a butt I would surely die." Marchetti's assemblage of a trumpet, this written statement and a photo of a lady's buttocks delve into the role of bowel movements as a healthy but much maligned bodily process. Nearby whispers of Migone's *South Winds* (2006) sound piece confirmed that indeed the body is a noisy thing that uncontrollably emits and transmits. All these parts crossed paths with Baldinger's artist shelter, set in close relief to Beuys *Kunst = Kapital* (1980), whose words rang so loudly off their chalkboard. Just adjacent was Pil And Galia Kollectiv's sharp black & white video animation *Elvis Burger* (2001), which mashed the American icon through robotic machinery into an assembly of burgers, all in tune with abrasive dubstep soundtrack that amplified an aggressive, pervasive, accelerated expression of excessive commodification and contemporary consumption.

Symphony of Hunger: Digesting Fluxus in Four Movements (2015)



Symphony of Hunger sounded many voices on multiple channels in ways that make its experimental attempts difficult draw back to their curatorial source. Yet, despite the apparent contextual cacophonies, the exhibition very carefully organized its noisiness within Kim-Cohen's advice. Its spatial, relational and conceptual concerns were addressed within the very DNA of its curatorial model, itself informed by the selection of works it put on display. In grounding its presentation outside of privileged space – for sound or art, for the historical or the contemporary, or for the musical or the visual – it was free to integrate all elements via intertextual, intergenerational and interactive modes. By holding these opposing worlds within a frame that responsively embraced their correlations and conflicts, *Symphony of Hunger* engaged with the current state of things from a sound-focused position that invited interplay and overlays between acoustics, discourses, interpretations and indeterminacy that altogether heard the call for a non-cochlear curation.

Footnotes

1. Given how well documented the history and development of Sound Art has become through a plethora of anthologies and texts (see Cox, Kahn, Labelle, Licht, et al.), I'll not seek to summarize it here for the sake of focusing on the question of how sound is addressed in contemporary art curation. But the reader will find references throughout the paper that will help create relevant context.
2. Sterne notes that this audiovisual litany that divides the properties of sound and sight has a tendency to idealize hearing while both denigrating and elevating vision. By accepting the audiovisual divide as fact without reflection and criticality leads Sound Art toward a focus on sound in and for itself, or what Seth Kim-Cohen would call an ambient conceptualism. In this mode, Sound Art cannot advance along the lines of linguistic conceptualism that has helped contemporary art develop over the last 45+ years (Kim-Cohen, 2016: 10).
3. Note that, for the purposes of this discussion, I am purposely focusing on those gallery and museum-based exhibitions that substantially present Sound Art in Western art institutions. It could be argued that biennales, festival and contemporary art events like the 1996 Sonambiente project in Berlin should be studied among the earliest examples of such exhibitions, but given that its presentation strategy involved a geographically scattered and site-specific approach, it has not been included here. My primary concern is to address the challenges with the gallerisation of Sound Art within institutional settings.
4. A Selector is the one who selects and passes the records (vinyls) to the person that is playing them on the sound system. It originated in reggae/dancehall music, but filtered up into UK electronic music styles like Jungle and Drum&Bass to describe a deejay.
5. Kim-Cohen borrows from Marcel Duchamps' 'non-retinal art' to coin this term.
6. See 'Non-Cochlear Sound' - <http://noncochlearsound.com/>
7. September Collective is comprised of seventeen members from twelve countries (including the author). It breaks with dominant traditions of authoritative curatorial hierarchies to harness the potential of collaborative thought and action to generate new curatorial knowledge and know how. The collective was formed in 2015 during the 56th International Art Biennale of Venice as a groundbreaking platform for global inquiry into contemporary art, curatorial practice, exhibition making and art publication.

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Fictional narratives of listening: crossovers between literature and sound studies

By Igor Reyner

Abstract

This paper explores how literature has been incorporated into sound studies in recent decades. Although the mobilisation of literary texts for the purpose of investigating sound and listening predates the establishment of a field of inquiry named sound studies, as Pierre Schaeffer's *Traité des objets musicaux* exemplifies, the rise of this field of research brought about completely new forms of dealing with literary accounts of sound and listening. If, for a long time, literary narratives fell short of engendering a theory of sound and listening of their own, serving mostly to exemplify theories and meditations exogenous to them, several studies on sound use literature for theoretical purposes other than exemplification. Focusing on four different uses of literature by sound studies scholars, this paper aims to indicate how varied can be the uses of literature for thinking sound and listening.

Keywords: Literature, Functions of Listening, Figures of Sound, Soundscape, Acousmatic Listening

Introduction

Literature has been incorporated into sound studies in myriad ways, yet a systematic account of these mobilisations is still to be given. Contributing to mapping out these crossovers, this study provides a fourfold survey of the presence of literature in research devoted to sound by examining how scholars associated with what came to be called sound studies turned to literary works to tackle questions of sound and listening. By gathering together authors whose publications span over four decades, this paper evinces a set of methodological trends and suggests a possible evolution concerning the role of literature in sound studies. While *literature* relates here primarily to fictional, diegetic accounts of acts of listening and sound description, which I will henceforth refer to as fictional narratives of listening, *sound studies* stands for any scholarship on sound and listening that examines these phenomena through the prism of their historical, social, philosophical, and cultural aspects, as opposed, on the one hand, to purely acoustic and physiological discourses on sound and listening, and, on the other hand, to the hegemony of music regarding these discourses¹.

Although literature is conventionally understood as a silent form of art that would not enable direct access to sound, it has been used as a source of information about sound and listening. Those uses come as no surprise, not least because of the privileged place literature occupies in the Gutenberg galaxy and beyond². Much has, therefore, been said about the relevance of written texts and literacy (as opposed to orality) to studies devoted to sound, listening, and sound technologies. Notions of writing are, for instance, located at the very origin of sound technologies, as attested by Thomas Edison's phonograph, which is identified "as a textual device, primarily for taking dictation" (Gitelman, 1999, p. 1), and Leon Scott's phonautograph, which was intended "to make sounds visible to the eye and specifically to create a form of automatic sound writing" (Sterne, 2003, p. 41)³. The reshaping of experiences of sound and listening by ideas of writing and reading are also extensively discussed in some of the most influential studies of the field, such as *Gramophone, Film, Typewriter* by Friedrich A. Kittler, and *Scripts, Grooves, and Writing Machines* by Lisa Gitelman. Furthermore, inherently literary concepts underpin recent considerations upon the very nature of sound. David Novak and Matt

Sakakeeny state that “sound resides in [the] feedback loop of materiality and *metaphor*” (2015, p. 1, my emphasis), whereas Rey Chow and James A. Steinringer propose that “the object of sound” must be pursued through an inquiry into a terminology that slides “between referential and figurative registers” (2011, p. 2), such as resonance, timbre, whisper, echo, silence, noise, voice, and dissonance. Finally, written documents emerge not only as key sources of knowledge about sound and listening but also as a point of debate on method, particularly with regard to their status in studies of the aural dimension of the pre-Edison era. In this respect, while Emily J. Cockayne stresses that, “although problematic, written texts are the most important sources by which we can gain access to past sensory experiences” (2000, p. 13), Mark M. Smith notes that “while actual sounds could not be reproduced with true fidelity until the invention of electromagnetic recording devices, print itself provided a form of recording, as the use of aural metaphors, similes, and onomatopoeia, and even mundane descriptions, attests” (2002, p. 319). It is out of this polyphonic and multifaceted theoretical setting, dominated by dichotomies such as literacy and orality, vision and listening, speech and writing, heard and unheard sounds, direct and indirect perceptions, that literature stands as an adequate, if insufficient, source of knowledge, as a necessary yet unreliable way into the sonic world. By focusing on literature, therefore, this paper aims to show that its engagement with sound and listening is unique and its contribution to the field is radically different from those afforded by sounding art forms, such as film, video and radio art, theatre, music, and others. This focus, moreover, shifts the debate from wider notions of writing and literacy towards more specific relations between fictional and scientific accounts of listening and sound.

From sound studies to literature

Identifying and examining all of the crossovers between literature and sound studies is no easy task, be it because references to literature abound in the human sciences more broadly or because delimiting sound studies thematically and historically is an often unfeasible and ungratifying endeavour. Yet, hypothetical and malleable boundaries must be drawn so that these crossovers could be better understood as methodological trends. Thematically, this paper focuses on scholars whose works engage with a range of literary texts in a sustained way, and in relation to key sound studies categories such as functional listening, figures of sound, soundscape, and the acousmatic. I comment on Pierre Schaeffer’s anticipatory use of literature in a pre-sound studies era, before examining the way in which Douglas Kahn, John M. Picker, and Brian Kane interact with literature. Examined alongside each other, these studies, published over the course of thirty years, offer a historical outline of the field and comprise paradigmatic forms of reading literature. Historically, this paper proposes a non-conventional starting point. In “Is There a Field Called Sound Culture Studies? And Does It Matter?”, Michele Hilmes draws on Rick Altman to date the beginning of sound studies “back to 1980 with the publication of the *Yale French Studies* issue on sound edited by Altman” (Hilmes, 2005, p. 249). Sterne however seems to suggest that the institutionalisation, as it were, of sound studies dates to the early 1990s (2012, p. 1), though its roots stretch back to after 1945 (*Ibid.*, p. 3). Adopting neither of these origins, this paper locates one of the possible origins of sound studies in 1966, at the moment of the publication of Pierre Schaeffer’s *Traité des objets musicaux: essai interdisciplines*, a study that posited defining problematics of sound studies even before the publication of groundbreaking studies such as Don Ihde’s *Listening and Voice* (1976), Jacques Attali’s *Bruit* (1977), and R. Murray Schaeffer’s *The Tuning of the World* (1977). Schaeffer’s *Traité* advances the debate on sound technology and auditory perception, in addition to taking to task the limits of musical listening as well as calling for a much-needed interdisciplinary methodology for research on sound.

French telecommunication engineer, musicologist, composer, writer, and sound studies pioneer, Schaeffer turned to literature on several occasions to illustrate his ideas on sound, listening, and technology. His recurrent references to Marcel Proust, veiled or otherwise, are a striking Interference Journal February 2018

example. Schaeffer refers to Proust for the first time in “Le pouvoir créateur de la machine”, when discussing the auditory shift promoted by sound recording⁴. Proust’s influence echoes in the title of *A la recherche d’une musique concrète*, published in 1952, and in the last paragraph of “Introduction à la musique concrète”, where Schaeffer explains the dichotomy between concrete music and abstract music in terms of *temps retrouvé* and *temps perdu* (1950b, p. 52). For him, Proust is “un précurseur et un initiateur” (Schaeffer, 1950a, p. 34) who theorises forms of experiencing time that may shed light on changes in perception afforded by sound-recording technologies. His engagement with the celebrated French writer is, however, neither sustained nor prominent, and he refers to Proust’s ideas without ever directly citing his work. It is only in *Traité* that Schaeffer will engage with literature more explicitly, when he resorts to the novel *Homo Faber*, by Max Frisch, to elucidate his language-based theory of listening. The use of Frisch is crucial, insofar as it sheds light on one of the key concepts of Schaeffer’s theory: the function *entendre*. Schaeffer contends that listening is a multi-functional mechanism. Akin to language, which is primarily an instrument of communication, according to functional linguistics⁵, listening corresponds to a circuit of sonic communication stretching from emission to reception (Schaeffer, 1966, p. 113)⁶. This circuit, however, does not comprise a sequence of perceptual stages but a set of autonomous activities proper to listening, each of them bearing specific purposes and modes of intentionality:

Our intention is not to decompose listening into a chronological sequence of events ensuing one from the other as effects follow causes, but, for a methodological purpose, is to describe the objectives corresponding to specific functions of listening. (*Ibid.*, p. 112)

Therefore, before bringing in literature, Schaeffer attends to language as a privileged source of knowledge on sound and listening. He retains four of the fifteen definitions of *entendre* given in *Litttré* – the etymological one and those corresponding to the definitions of the verbs *écouter*, *ouïr*, and *comprendre* – as a means of examining the connections between intention and intentional object that underlie our use of hearing-related verbs, that is, that reveal our mechanisms of listening. In this view, Schaeffer’s understanding of listening suggests a theory of language as much as a phenomenological account of listening, and prepares the shift from lived experience to literature.

To show the reader how the functions of listening operate around the shifting concept of *entendre*, Schaeffer carries out a close reading of two episodes of *Homo Faber*, which I quote here so as to give a clearer idea of his method:

Every morning I was woken by a curious noise, half mechanical, half musical, a sound which I couldn’t explain, not loud, but as frenzied as crickets, metallic, monotonous; it must be mechanical in origin, but I couldn’t guess what it was, and later, when we went to breakfast in the village, it was silent, nothing to be seen.

... It was Sunday when we packed... and the queer noise that had woken me every morning turned out to be music, the clatter of an antiquated marimba, hammer taps without resonance, a ghastly kind of music, positively epileptic. It was some festival connected with the full moon. They had practised every morning before going to work in the fields, so that now they could play for dancing, five Indians who struck their instruments with whirling hammers, a kind of wooden xylophone, as long as a table. (Frisch, 1959, pp. 38 & 44)⁷

Schaeffer’s method differs quite radically from more common uses of literature by scholars from other disciplines, which tend to refer to writers’ ideas without closely engaging with the text. In other words, scholars tend to borrow more abstract, general concepts for which the Interference Journal February 2018

literary text is only an embodiment. Schaeffer, on the contrary, reads Frisch closely, aligning himself with what Barbara Herrnstein Smith diagnoses as “a persistent feature of Anglo-American literary studies” (2016, p. 57) and Matthew Jockers deems the “primary methodology” of literature (2013, p. 6). To clarify the concept of qualified listening (*écoute qualifiée*), Schaeffer attends not only to the events depicted in the extract by Frisch but also to its “linguistic features and rhetorical operations” (Herrnstein Smith, 2016, p. 57)⁸. In a two-paragraph long analysis of Frisch’s narrative of listening, which represents Schaeffer’s main attempt to assimilate literature into his theory, he shows how a literary text paves the way for theoretical reflexions:

The two descriptions clearly match: frenzy, monotony and hammer taps, rumour and absence of timbre, metallic sound and hammer-blows on a xylophone. From his bed, every morning, and then from outside when he is about to leave, Walter Faber virtually heard [*a oui*] the same thing.

We would not say the same about what he listened to [*a entendu*]: In the first scene, he heard [*entendait*] a *sound*, whose cause he tried to *work out* [*s’expliquer*]; in the second scene, informed of the causes, he *appreciates* [*apprécie*] a piece of *music*. As a result, what was only “odd” [*curious* in the English translation, and *bizarre* in the *Traité*], becomes “frightful” [*ghastly* in the English translation, and *effroyable* in the *Traité*]. The “frenzy” that appears in the first scene simply as a descriptive analogy (our hero does not even think about directly attributing it to the crickets) is more powerfully perceived when it is revealed to be the result of a furious instrumental activity, becoming “positively epileptic”. In contrast, the monotonous hammering, which could evoke a piece of machinery, becomes less perceptible. Having managed to *qualify* listening, Walter Faber began to listen out for [*entendre*] and then to understand [*comprendre*] according to a precise signification (Schaeffer, 1966, pp. 109-10)⁹.

For Schaeffer, Frisch’s fictional narrative of listening not only exemplifies qualified listening, but also fully shows listening as a functional mechanism. And even though the four verbs of listening do not feature in the extract, the functions they stand for still govern the verbs used by Frisch. The attention payed by Schaeffer to adjectives and nouns and, subsequently, to verbs, not only corroborates Schaeffer’s ideas that language embodies our mechanisms of perception but also announces an aspect of his theory that will be introduced later in the *Traité*, that that “there is no verb [of listening] without object” (*Ibid.*, p. 148).

Though brief, Schaeffer’s analysis suggests that studies devoted to listening can benefit from literature’s ability to describe auditory behaviour and foreground listening without rejecting, disposing of, or effacing the non-aural dimension of any auditory experience. His enterprise is, however, still very limited, and his use of Frisch’s fiction is decontextualised and unidimensional. He shows how literature illuminates listening without discussing the role of listening and sound in Frisch’s novel or even giving the context from which the narrative of listening is extracted. Schaeffer’s use of literature overlooks the fact that listening, too, can be thought of as a literary category. It fails to indicate, for instance, why literature is more suitable for exemplifying ideas on sound and listening than any example borrowed from everyday life. That is to say that, as used by Schaeffer, literature exemplifies concepts that are not inherently literary, notions that are not specifically tied to Frisch’s fiction. Yet, Schaeffer’s use of literature holds a historical and methodological value, insofar as it points to close reading of literary texts as a fruitful avenue of inquiry into sound and listening.

Literature, sound, and history (I): figures of sound

Douglas Kahn does not engage in any close reading of any work of fiction in his insightful, groundbreaking essay “Histories of Sound Once Removed”, an introduction to the collective volume *Wireless Imagination* that he edited alongside Gregory Whitehead. He shows, however, how literature keeps and passes on a myriad of forms of looking at and listening to sound. Discussing the challenges faced by those who attempt to understand the historical connotation of sound in the arts (Kahn, 1992, p. 1), Kahn examines artistic expressions associated with sound reproduction technologies in order to propose a way of surpassing the problem that scholarship “on the arts of recorded and broadcasted sound, and of conceptual, literary, and performative sound, is scant at all levels, from basic historical research to theoretical modelings” (*Ibid.*). He attributes this gap to three major problems: the absence of “artistic practice outside music identified primarily with aurality” (*Ibid.*, p. 2), “the privileging of music as the art of sound in modern Western cultures” (*Ibid.*, p. 3), and the difficulties of “merely thinking about sound within a culture that so readily and pervasively privileges the eye over the ear” (*Ibid.*, p. 4). To tackle this cluster of problems he then devises a twofold method whereby he “will first point to various artistic links to sound recording technologies and then propose a schema of three figures of sound operative in the arts since the late nineteenth century” (*Ibid.*). It is in relation to this twofold method that literature emerges, surprisingly, as the most varied and comprehensive source of models for pinning down and historicising sound. And this is probably so because literature is the realm of narrative *par excellence*, and one of Kahn’s main concerns is that, “as a historical object, sound cannot furnish a good story” (*Ibid.*, 2).

While for Schaeffer, fictional narratives of listening seem to be a good way of clarifying a complex theory whilst underscoring the proximity between language, theory, and lived experience, for Kahn, literature not only illustrates but also reveals the foundations of the history of sound in the arts. More than a mere support for an inquiry into sound, literature becomes the very object of research. Therefore, a closer look at Kahn’s abundant use of literary examples indicates how literary works take precedence in his analysis, in spite of the multiplicity of artistic forms and currents that engage with sound or the fact that Kahn’s ultimate goal is to write the history of sound in the arts and not just in literature¹⁰. Stretching from François Rabelais’s *paroles gelées* (*Quart Livre*, chapters LV & LVI) to William Burroughs’s novels and experiments via French symbolism and Russian modernism, references to literature substantiate all of Kahn’s major claims about the relation between sound technologies and figures of sound¹¹. His privileging of literature has implications not only at the level of theory but also at the level of practice. The focus on literature’s engagement with sound suggests that literature can be understood as an art form deeply grounded in aurality, which both undermines music’s monopoly over aestheticised sonic experiences and the hegemony of vision in the realm of literature and literary criticism.

It is not only Kahn’s object of study that is literary, but also his figurative method, insofar as it relates to a long-standing and multifarious literary and philosophical tradition that stretches from ancient rhetoric to narratology and structuralism. To write his history of sound, he puts forwards the idea of figure, proposing to attach sound either to *figures of a more abstract character*, such as vibration, inscription, and transmission, or to *figures of a more concrete character*, which are associated with actual and specific technological forms (Kahn, 1992, p. 14). Each of these two lines of inquiry touches upon a particularly interesting aspect of literature’s contribution to thinking about and historicising sound and listening. As regards the figures of concrete character, Kahn interrogates “the familiar figure and functioning of the phonograph, or of any technology for that matter” (*Ibid.*). Tackling the relation between practical applications and conceptual implications of phonography, his analysis is biased towards the conceptual aspect, insofar as Kahn attends primarily to the fact that literature depicted and accounted for phonography’s future before the device itself could reach maturity. The underlying thesis is that *representation* of newly invented technology often anticipates,

surpasses, and even conditions the *experience* of it. As he puts it:

The ideational mission of the phonograph, in fact, totally outstripped any practical application for decades to come, for its conceptual implications were much more accessible, mobile, and workable than its actual mechanics. (*Ibid.*, p. 5)

In aid of this thesis, Kahn shows how short stories, novels, poems, and manifestoes, ranging from more faithful accounts to far-fetched narratives, account for the ideological construction of phonography. He moreover demonstrates how the figure of phonography anticipated the reality of the phonograph, as, for instance, when he speaks of conceptual and literary sound (*Ibid.*, p. 1), points out the issues of orality and literacy (*Ibid.*, p. 5), talks about the acts of writing and representation related to phonography (*Ibid.*, p. 6), states that authors and artists tended to internalise the attributes of phonography so as to move from representation closer to experience (*Ibid.*, p. 7), discusses onomatopoeia (*Ibid.*, pp. 7 & 8) and verbal imitation of worldly sounds (*Ibid.*, p. 9), alludes to “a new vocal form of sound synthesis” (*Ibid.*, 11), and analyses William Burroughs’s “technical difficulties while moving from metaphor to artistic technology” (*Ibid.*, p. 13). Because representation often outdoes experience, literature outdoes not only the actual phonograph but also the desired idea of phonography. More than simply representing the auditory dimension of reality, literature begets new aural dimensions that would not be experienceable without it. Therefore, as regards sound and listening, it not only portrays but creates.

The abstract equivalent of the concrete figure of phonography is the figure of inscription, which is “associated with the phonograph of the late nineteenth century and the phonograph not too long before it” (Kahn, 1992, p. 17). Inscription refers to a “phonographic collapse of speech and writing into visible speech and vociferous graphemes” (*Ibid.*, p. 18), which indicates that “sound was finally brought into the visualist and scriptural logic of Western culture” (*Ibid.*). It, moreover, relates to the question of human agency (or the absence thereof) for “inscribed sound [...] meant something distant from the conceit of nothing-but-consciousness, from the necessity of human agency and metaphysical presence” (*Ibid.*). This visualist, scriptural, and human-agency free class of figure not only relates to literature for the reasons discussed so far, but also because, for Kahn, it is best embodied in the work of two writers: Raymond Roussel, for whom “sound is written on the *surface* of objects”, and William Burroughs, for whom “writing occurs submerged within a secretive *interior* [...], or in a way not easily readable” (*Ibid.*, p. 19). It is not only through ideas of writing, but also through writing itself that sound takes on form and meaning, be it the concrete form of recorded sound, afforded by phonography, or the abstract attributes of phonography represented, enacted, and explored in the literary realm.

While Schaeffer’s use of literature, as we have seen, touches upon the specifics of the relations between fiction and scientific accounts of listening and sound, Kahn’s analysis tackles the unending interchange between actuality and representation, concepts and materiality, and refers the debate back to some of the overarching dichotomies that ceaselessly haunt sound studies. Clustered as figures, localised literary forms enable Kahn not only to historicise the use of sound by a range of art forms but also to link apparently irreconcilable dimensions, such as literacy and orality, vision and listening, direct and indirect perception, concrete and abstract categories of sound.

Literature, sound, and history (II): literary soundscapes

The turn of the century witnessed a sudden and enlightening interest in the historical soundscapes of England. In 1999 appeared the innovative *The Acoustic World of Early Modern England* by Bruce R. Smith. In the following year, Emily Cockayne received her PhD for a thesis entitled “A Cultural History of Sound in England 1560-1760”. Three years later, John M. Interference Journal February 2018

Picker published *Victorian Soundscapes*. Linking all of these readings is not only England or the notion of soundscape, but also the conception of literature as a historical document capable of providing evidence of the ways in which spaces sounded in the past. Their main difference is, however, the object on which each author lays emphasis. Smith aims primarily to reconstruct the acoustic reality of performances and spaces in the past. Cockayne focuses mainly on the specifics and meanings of a repertory of sounds that filled up historical spaces over two centuries. Picker emphasises neither the space, properly speaking, nor the sound, but the accounts and forms of representation that brought together space and sound in the Victorian period. As he seems to suggest, a soundscape is less a category of space or a set of acoustic features and more the interplay between the “figurative and literal manifestations of sound” (Picker, 2003, p. 12) and its material consequences in the lives of people. By displacing the focus to a range of accounts of sound (i.e. scientific, fictional, religious) that modelled people’s use of space as well as writing techniques, Picker not only introduces the soundscape as primarily a literary category and an aural condition for writing, but also discredits an anachronistic concern raised by Steven Connor in a lecture given in Cambridge, on 10 July 2015, where the latter categorically asserts that the soundscape “is probably the most important carrier of the idea of the pure and autonomous order of sound” (2015, p. 6)¹². As conceptualised by Picker, the soundscape is everything but an example of sound’s autonomy. Rather, it is an example of sound’s ubiquitous presence and pervasiveness as well as its sway over the creative and subjective processes of artists and scientists.

Picker’s book advances the methodological use of literature to thinking questions of sound and listening, insofar as it combines a few close readings of literary texts with an array of all sorts of texts and even illustrations in order to interpret, especially in the two last chapters, those figurative and literal manifestations of sound. In more general terms, it investigates how Victorian writers responded to changes in the status of sound during the reign of Queen Victoria and in listening, summarised as a “cultural shift toward close listening” (Picker, 2003, p. 8). According to Picker, “Victorians in their scientific and technological discoveries and literary innovations went a long way toward dispelling, or at least redefining, the mysteries of hearing and sound” (Ibid., p. 10). Their literary innovations and narratives of listening and sound were thus entwined with an epistemological, aural turn whereby “what Romantics had conceived of as a *sublime* experience” was transformed “into a quantifiable and marketable *object* or *thing*, a sonic commodity, in the form of a printed work, a performance, or, ultimately, an audio recording” (Ibid.). In order to analyse the stages by which this transformation took place and the close relation established between literature and sound, as both aesthetic concept and urban sign, Picker delves into Victorian soundscapes and tells the stories “of figures at once attentive and investigative, those who both contributed to and, consciously or not, hoped to control, even to dominate, their acoustic worlds” (Ibid., p. 14). Biographical and historical narratives illuminate fiction as much as fictional narratives offer a way into biographies and history. For Picker, a soundscape resides precisely in the overlapping between these varied narrative forms, being neither here nor there, but hither and yon. Picker, therefore, argues for a non-unifying conception of the soundscape in Victorian times – as his use of the plural form of *acoustic world* indicates. Ultimately, he desires to move the concept of the soundscape “away from a monolithic conception of a singular soundscape toward an analysis of the experiences of particular individuals listening under specific cultural influences and with discernible motivations” (Ibid.). In Picker’s study, the soundscape designates a set of ideas about sound and of sonic experiences lived by an individual or shared by a group of individuals which come to be associated with a space and a time by virtue of a narrative. Since a soundscape does not represent the acoustic world in its fullness anymore but only one perspective of this world, soundscapes can be manifold, overlapping, harmonious, or contradicting – simultaneous, but not necessarily contemporary. And because what constitutes a soundscape for Picker is not simply the sound itself but a set of experiences organised in relation to sound according to a narrative, literature emerges as a privileged territory of inquiry.

Picker's analyses are chiefly comparative. He repeatedly confronts literary texts with more theoretically orientated texts, such as Charles Babbage's *The Ninth Bridgewater Treatise: A Fragment* (1837) or Hermann von Helmholtz *Die Lehre von den Tonempfindungen* (1863) – whose third edition was translated into English by the mathematician and philologist Alexander J. Ellis as *On the Sensations of Tone as a Physiological Basis for the Theory of Music* (1975). It is in relation to Helmholtz's *Sensations of Tone*, for instance, that Picker reads George Eliot's last completed novel *Daniel Deronda* (1876), a parallel he justifies as due to the fact that "Helmholtz's new understanding of the physiology of hearing sympathetically resonated not only in Eliot's fictional project, especially the strained silences and stifled speech of *Daniel Deronda*, but also in the technological and psychological discoveries that occurred alongside it" (Picker, 2003, p. 12). Helmholtz's and Eliot's ideas, therefore, resonate not only with each other but also with their time – and it may not be a coincidence that *Daniel Deronda* is Eliot's only novel to be set in the contemporary Victorian society of her day. The convergence of ideas and practices related to sound is theorised by Picker in a manner analogous to Kahn. He introduces what can be considered a figure of sound, the figure of sympathetic vibration (which can be located somewhere in between Kahn's figures of vibration and transmission). In doing so, he brings together Helmholtz's theories and Eliot's fictional project, devising an analytical category that allows him to tackle the much more diffuse and indeterminate form that narratives of listening assume in Eliot's literature. In her novels, sound and listening do more than characterise specific moments or scenes. They saturate the narrator's language and imagery informing a "language of sound" (Ibid., p. 89).

Aurality is explored in *Daniel Deronda* mainly through the figure of sympathetic vibration, which according to Picker, is rephrased by Eliot as "separateness with communication" (Ibid., p. 99). "With the idea of 'separateness with communication'", Picker explains, "Eliot very nearly captures the essence of *Deronda* in a single phrase, one that evokes the tenue balance between self and other, individual and community, and home and world, that so often is the goal of her fictional project" (Ibid.). This idea also offers a way to think about the telephone, invented at the same time:

The idea of "separateness with communication" can be considered an acoustic process, a distillation of the essence of sympathetic vibration. And such a Helmholtzian echo in the theme of this, Eliot's grand finale in fiction, was at the same time sounding in the telephone, the mechanism that made aurally possible the psychological and nationalist condition *Deronda* espoused. (Ibid.)

Patented in the same year *Deronda* came out, the telephone represents the technological embodiment of "separateness with communication" and, despite being actually absent from Eliot's literature, it partakes of the same ideational ground of her fiction. As Picker puts it:

There are, of course, no telephones in *Deronda*, set as it is in the 1860s, a decade before its period of composition. But it is a novel that, like Eliot, dreams of the possibilities for "telephonic converse"; a book about which its author well might have said with Bell in 1875, "I feel that I am on the verge of a great discovery". (Ibid., p. 104)

It is this particular converge of contemporary authors, ideas, and devices that engender what Picker understands by the soundscape. Something that, ultimately, is more abstract and discursive than sensorily experienceable. And it is precisely his attempt to revitalise the notion of the soundscape that reveals that the gap between sound and literature is, perhaps, narrower than we might otherwise believe: the soundscape being a literary category as much as it is a key concept of studies devoted to sound.

From literature to sound studies

In 2014 Brian Kane published *Sound Unseen*: “a book written to develop a theory of acousmatic listening as a historical and cultural practice, one with clearly defined characteristics” (2014, p. 7). The notion of acousmatic is indelibly associated with Schaeffer, whose work offers the counterpoint to Kane’s ideas, and is also targeted by Connor in his decrying of what he calls *acousmania*, that is, an “exorbitance within sound studies” (2015, p. 3) that takes place “whenever a) it asserts the possibility of identifying or experiencing sound in a raw or pure condition and b) when it affirms some particular value in such a condition” (Ibid., p. 7). According to Connor, “acousmania [...] is often twinned with, and perhaps often depends on what has been called the idea of the acousmatic” (Ibid.). As Kane explores it, however, the concept of the acousmatic is far from exhibiting the symptoms of acousmania, not least because the core of his inquiry lies not in any purely aural dimension, but in a fictional portrayal of a creature whose obsessive attention to sound is localised and contingent. The key argument of his book is introduced in the fifth chapter, in which Kane devises “an alternative theory of acousmatic sound by way of a close reading of Kafka’s tale ‘The Burrow’” (2014, p. 11). The chapter “attempts to rethink the terms of acousmatic sound apart from the ontology of the sound object” (Ibid.), to which end it steers the analysis away from philosophies of listening to fictional narratives of listening. Literature does not feel the need to resolve problems, thus enjoying more freedom in raising questions and exploring unsettling issues.

Kafka’s story “The Burrow” was written in the winter of 1923-24, published in *Beim Bau der Chinesischen Mauer*, and reprinted in *Beschreibung eines Kampfes*. It depicts a burrowing creature who has just completed the construction of its den, which comprises an elaborate system of tunnels and round cells. Not quite in the centre of the burrow lies the chief cell, the Castle Keep, as the creature names it. The main feature of the burrow was its stillness, which was only really perturbed by the noise with which the creature occupies itself in the second half of the story. “The most beautiful thing about my burrow is the stillness” (Kafka, 2005, p. 351), which is indicated by an omnipresent silence whose disruption has to be readily counteracted: “For hours I can stroll through my passages and hear nothing except the rustling of some little creature, which I immediately reduce to silence between my jaws, or the pattering of soil” (Ibid.). Silence is, for the creature-narrator, the sign of security and a reassuring reply:

What if my foes should be assembling even now up above there and their muzzles be preparing to break through the moss? And with its silence and emptiness the burrow answers me, confirming my words. (Ibid., p. 368)

However, whenever the silent atmosphere of the den is spoilt by a sound, insecurity and uncertainty take hold of the creature. These feelings reach a critical level when suddenly a prolonged unseen sound is ubiquitously heard without its source being identified. Not even the creature’s fine hearing, which sharply attends to the quality of the sound, succeeds in explaining the origin of this sound. The cause of the noise will remain unknown: “But whether trifling or important, I can find nothing, no matter how hard I search, or it may be that I find too much” (Kafka, 2005, p. 370).

The episode shows how an ordinary encounter with an acousmatic sound can amount to an excruciating experience of listening filled with paranoid confabulation and poisoned by an anxiety, which is not only caused by a sound but ontologically aural itself. It is Kafka’s depiction of acousmatic listening as characterised by insecurity and uncertainty, therefore, that leads Kane to conceptualise acousmatic sound as a source of anxiety *par excellence*, an anxiety that, “inherent in acousmatic sound” (2014, p. 159), is caused by insecurity and indeterminacy rather than lack of visual references. Based on Kafka, Kane will re-evaluate the concept of the

acousmatic and assert that “acousmatic sound is unsettling because it depends on a structural spacing of sonic source, cause, and effect that is fundamentally insecure” (*Ibid.*, pp. 157 & 159). Having brought the problem of insecurity and uncertainty to the core of his theory of the acousmatic, Kane draws to a close his reading of Kafka by comparing his account of acousmatic listening to the two conventional, philosophical approaches to acousmatic listening:

On the one hand, there is the drive to secure certainty by discovering the material source of acousmatic sound, by lifting the mythical Pythagorean veil and seeing the source in all of its nakedness. On the other hand, there is the drive to secure certainty by bracketing everything that is inessential to encounter the sound object in all of its absolute and essential detachment. (*Ibid.*, p. 159)

Deemed reductive, these approaches’ aim is to dispel the epistemological uncertainty that characterises acousmatic listening, yet their only contribution is to theorise away the problematics of acousmatic sound. In contrast, Kafka, due to his predilection for unresolved tensions, engages with the problematics posed by the acousmatic, “choos[ing] neither of these routes, [thus] maintaining the anxiety inherent in [the] acousmatic” (*Ibid.*). Kafka’s adamant indecision unveils that an acousmatic sound, to be acousmatic, has to remain perpetually veiled. The veil is the source of anxiety and the inescapably ontological condition of an acousmatic sound. By fictionalising the acousmatic, Kafka contributes to its radical reconceptualisation.

Ultimately, Kane uses Kafka to show how it is possible to bracket out the inherent differences regarding philosophical and literary forms of inquiry. He thus questions why we should give more credence to Hans Jonas, Erwin Stein, or Pierre Schaeffer than to Kafka when it comes to thinking about acousmatic sound. “Why should the philosopher be a more insightful, more systematic researcher than the novelist?”, he asks (*Ibid.*, p. 161). His challenging of the epistemological status of literature allows it to be thought of as something more than mere illustration or historical document, but as theory and history itself. Although Kane’s chapter on Kafka goes beyond Kafka’s fiction, incorporating historical and philosophical ideas of acousmatic listening, literature remains the ground upon which the innovative reading of acousmatic listening is constructed. And even the examples drawn from other art forms, such as music and film, and disciplines, such as sound studies and philosophy, primarily provide a field where Kafka’s notion of the acousmatic can be tested. Literature thus becomes an autonomous source of ideas on sound and listening, a field where theories are tested as well as a source of theories to be applied elsewhere.

Conclusion

This article has sought to lay the foundations for a thorough account of the crossovers between literature and sound studies. The use of literary texts in studies devoted to sound has served several purposes over the years: from a mere source of examples, to an object of theorisation and historical evidence, to a basis for autonomous and accomplished theories.

In the first section, a brief analysis of Schaeffer’s anticipatory and archetypal use of an excerpt from Frisch’s *Homo Faber* to elucidate one of his functions of listening showed how Schaeffer sees language and literature as the arena where listening and ideas of sound are not only represented but dramatised. They are, moreover, understood as a means through which aurality is actually experienced. His focus on hearing-related verbs indicates that our use of language is evidence of the way listening and sound works; literature, by extension, emerges as a privileged laboratory where hypotheses regarding auditory categories can be tested.

In the second section, a reading of an essay by Kahn suggests how literature can theorise, materialise, and shape auditory experiences. It offers solutions for problems regarding sound’s elusiveness whilst returning the debate to the broad categories that underpin sound studies as a

field, such as orality and literacy, vision and listening, direct and indirect sound, and figures that are either concrete or abstract in character. These figures, in particular, as Kahn asserts at the very end of his article, amount to a method “to cohere a wide range of scattered events and ideas” (1992, p. 26), a method that is not only derived from the Western literary tradition, but which also finds in literature its most accomplished form of expression. The cohesion sound historians are seeking “need not be a narrative one”, as he notes (*Ibid.*). And yet, his reading is indeed inherently narrative, insofar as each figure comprises a set of micro-narratives, themselves springing from major narratives, whether historical, theoretical, or philosophical narratives, or simply the plot of a novel, of a short story, or the ideas voiced through a manifesto or populating a piece of literary criticism.

If by tracing figuratively the ephemeral life of this fleeting and scattered *entity* that is sound Kahn brings literature – the realm of representation, figurative expression, and narrative – to the fore of an inquiry into sound, listening, and aurality, Picker does not bring literature to the fore of a quest for sound so much as he brings sound and listening into the world of narrative and literature. In doing so he reveals how soundscapes tell stories as much as stories unveil past, forgotten, or unknown soundscapes. Historical soundscapes become less a reconstruction of past aural spaces than forms of rereading, rewriting, and retelling the past.

Finally, the fourth section examines Kane’s close reading of Kafka’s “The Burrow” to show how literature engenders its own productive, informative, and thought-provoking accounts of sound and listening. It not only offers a solution to problems of sound and listening, but also presents puzzles to be solved. What Kane’s reading of Kafka reveals is that while key theoretical categories related to sound and listening seem to be *always already* given – such as the dichotomies listed above –, literature, in dislocating the reader’s attention from sound and listening to other subjects at the very moment it speaks of sound and listening, invites the reader to reassess what they know about what they read, to rethink in novel terms auditory experiences and aural-related concepts that seem far too common or familiar. As regards research methodology, literature can be thought of, therefore, as the written equivalent of sound, as accounted for by Kahn:

“sound”, rather than being a destination, has been a potent and necessary means for accessing and understanding the world; in effect, it leads away from itself. A very nebulous notion of methodology, but also something that kicks in before methodology. (Kahn cited in Sterne, 2012: 6)

In the case of Kafka’s acousmatic, for instance, the structural insecurity, or epistemological uncertainty, that characterises acousmatic listening for Kane is insightfully and uncannily dramatised with a poetic eloquence that offers unexpected ideas on listening. It moreover sets in motion a ceaseless conceptual logomachy, which is in embryo the ruin of the very ideas it inspires – literature transforms thoughts into thinking. Paraphrasing Kahn, literature may be, as well as sound, a nebulous notion of methodology, but also something that kicks in before methodology.

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Footnotes

¹ My understanding of the field is indebted to Jonathan Sterne's idea that 'Sound studies is a name for the interdisciplinary ferment in the human sciences that takes sound as its analytical point of departure or arrival' (2012, p. 2). I would like to narrow down this definition so as to point out that sound studies is not only inherently grounded in the human sciences but is inescapably at odds with 'music's dominance' (Kahn, 1990, p. 67). For a short and enlightening commentary on the contentious and complex relation between sound studies and music, see the introduction to *Keywords in Sound* (Novak and Sakakeeny, 2015, pp. 5-6).

² The reference to Marshall McLuhan's idea of Gutenberg galaxy here aims to stress the tension between literacy and orality that lies at the very origin of sound technologies. For further discussion on literacy and orality, see McLuhan's *The Gutenberg Galaxy*, Walter J. Ong's *Orality and Literacy*, and Jonathan Sterne's *The Audible Past* and 'The Theology of Sound: A Critique of Orality'.

³ The phonograph, particularly, plays a very unique role in the problematics of orality and literacy, since, as Sterne writes, Scott's invention 'would smash the distinction between orality and literacy because sound could literally write itself – hearing and speaking would become equivalent to reading and writing' (2003, p. 45).

⁴ This text is a version of a homonymous lecture given on 3 December 1949 published by the Centre d'Études Radiophoniques on 6 January 1950. Revised and expanded, this conference was republished in 1970 under the title 'Pouvoirs de l'instrument', in the first volume of *Machines à communiquer*.

⁵ Functional linguistics is referenced throughout the *Traité* (see Chion, 1983, p. 179). Central to the notion of functions of listening is André Martinet's *Éléments de linguistique générale*. When discussing language as an instrumental function, Martinet notes that 'the designation of a given language as an instrument or tool focuses attention on what distinguishes language from many other institutions. The essential function of this instrument, if we regard any given language as such, is communication' (1964, p. 18).

⁶ All translations are mine unless otherwise indicated.

⁷ Here I give Michael Bullock's translation to the same passages quoted by Schaeffer.

⁸ By *qualified listening*, Schaeffer understands a mode of listening 'whose diversity therefore stems from an essential law of perception which is that of proceeding by way of a series of ensuing "sketches", without ever exhausting the object, to the multiplicity of our knowledge and previous experiences (according to which the object presents itself immediately imbued with different meanings and significations), to the variety of our intentions of listening' (Schaeffer, 1966, p. 109).

⁹ Bullock's translation into English and Schaeffer's analysis, based on an unidentified French translation, are slightly incompatible. For instance, Schaeffer's French translation gives 'martèlement sans timbre' in lieu of 'hammer taps without resonance', and 'rumeur' instead of 'sound'.

¹⁰ See Douglas Kahn's *Noise, Water, Meat: A History of Sound in the Arts*.

¹¹ Among Kahn's literary references are Villiers de L'Isle-Adam's *L'Ève future* (1886), Marcel Schwob's 'La Machine à parler', from *Le Roi au masque d'or* (1892), Alfred Jarry's 'Phonographe', from *Les Minutes de sables memorial* (1894), Maurice Renard's 'La Mort et le coquillage' (1907), Raymond Roussel's *Locus Solus* (1914), Velimir Khlebnikov's 'Ka' (1915), Guillaume Apollinaire's 'Le Roi-Lune', from *Le Poète assassiné* (1916), and André Breton's 'Ode à Cahrles Fourier' (1947).

¹² For a more productive yet still reductive critique of the significance of soundscape as a response to the hegemony of vision, see Tom Ingold's 'Worlds of Sense and Sensing the World' (2011, p. 316).

Biography

Igor Reyner is a graduate of King's College London, where he obtained his PhD in French Literature, under the supervision of Professor Patrick Ffrench. His thesis, "Listening in Proust", investigates how sound descriptions, metaphors, and listening practices circulate within an economy of the aural in Marcel Proust's *A la recherche du temps perdu*. In 2010, he completed a B.A. degree in Music at Federal University of Minas Gerais (Brazil), where he also gained in 2012 an M.A. degree in Music with an emphasis on Sound Studies, under the supervision of Dr Carlos Palombini.